KARPAGAM ACADEMY OF HIGHER EDUCATION

Pollachi Main Road, Eacharani Post, Coimbatore-641 021

DEPARTMENT OF CS, CA & IT

SUBJECT : MULTIMEDIA SYSTEMS **SEMESTER: V**

SUBJECT CODE: 15CSU504 **L T P C**

CLASS : III B.Sc. CS **5 0 0 5**

COURSE OBJECTIVE:

- Understand basic multimedia concepts, devices and the current trends in multimedia.
- To understand the basic software tools used in multimedia.
- To learn the basic tools and techniques in photoshop
- To learn essential concepts in Adobe Flash

COURSE OUTCOME:

After the completion of this course, a successful student will be able to do the following:

- Understand basic multimedia concepts.
- Acquire basic knowledge on Multimedia devices.
- Identify the basic components of a multimedia project.
  Identify the basic hardware and software requirements for multimedia development.
- Understand current trends in multimedia
- Will be able to develop a simple action scripts using flash.
- Will be able to perform photo editing process using Photoshop.

UNIT-I

Definition of multimedia – Introduction to making multimedia: the stages of a project – Basic software tools-Using Text in multimedia - font editing and design tools – hypermedia and hypertext.

UNIT-II

Introduction to Photoshop 6: Interfaces and Navigation-Tools-Text-Working in Photoshop-Creating new documents-Saving Files.

UNIT-III

Displaying the Images – Using Ruler, Guides and Grids – Making Selections- Layers and Types-Choosing Colors-Creating Brushes- painting & editing Tools-Making and Applying Gradients.

UNIT-IV

Introduction to Flash: Variables & data types-Data types in Action Script-Creating and placing variables – Buttons with text fields.

UNIT-V

Basic Actions: Play, stop, Back & forth-Between frames and scenes – Timelines – External scripts-Loops.

TEXT BOOKS

1. Bill Sanders. 2001. *Flash5 Action Script*, 1st Edition, DreamTech Press, New Delhi.
2. Steve Romaniello. 2001. *Mastering Photoshop 6*, 1st Edition, BPB Publications, New Delhi.
3. Tay Vaughan.2014. *Multimedia making it Work*, 9th Edition, Tata McGraw-Hill, New Delhi.

REFERENCES

1. Dinesh Maidasani. 2006. *Flash 8*, 1st Edition, Firewall Media Publications, New Delhi.
2. Robert Shufflebotham. 2004. *Photoshop CS in Easy Steps*, 1st Edition, DreamTechPess, New Delhi.

3. Ze-Nian Li and Mark S. Drew. 2004. *Fundamentals of Multimedia*, Pearson Education, New Delhi.
4. Scott Kelby . 2016. *How Do I Do That in Photoshop?* Rocky Hook Publications
5. Glyn Dewis. 2014. *The Photoshop Workbook: Professional Retouching and Compositing Tips, Tricks, and Techniques* , Preachpit Press
6. Annesa Hartman . 2011. *Exploring Adobe Flash CS5*, Delmar Cenage Learning.
7. Richard Wagner. 2011. *Professional Flash Mobile Development: Creating Android and iPhone Applications* 1st Edition, Wiley Publishing.

WEBSITES

1. en.wikipedia.org/wiki/Multimedia
2. www.arena-multimedia.com/
3. www.nextwavemultimedia.com/
4. www.photoshopessentials.com
5. http://design.tutplus.com
6. https://www.elearninglearning.com/flash

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Enable | Enlighten | Enrich
(Deemed to be University)
(Under Section 3 of UGC Act 1956)

DEPARTMENT OF CS, CA & IT

LECTURER PLAN

STAFF NAME : K.YUVARAJ & Dr S.MANJU PRIYA

SUBJECT NAME : MULTIMEDIA SYSTEMS

SUBJECT CODE : 15CSU504

SEMESTER : V

CLASS : III B.SC. (CS)

S.NO	Lecture Duration (Hrs)	Topics To Be Covered	Support Materials/ PageNo
		UNIT 1	
1	1	**Definition of multimedia** -CD-ROM and the Multimedia Highway -CD-ROM, DVD, and Multimedia -The Multimedia Highway	T1:1-4
2	1	Multimedia Uses	T1:5
3	1	Where to use Multimedia -Multimedia in Business -Multimedia in Schools -Multimedia at Home	T1:5-12
4	1	Multimedia in public places -Virtual Reality	T1:8-12
5	1	**Introduction to making Multimedia** -The Stages of a project	T1:18-19
6	1	**Basic software tools** -Text editing and word processing tools -OCR Software -Painting and drawing tools	T1:262-264
7	1	3-D Modeling and Animation tools -Image-Editing tools -Sound editing tools	T1:264-270
8	1	-Animation ,video ,and Digital movie Tools	T1:270
9	1	**Using Text in multimedia** -Designing with text -Choosing text fonts	T1:55-56
10	1	-Menus for navigation	T1:56-58
11	1	-Buttons for interactions -Fields for reading	T1:58-62

12	1	HTML documents -Symbols and Icons -Animating text	T1:62-66
13	1	**Font editing and design tools** -Fontographer	T1:66-68 W2
14	1	Making pretty text	T1:80-84
15	1	**Hypermedia and hypertext** -The power of hypertext	T1:84-85
16	1	Using hypertext	T1:85-87
17	1	Recapitulation and Discussion of Important Questions	
		Total No Of Hours Planned For Unit I	**17**
		UNIT 2	
1	1	**Introduction Photoshop 6**	T2:17
2	1	Interfaces and Navigation -Accessing and Navigation -Palettes	T2:21-22
3	1	-Presets	T2:22
4	1	**Tools** -Toolbar -Crop Tool -Shape Tools	T2:22
5	1	-Path Component Selection Tool -Annotation Tools	T2:22-23
6	1	-Patterns and Gradients -Slice Tools	T2:23-24
7	1	**Text**	T2:25-30

		-Layer Management -Mini Programs	
8	1	**Working in Photoshop** -Strategies	T2:39-43
9	1	-Opening Documents	T2:43-45
10	1	Importing a scanned image	T2:45-46
11	1	**Creating new documents** -Creating a document from the clipboard	T2:46-47
12	1	**Saving Files**. -Save as -Save	W3
13	1	-Save for web -Path to illustrator	T2:49-51
14	1	Recapitulation and Discussion of Important Questions.	
		Total No Of Hours Planned For Unit II	**14**
UNIT 3			
1	1	**Displaying the images** -The zoom tool -Scrolling in Photoshop	T2.Pg.no:70-71
2	1	-Navigation shortcuts -The navigator -The view menu -Display modes	T2.Pg.no:71-74
3	1	**Using Rulers ,Guides and Grids** -Settings preferences for rulers and guides	T2.Pg.no:75-78
4	1	-Using Guides	T2.Pg.no:78-80

		-Using a grid	
5	1	**Making Selections** -Layers and Types -Arranging layers	T2.Pg.no:198-204
6	1	-Using layers to create and edit	T2.Pg.no:204-207
7	1	-Entering type -Adjusting opacity of a layer	T2.Pg.no:208-213
8		Merging layers	T2.Pg.no:210-213
9	1	**Choosing Colors** -The color picker -Active parameters of color	T2.Pg.no:256-261
10	1	-Using color palettes -Sampling colors	T2.Pg.no:262-265
11	1	**Creating Brushes** -Make a new brush -Modify an existing brush	T2.Pg.no:265-266
12		-Create a custom brush	T2.Pg.no:266-268
13	1	**Painting & Editing Tools** -The painting tools	T2.Pg.no:268-274
14		-The editing tools	T2.Pg.no:272-276
15	1	-Brush dynamics -Color blending modes	T2.Pg.no:276-277
16		-Painting tool shortcuts	T2.Pg.no:277
17	1	**Making and Applying Gradients** -Choosing gradients	T2.Pg.no:277-278
18	1	-Making custom gradients	T2.Pg.no:279-280
19		-Applying gradients	T2.Pg.no:281-282
20	1	Recapitulation and Discussion of Important Questions	
		Total No Of Hours Planned For Unit 3	**20**

UNIT 4			
1	1	**Introduction to Flash**	T3.:20
2	1	Flash -Variables	T3.:21
3	1	Data types	W5
4	1	Data Types in Action Script	T3:22-28
5	1	Creating Variables	T3:29
6	1	Placing Variables	T3:30
7	1	Buttons with text fields	T3:33-35
8	1	Text fields	T3:33-35
9	1	Creating an instance of the Button component	T3:36
10	1	Resizing and Positioning Buttons	W1
11	1	Recapitulation and Discussion of Important Questions	
		Total No Of Hours Planned For Unit 4	**11**
UNIT 5			
1	1	**Basic Actions**	T3:58-60
2	1	Play & Stop	T3:58-60
3	1	Back & Forth between frames	T3:61
4		Back & Forth between scenes	T3:62

5	1	Time lines	T3:67
6	1	Parts of the Time lines	W4
7	1	External scripts	T3:69
8	1	Loops	T3:104-108
9	1	Loops example	T3:108
10	1	Recapitulation and Discussion of Important Questions	
11	1	Discussion of Previous ESE question paper	
12	1	Discussion of Previous ESE question paper	
13	1	Discussion of Previous ESE question paper	
		Total No Of Hours Planned For Unit 5	**13**

TEXT BOOKS

1. Bill Sanders. 2001. *Flash5 Action Script*, 1st Edition, DreamTech Press, New Delhi.
2. Steve Romaniello. 2001. *Mastering Photoshop 6*, 1st Edition, BPB Publications, New Delhi.
3. Tay Vaughan.2014. *Multimedia making it Work*, 9th Edition, Tata McGraw-Hill, New Delhi.

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WEBSITES

1. en.wikipedia.org/wiki/Multimedia
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4. www.photoshopessentials.com
5. http://design.tutplus.com
6. https://www.elearninglearning.com/flash

UNIT-I

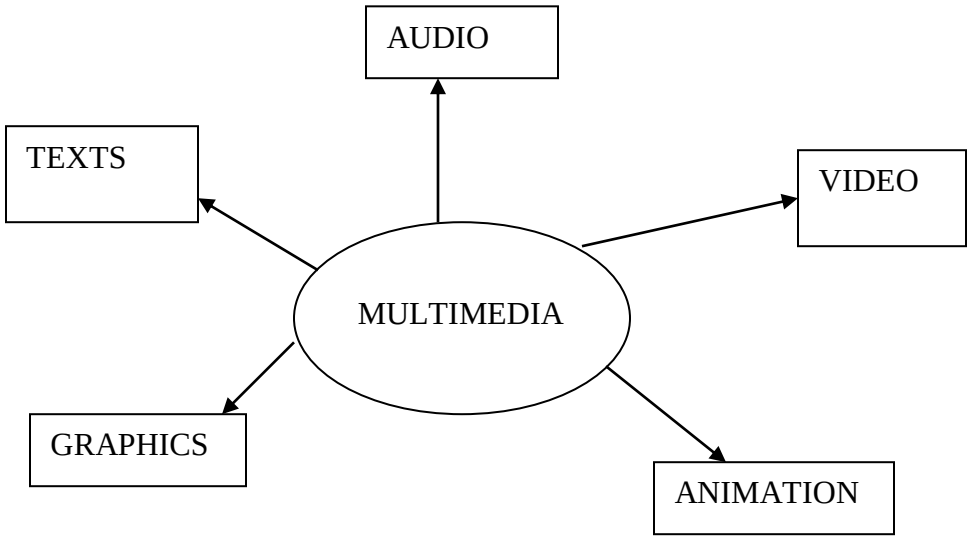
SYLLABUS

Definition of multimedia – Introduction to making multimedia: the stages of a project – Basic software tools-Using Text in multimedia - font editing and design tools – hypermedia and hypertext.

MULTIMEDIA TOOLS

Definition of multimedia:

"Multimedia can be defined as the technology engaging a variety of media, including text, audio, video, graphics, and animation, either separately or in combination, using computers, to communicate ideas."



AUDIO: Speeches, music and other types of sounds. Audio element is generally used to enhance the usual multimedia environment, but in some cases may become more effective than all other media put together.

TEXT: The usual text with some difference as compared to the print media. Since computer can display a variety of fonts, beautiful color combinations, and background features in almost all of the multimedia titles, which is far better then the printed text.

GRAPHICS: pictures, photographic images and other art works.

ANIMATION: the artificial movements of texts or objects, created in visual environments, using specialized software packages. There are 2D and 3D animations. Animation is the most interesting part of multimedia.

VIDEO: the actual video clips that could be embedded right over the application and can be played back without a hitch. But the sizes of the clippings are usually much smaller than that from video cassette players.

Multimedia Definition :

The use of multiple formats for the presentation of information, including, text, sound, video, images, and animation. Computer-based interactive multimedia includes Hypermedia and hypertext. Multimedia means more than one media.

- Text
- Sound
- Images
- Animation
- Video

Hypermedia :

computer-based system that allows interactive linking of multiple format information including text, sound, video, images, and animation. Allow non-linear traversal.

Hypertext :

Non-linear organized and accessed screens of text and static diagrams, images, and tables.

Multimedia hardware

- Selection of the proper platform for developing your multimedia project may be based on:
  - Personal preference
  - PC or Macintosh
  - Budget constraints
  - Delivery requirements
  - Type of material and content in the project

Stages of a Multimedia Project:

(1) Planning

- Planning involve:-

- Developing an idea
- Identifying Objectives and Users
- Identify Skills and Resources
- Developing a graphic template, the structure, and a navigational system.
- Estimating Time and Cost
- Develop a small prototype or proof of concept

(2) Design and Production

- The planned tasks are performed to create a finished product.
- Task include storyboarding, designing a detail navigation structure, GUI consideration and HCI consideration.
- The product is revised, based on the continuous feedback received from the client by doing an evaluation.

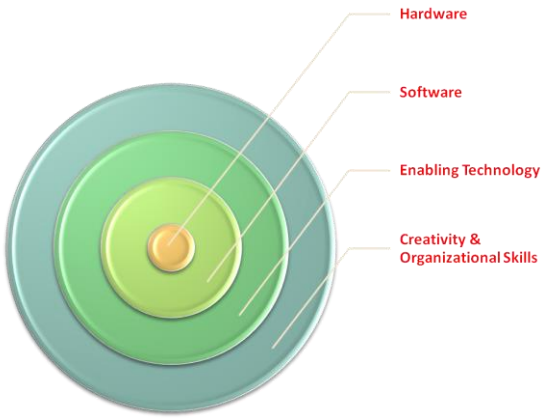
(3) Testing

- The program is tested to ensure that it:
  - meets the objectives of the project
  - works on the proposed delivery platforms
  - meets the client requirements.

(4) Deliver

- The final project is packaged and delivered to the end user.

Requirements for a Multimedia Project



Where to use multimedia

Multimedia is **media** and **content** that uses a combination of different **content forms**. The term can be used as a noun (a medium with multiple content forms) or as an adjective describing a medium as having multiple content forms. The term is used in contrast to media which only use traditional forms of printed or hand-produced material. Multimedia includes a combination of **text**, **audio**, **still images**, **animation**, **video**, and **interactivity** content forms.

Categorization of multimedia

Multimedia may be broadly divided into **linear** and **non-linear** categories. Linear active content progresses without any navigational control for the viewer such as a **cinema presentation**. Non-linear content offers user **interactivity** to control progress as used with a **computer game** or used in self-paced **computer based training**. **Hypermedia** is an example of non-linear content.

Multimedia **presentations** can be live or recorded. A recorded presentation may allow interactivity via a **navigation system**. A live multimedia presentation may allow interactivity via an interaction with the presenter or performer.

Usage

A presentation using **Powerpoint**. Corporate presentations may combine all forms of media content.**Virtual reality** uses multimedia content. Applications and **delivery platforms** of multimedia are virtually limitless.VVO Multimedia-Terminal in **Dresden** WTC (Germany)Multimedia finds its application in various areas including, but not limited to, **advertisements**, **art**, **education**, **entertainment**, **engineering**, **medicine**, **mathematics**, **business**, scientific research and **spatial temporal applications**. Several Examples are as follows:

Creative industries

Creative industries use multimedia for a variety of purposes ranging from fine arts, to entertainment, to commercial art, to journalism, to media and software services provided for any of the industries listed below. An individual multimedia designer may cover the spectrum throughout their career. Request for their skills range from technical, to analytical, to creative.

Commercial

Much of the electronic **old** and **new media** used by commercial artists is multimedia. Exciting presentations are used to grab and keep attention in **advertising**. Business to business, and interoffice communications are often developed by **creative services** firms for advanced multimedia presentations beyond simple slide shows to sell ideas or liven-up training. Commercial multimedia developers may be hired to design for governmental services and nonprofit services applications as well.

Entertainment and fine arts

In addition, multimedia is heavily used in the entertainment industry, especially to develop special effects in movies and animations. Multimedia games are a popular pastime and are software programs available either as CD-ROMs or online. Some **video games** also use

multimedia features. Multimedia applications that allow users to actively participate instead of just sitting by as passive recipients of information are called *Interactive Multimedia*.

Education

In **Education**, multimedia is used to produce **computer-based training** courses (popularly called CBTs) and reference books like encyclopedia and almanacs. A CBT lets the user go through a series of presentations, text about a particular topic, and associated illustrations in various information formats. **Edutainment** is an informal term used to describe combining education with entertainment, especially multimedia entertainment.

Journalism

Newspaper companies all over are also trying to embrace the new phenomenon by implementing its practices in their work. While some have been slow to come around, other major newspapers like **The New York Times**, **USA Today** and **The Washington Post** are setting the precedent for the positioning of the newspaper industry in a globalized world.

News reporting is not limited to traditional media outlets. Freelance journalists can make use of different new media to produce multimedia pieces for their news stories. It engages global audiences and tells stories with technology, which develops new communication techniques for both media producers and consumers. **Common Language Project** is an example of this type of multimedia journalism production.

Engineering

Software engineers may use multimedia in **Computer Simulations** for anything from entertainment to **training** such as military or industrial training. Multimedia for **software interfaces** are often done as a collaboration between **creative professionals** and software engineers.

Industry

In the **Industrial sector**, multimedia is used as a way to help present information to shareholders, superiors and coworkers. Multimedia is also helpful for providing employee training, advertising and selling products all over the world via virtually unlimited web-based technology

Mathematical and scientific research

In **mathematical** and **scientific research**, multimedia is mainly used for modeling and simulation. For example, a **scientist** can look at a **molecular model** of a particular substance and manipulate it to arrive at a new substance. Representative research can be found in journals such as the **Journal of Multimedia**.

Medicine

In **Medicine**, **doctors** can get trained by looking at a virtual **surgery** or they can simulate how the **human body** is affected by **diseases** spread by **viruses** and **bacteria** and then develop techniques to prevent it.

Requirements for a Multimedia Project:

(1) Hardware

1. Fast processor
   - e.g. Pentium
2. Large RAM (Random Access memory)
   - Memory space that the computer uses when performing work.
   - More RAMs means computer works quicker and more efficient.
3. Storage
   - Large Hard Disk
     - Capable of supporting fast data transfer rate.
   - Removable large-capacity storage devices
     - E.g. rewritable CD-Rom, Zip drive
4. A good CD-ROM burner & good CD-R software to complement it
   - Easy CD Creature Deluxe
5. High resolution and a large monitor
   Minimum 17 inch monitor
6. Good video display card
   preferable capable of displaying 24 bit colors
7. Good video capture cards
   - Allow you to capture video from a tape or camcorder
8. A good quality digital camera
   - At least support 640 x 480 pixels images
   - Has display panel
9. Input devices
   - Keyboard, mouse, track ball, touch screen, graphic tablet, data glove
10. A good flatbed scanner
    - 24-bit color depth and 300-dpi resolution
11. Color Printer
12. Color projector

Software

- **Graphic design photo editing application**
  - Adobe Photoshop, Corel's Photo-Paint
- **3D modeling and animation application**
  - Maya, 3D StudioMax
- **Digital sound editing application**

- Sonic Foundry's Sound Forge

- **Digital video editing application**
  - Adobe's Premiere

- **Multimedia authoring application**
  - Adobe Director
- **Web page authoring/design tool**
  - Adobe Dreamweaver, Microsoft's FrontPage

Enabling Technology

Computing Power

- Increase in CPU processing power
- Increase in storage capacData Networking

Data Networking

- Better transmission media
- Fiber optic as compared to copper wire
- Better transmission technique
- Fast packet switching
- Better services offered
- ATM, ISDN, B-ISDN, Broadband

Compression Technology

- GIF (Graphical Interchange Format)
  - Mostly used with the internet
- JPEG (Joint Photographic Experts Group)
  - Still image compression
- PNG (Portable network Graphic)
  - Very popular nowadays especially for web-based application
- MPEG (Motion Picture Expert Group)
  - Full motion video compression

Creativity and Organizational skills.

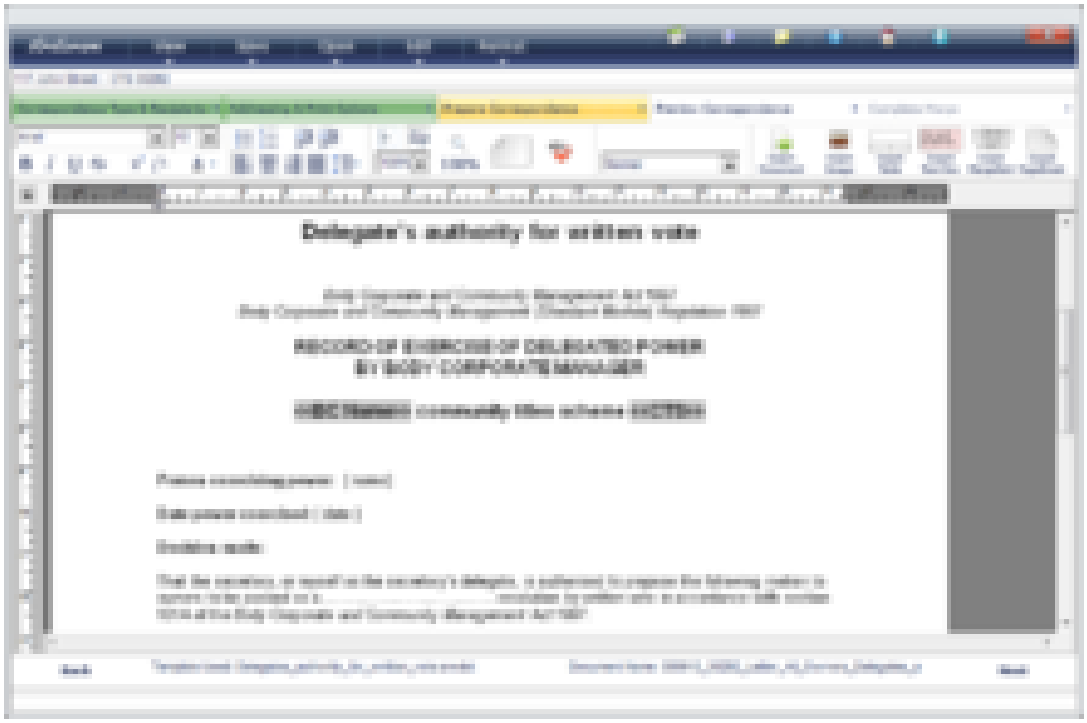
- In a multimedia project, being creative implies knowledge of hardware and software.
- It is essential to develop an organized outline detailing the skills, time, budget, tools and resources needed for the project
- Assets such as graphics, sound and the like should be continuously monitored throughout the project's execution.
- A standardized file-naming procedure should be followed for precise organization and swift retrieval.

Basic software tools

The tools used for creating and editing multimedia elements on both Macintosh and windows platforms support the authoring systems.

- **Text editing and word processing tools:**
  - ❖ It is usually the first software tool computer users learn.
  - ❖ From letters, invoice and storyboards to project content
  - ❖ Workgroup will choose a single word processor to share documents in a standard format.
  - ❖ Include spreadsheet, database, e-mail, Web browser and presentation applications.

    Word processors such as
    - ❖ Word and WordPerfect
    - ❖ Include spell checkers, table formatters prebuilt templates for
    - ❖ letters, resumes, purchase orders.
    - ❖ Multimedia elements such as sounds, images and video.



- **OCR Software**
  - ❖ Optical Character Recognition.
  - ❖ Often you will have printed matter and other text to incorporate into your project, but no electronic text file. With *Optical Character Recognition*
  - ❖ (*OCR*) software, a flat-bed scanner and your computer you can save many hours of typing printed words and get the job done faster and more accurately.

- Reading 8 to 36 point characters at 300 dpi(dots per inch)
- Processing speeds 150 characters per second.
- The text areas of the images are then converted to ASCII characters using probability and expert system algorithm.
- Ex: Perceive
- **OCR** – for printed text recognition
- **ICR** – for hand-printed text recognition
- **OMR** – for marks recognition
- OBR – for barcodes recognition
- BCR – for business cards recognition
- DLR - for document layer recognition

- **Painting and Drawing Tools:**
  - *Painting and drawing* tools are the most important items in your toolkit because the impact of the graphics in your project will likely have the greatest influence on the end user.
  - ***Painting software*** is dedicated to producing excellent bitmapped images
  - *Such us Photoshop, Picture Publisher and Fractal Design Painter*
  - ***Drawing software*** is dedicated to producing vector based line art that is easily printed to paper.
  - Drawing packages include powerful and expensive computer-aided design (*CAD*) software.
  - Such us CorelDraw, FreeH And Canvas.
  - software applications combine drawing and painting capabilities.
  - But many autoring systems can import only bitmapped images.
  - Ex: DeskDraw, DeskPaint, Designer

The following features in a drawing or painting packages:

- Paint tools to create geometric shapes,from squares to circles and from curves to complex polygons.
- Ability to pour a color,pattern or gradient into any area.
- Ability to paint with patterns and clip art.
- Eyedropper tool that samples colors.
- Zooming for magnified pixel editing.
- Multiple undo capabilities to let you try again.
- Airbrushing in variable sizes,shapes,and pattens
- Washing colors in gradients,blending and masking.
- Support for scalable text fonts and drop shadows.

- **3-D Modeling and Animation Tools**

- 3 – D modeling software objects rendered in perspective appear more realistic
- we can create stunning scenes and wander through them.
- Choosing the right lighting and perspective for you final rendered image.
- Powerful modeling packages such as Macromedia's Estreme 3D,AutoDesk's 3d studio Max.
- Application also include export features enabling to save a moving view.
- Each rendered 3-D image takes from a few seconds to a few hours to complete
- Depending upon the complexity of the drawing and number of drawn objects.

Features

- Ability to drag and drop primitive shapes into a scene.
- Color and texture mapping.
- Ability to add realistic effects such as transparency.shadowing and fog.
- Ability to draw spline-based paths for animation.
- Unlimited cameras with focal length control.

- **Image-Editing Tools**

- *Image editing applications* are specialized and powerful tools for enhancing and retouching existing bitmapped images.
- These programs are also indispensable for rendering images used in multimedia presentations.

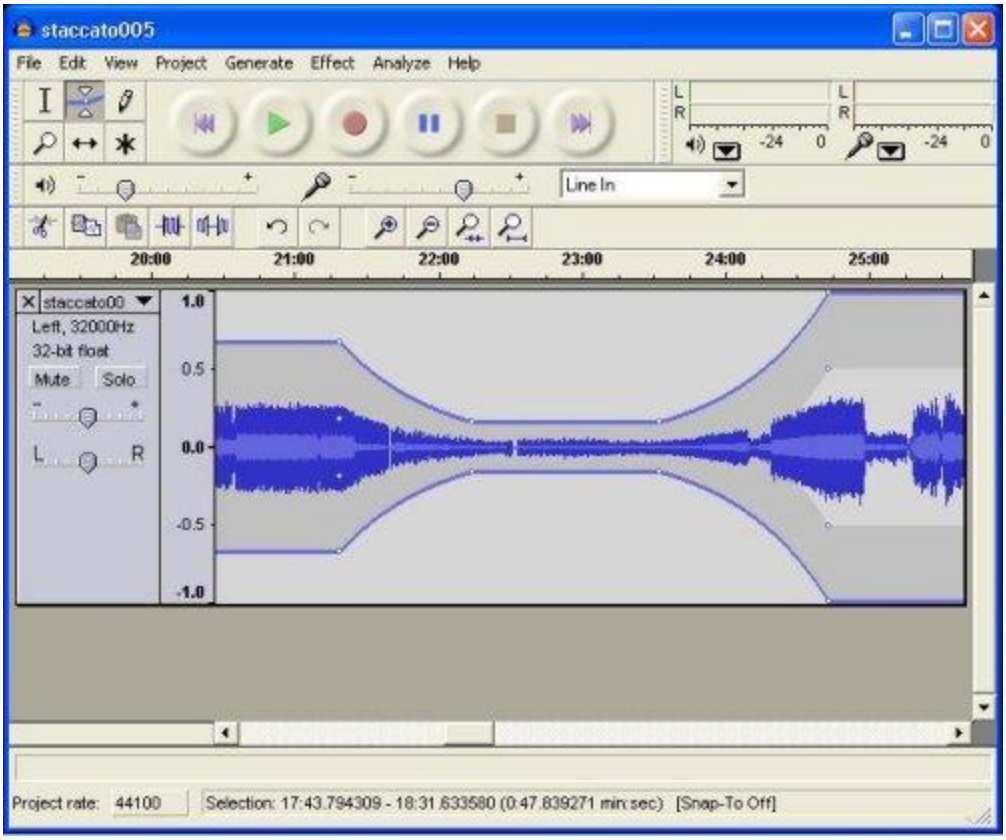
- Modern versions of these programs also provide many of the features and tools of painting and drawing programs, and can be used to create images from scratch as well as images digitized from scanners, digital cameras or artwork files created by painting or drawing packages.
- **Ex: Photoshop**

Features

- Multiple windows provide views of more than one image at a time.
- Good masking features
- Multiple undo and restore features.
- Direct inputs of images from scanner and video sources.
- Conversion of major image-data types and industry standard file formats.

- **Sound Editing Tools**

  - Sound editing tools for both *digitized* and *MIDI* sound let you *see* music as well as *hear* it.
  - By drawing the representation of the sound in a waveform, you can cut, copy, paste and edit segments of the sound with great precision and making your own sound effects.
  - Using editing tools to make your own MIDI files requires knowing about keys, notations and instruments and you will need a MIDI synthesizer or device connected to the computer.
  - Many MIDI applications provide both sequencing and notation capabilities
  - Need a MIDI synthesizer or device connected to computer.
  - MIDI files and multimedia project without learning any special skills.
  - Editing software such as Creative Labs,WaveStudio.
  - Ex: SoundEdit Pro



- **Animation Video and Digital Movie Tools**

  - *Animations and digital movies* are sequences of bitmapped graphic scenes (frames), rapidly played back.
  - But animations can also be made within an authoring system by rapidly changing the location of objects to generate an appearance of motion.
  - *Movie-making tools* let you edit and assemble video clips captured from camera, animations, scanned images, other digitized movie segments.
  - The completed clip, often with added transition and visual effects can be played back.

- **Video Formats**
  - **The AVI Format**

The AVI (Audio Video Interleave) format was created and released by Microsoft. Being a very common format, computers operating Windows and also most of the web browsers as Internet Explorer, Firefox or Safari support it. The video files encoded in AVI can be easily recognized by their extension:example "videofile.avi" .Systems running other operating systems than Windows may not support the avi format.

❖ **The Windows Media Format**

This format is also a Microsoft release. First it was created for online streaming apps (WMV) and as a countermove to the RealVideo solutions

❖ **The MPEG Format**

The Moving Pictures Expert Group format seems to be the most popular online format. This maybe because it is supported by the most of the web browsers and operating systems.

❖ **The QuickTime Format**

Released by Apple, it is a very popular format on the Web. Movies need an additional plugin in order to play on a Windows based environment. QuickTime 10.0 is the latest release being available on MAC OS v.10.6. .mov. is the extension for QuickTime video files

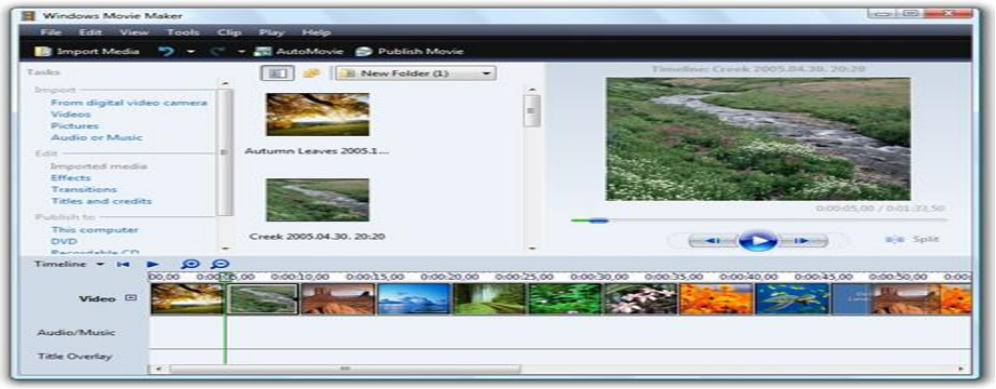
- **Movie Editors**

❖ **QuickTime X**

QuickTime Player is a perfect video editor if you just need some basic video editing functions like trimming, rotating, or combining video clips. With the video trimming feature, you can remove the part you don't want and get your desired video parts. Also you can combine 2 or more clips and merge them into one.

- **Windows Movie Maker(Windows)**

Window Movie Maker has been on the market for many years for Window systems to let you easily edit QuickTime video. You can use it to rotate QuickTime video, resize QuickTime video, or crop, zoom, add title, transitions and other effects to your clips. The software can also blend audio files with video tracks to produce video remixes. The supported video formats



include MOV, WMV, AVI, MP4, M4V, 3GP and more.

Compression Movie files

- Audio, image and video require vast amounts of data
- 320x240x8bits grayscale image: 77Kb
- 1100x900x24bits color image: 3MB
- 640x480x24x30frames/sec: 27.6 MB/sec
- Low network's bandwidth doesn't allow for real time video transmission
- Slow storage devices don't allow for fast playing back
- Compression reduces storage requirements

Classification of Techniques

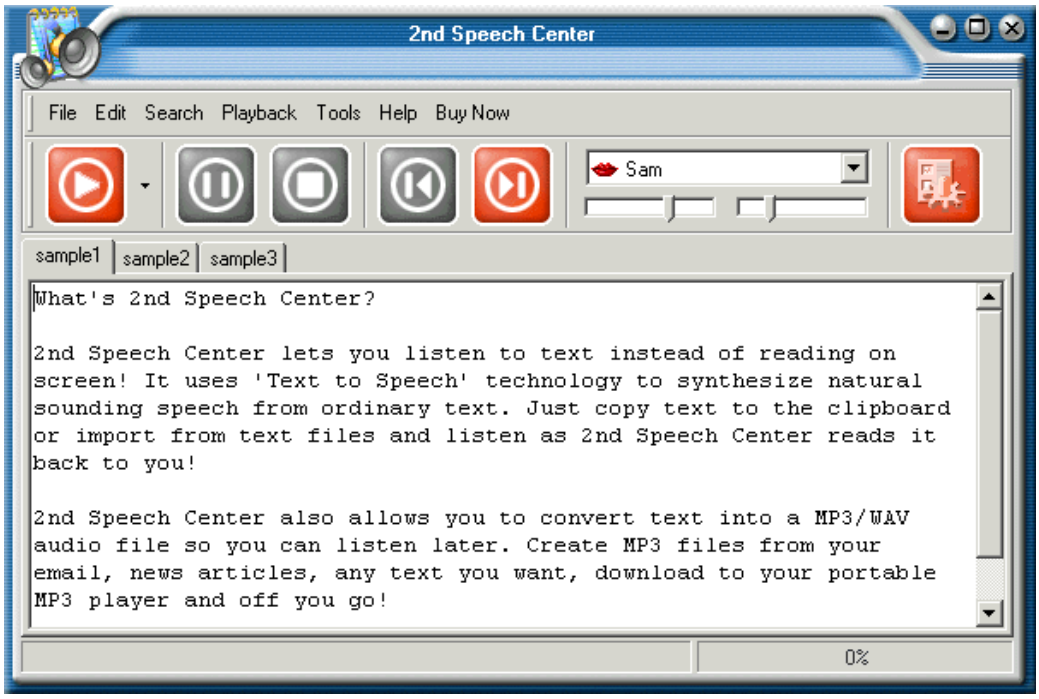
- Lossless: recover the original representation
- Lossy: recover a representation similar to the original one
- high compression ratios
- more practical use

- ❖ Hybrid: JPEG, MPEG, px64 combine several approaches

Using Text Elements in a Multimedia Presentation

- ❑ The text elements used in multimedia are:
  - ➢ Menus for navigation.
  - ➢ Interactive buttons.
  - ➢ Fields for reading.
  - ➢ Portrait vs. Landscape
  - ➢ HTML documents.
  - ➢ Symbols and icons.
  - ➢ Fonts and Faces
  - ➢ Animating Text

Menus for Navigation



Interactive Buttons

- ❑ A button is a clickable object that executes a /command when activated.
- ❑ Users can create their own buttons from bitmaps and graphics.
- ❑ The design and labeling of the buttons should be treated as an industrial art project.

Fields for Reading

- ❑ Reading a hard copy is easier and faster than reading from the computer screen.
- ❑ A document can be printed in one of two orientations - portrait or landscape.

- ❑ The taller-than-wide orientation used for printing documents is called **portrait**.
- ❑ The wider-than-tall orientation that is normal to monitors is called **landscape**.

Portrait vs. Landscape

- Monitor use wider-than-tall aspect ratios called landscape
- Most books use taller-than- wide orientation, called portrait
- Don't try to shrink a full page onto a monitor

HTML Documents

- ❑ HTML DocumentsHTML stands for Hypertext Markup Language.
- ❑ It is the standard document format used for Web pages.
- ❑ HTML documents are marked using tags.
- ❑ An advanced form of HTML is DHTML.
- ❑ DHTML stands for Dynamic Hypertext Markup Language.
- ❑ DHTML uses Cascading Style Sheets (CSS).

- ❑ **Some of the commonly used tags are:**
  - ➢ The <B> tag for making text bold faced.
  - ➢ The <OL> tag for creating an ordered list.
  - ➢ The <IMG> tag for inserting images.

Symbols and Icons

- ❑ Symbols are concentrated text in the form of stand-alone graphic constructs.
- ❑ They are used to convey meaningful messages.
- ❑ Symbols used to convey human emotions are called emoticons.
- ❑ Icons are symbolic representations of objects and processes.

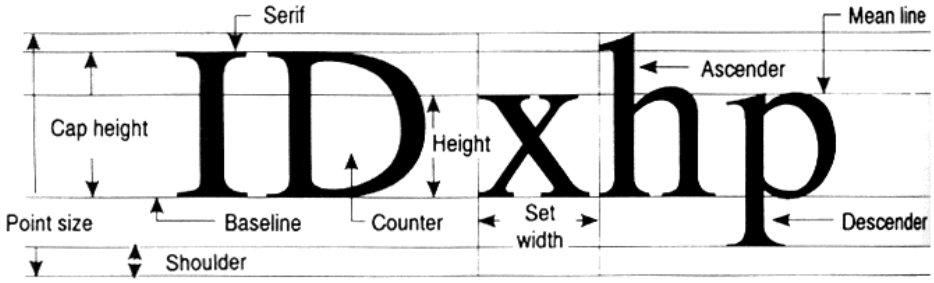
Fonts and Faces

- A typeface is a family of graphic characters that includes many type sizes and styles (such as Times, Arial, Helvetica)

- A font is a collection of characters of a single size and style belonging to a typeface family (such as bold, italic)

- Font sizes are in points 1 point = 1/72 inch
  (measured from top to bottom of descenders in capital letter)
- X-height is the height of the lower case letter x

Character Metrics



Factors affecting legibility of text

- Size.
- Background and foreground color.
- Style.
- Leading (pronounced "ledding").

Styles

- Examples of styles are boldface and italic

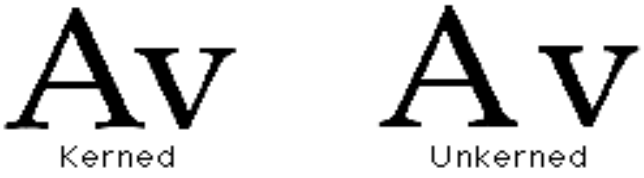
Italic
Bold
Underlined

Leading and Kerning

Computers can

- adjust the line spacing (called leading)

The space between pairs of letters,
Called kerning



Fonts and Faces

- PostScript, TrueType and Master fonts can be altered
- Bitmapped fonts cannot be altered
- The computer draws or rasterizes a letter on the screen with pixels or dots.

Serif and Sans Serif

- Type either has a little decoration at the end of the letter - called a serif
- or it doesn't - sans serif ("sans" from the French meaning without)
- Examples (Times - serif "T")
  (Arial - sans serif "T")

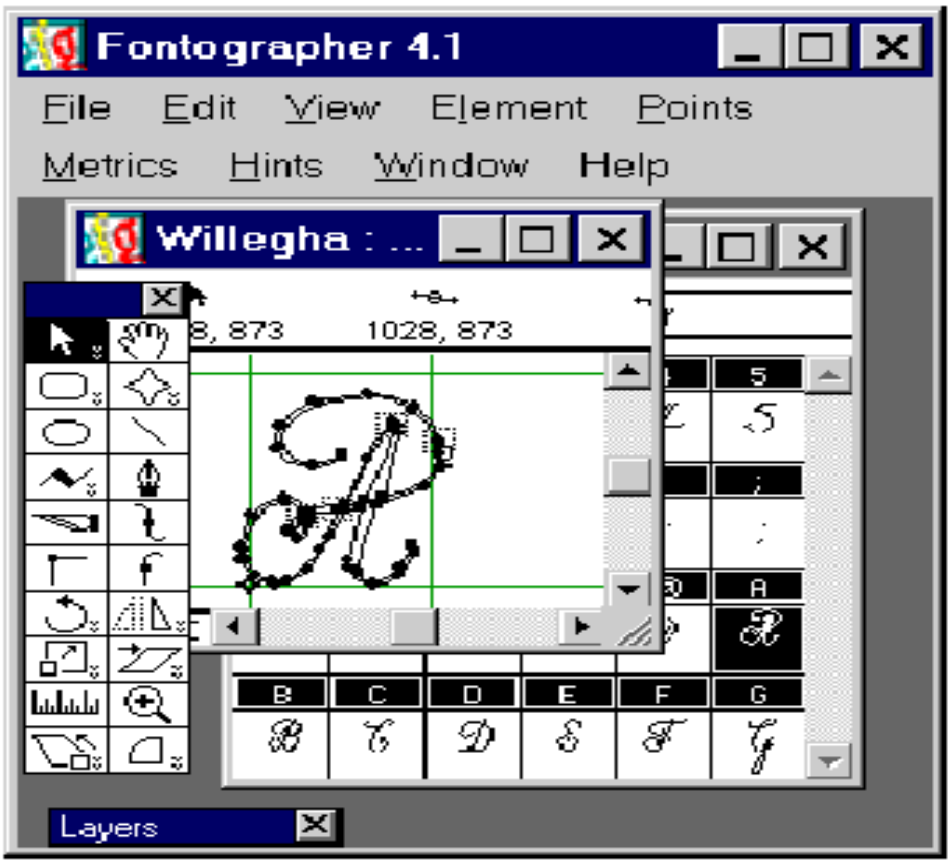
- Use what is appropriate to convey your message

Animating Text

- To grab a viewer's attention:
  - let text "fly" onto screen
  - rotate or spin text, etc.
- Use special effects sparingly or they become boring

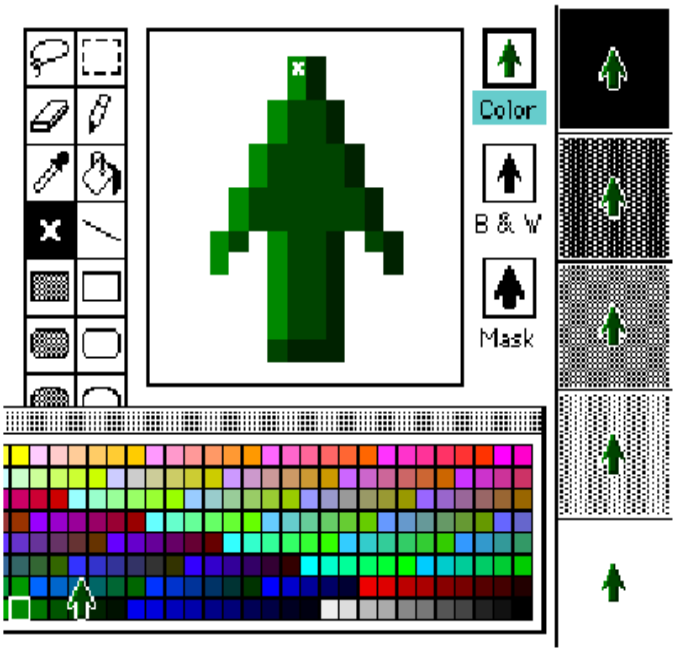
Fonts Editing and Design Tools

- Macromedia Fontographer
  - Fontographer is a specialized graphics editor.
  - It is compatible with both Macintosh and Windows platform.
  - It can be used to develop PostScript, TrueType, and bitmapped fonts.
  - It can also modify existing typefaces and incorporate PostScript artwork.



ResEdit

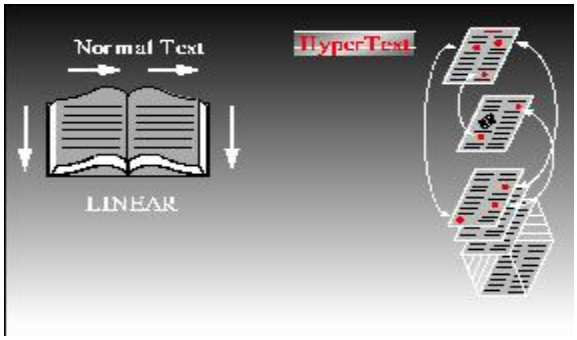
- Introduced by Apple Text to design text as a bitmap image.



- **Creating attractive texts.**
  - Applications that are used to enhance texts and images include:
    - ✓ Adobe Photoshop
    - ✓ TypeStyler
    - ✓ COOL 3D
    - ✓ HotTEXT
    - ✓ TypeCaster

Hypermedia and Hypertext

- *Multimedia - combines text, graphics and audio*
- *Interactive multimedia - gives user control over what and when content is viewed (non-linear)*
- *Hypermedia -provides a structure of linked elements through which user navigates and interacts*
- *Hyper media* provides a structure of links
- *Hypertext* words are linked to other elements
- Hypertext is usually searchable by software robots



Hypermedia Structures

- Hypermedia elements are called *nodes*
- Nodes are connected using *links*
- A linked point is called an *anchor*
- Link - connections between conceptual elements (navigation pathways and menus)
- Node - contains text, graphics sounds
- Anchor - the reference from one document to another document, image, sound or file on the web
- Link anchor - where you came from

Multimedia and Hypertext

- Hypertext system.
- Using hypertext systems.
- Searching for words.
- Hypermedia structures.
- Hypertext tools.
- Hypertext System
- Hypertext is defined as the organized cross-linking of words, images, and other Web elements.
- A system in which words are keyed or indexed to other words is referred to as a hypertext system.
- A hypertext system enables the user to navigate through text in a non-linear way.

Using Hypertext Systems

- Information management and hypertext programs present electronic text, images, and other elements in a database fashion.
- Software robots visit Web pages and index entire Web sites.
- Hypertext databases make use of proprietary indexing systems.
- Server-based hypertext and database engines are widely available.

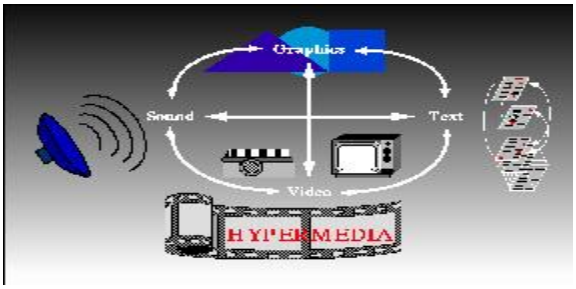
Searching for Words

- Typical methods for word searching in hypermedia systems are (cont):
  - Adjacency
    - ✓ Words occuring next to one another, usually in phrases or proper names
  - Alternates
    - ✓ Applying OR
  - Association
    - ✓ Applying AND

- Typical methods for word searching in hypermedia systems are (continued):
  - Negation
    - ✓ Applying NOT
  - Truncation
    - ✓ Words with its possible suffixes
  - Intermediate words
  - Frequency

Hypermedia Structures

- **Anchors.**
  - Anchor is defined as the reference from one document to another document, image, sound, or file on the Web.
  - The source node linked to the anchor is referred to as a link anchor.
  - The destination node linked to the anchor is referred to as a link end.



- **Navigating hypermedia structures.**
  - The simplest way to navigate hypermedia structures is via buttons.
  - Location markers must be provided to make navigation user-friendly.

Hypertext Tools

- Two functions common to most hypermedia text management systems are building (authoring) and reading.
- The functions of 'builder' are:
  - Creating links.
  - Identifying nodes.
  - Generating an index of words.

POSSIBLE QUESTIONS(8 Marks)

1. Briefly explain about basic software tools.
2. Explain Font Editing and Design Tools
3. Discuss in detail about uses of multimedia and stages of a project.
4. Explain
   a. i) The power of hypermedia (ii) Using hypertext
   b. (iii) Searching for word (iv) Hypermedia structure

5. Explain about the stages of project.
6. Write any two types of basic software tools in multimedia.
7. Write in detail about multimedia uses with real time examples.
8. Discuss in detail about hypermedia and hypertext.

SNo	Questions
1	The people who weave multimedia into meaningful tapestries are ---------
2	---------- multimedia allows an end user to control what and when the elements are delivered
3	---------- is a structure of linked elements through which the user can navigate.
4	HTML and DHTML Web pages or sites are generally viewed using a ------
5	Multimedia elements are typically seen together into a project using --------
6	The sum of what gets played back and how it is presented to viewer on a monitor is the ----------
7	The hardware and software that govern the limit of what can happen are the multimedia ----------
8	A browser is used to view ---------
9	CD & DVD ---------- are used for reading and making discs.
10	PDA stands for ----------
11	Cell phones and PDA utilize ---------- communication technology
12	VR stands for ----------
13	VRML stands for ----------
14	DVD stands for ----------
15	Macintosh is an operating systems developed by ----------
16	---------- file requires no cross platform conversion
17	Which of the following is not a stage of multimedia production?
18	A family of graphic characters that usually include many type sizes and styles is called a ----------
19	A ---------- is a collection of characters of a single size
20	Type sizes are usually expressed in ----------
21	One point is ---------- inch
22	---------- are general measurements applied to individual characters

23	---------- is the spacing between character pairs
24	Which of the following term represent the spacing between characters of the text?
25	The ---------- is the little decoration at the end of the letter stroke
26	Designers call roomy blank areas as ----------
27	---------- blends the colors along the edges of the letters to create a soft transition between the letter and its back ground
28	The pages are coded using
29	The taller-than-wide orientation used for printed document is called ----------
30	The wider – than –tall orientation normal to monitors is called----------
31	CSS stands for ----------
32	Which of the following is displayed on a web page after installation of a browser plug-in?
33	WYSIWYG stands for ----------
34	What is ESQ?
35	-------- are connections between conceptual elements
36	---------- text can be link and can navigate through text in non linear way
37	---------- is a specialized graphics editor for both Macintosh and Windows platform
38	Fontographer is supplied by ----------
39	Translating or designing multimedia is called ----------
40	In Macro media's director, font mapping can be controlled by altering the ----- file.
41	Substituting a font that is not existed on the target is called ----------
42	What is ANSI ?
43	Which of the following is not part of multimedia specification
44	---------- is required to display type 1 post script font at all sizes without jaggies
45	Jaggies can be avoided by --------- edges of the text characteristics
46	Hypercard was first introduced in --------
47	DHTML uses ---------- to define choices ranging from line height to margin width to font face.
48	Placing an upper case letter in the middle of a word called----------
49	A file in Macintosh AIF format we get ---------- sound.

50	Web sites with rich media require large amount of ----------
51	Which of the following is displayable on a web page after installation of a browser plug-in?
52	At one time, the technology that brought the greatest amount of multimedia to the classroom was the ------
53	Which H/W platform is considered by many multimedia developers to be better equipped to manage both sound and video editing?
54	Which of the following is multimedia software?
55	---------- is searching for a word with any o its possible suffixes
56	Leading is the space between ----------
57	--------- is really a method of describing an image in terms of mathematical constructs.
58	---------- is a powerful OCR program that reads documents on a flatbed scanner & turns them into formatted word processing documents
59	---------- let you extrude, warp, twist and rotate characters and adjust lighting and texture effects foe high impact 3D titles
60	A smaller version of an image is called a:

KARPAGAM ACADEMY OF HIGHER EDUCATION

Pollachi Main Road, Eacharani Post, Coimbatore-641 021

CLASS : III-B.Sc COMPUTER SCIENCE(2015-2018)

Online Examination

MULTIMEDIA SYSTEMS(15CSU504)

opt1	opt2
Multimedia producers	Multimedia developers
Hyper media	Interactive Multimedia
Hyper media	Multimedia
MS Office	Paint
Editing Tools	Unauthoring tools
UML	URL
Platform	bandwidth
program code	story boards
Banners	video discs
personal data agency	personal data assistants
GPRS	Internet
Virtual reality	visual random
virtual reality modeling language	visual response modeling language
digital versatile disk	digital video disk
Windows	Apple
Digital	Apple
Planning and costing	designing and producing
type face	font
Attribute	font
Font	inches
0.0138	0 .1038
Kerning	tracking

leading	kerning
Leading	gothic
Serif	sans serif
Blending	white space
anti – aliasing	aliasing
HTTP	ASCII
Portrait	newsscape
Landscape	newsscape
cascading sheet styles	cascading style sheets
Windows 98	Macromedia Flash
what you see is what you get	Where you see is where you go
enhanced system quality	enhanced screen quality
Point	node
hyper text	linked text
texto-grapher	fontographer
Apple	IBM
Specialization	globalization
FONT MAP .BMP	FONT MAP.JPG
font replacement	font substitution
American national standard institute	American nation standard institute
Text	Odors
Adobe tool manager	Adobe type manager
anti – aliasing	editing
1989	2000
CCS	CSC
midle cap	center cap
Analog	digitized

Bandwidth	memory
windows 98	macromedia flash
DVD	video tape
Dell	Sun
3D Studio	SPSS
Association	truncation
Alignment	words
PostScript	Sub Script
OminiPage Pro	wipro
Cool 3D	HotTEXT
clipart	bitmap

opt3	opt4	Answer
Multimedia Projectors	Multimedia Creatures.	**Multimedia developers**
Non interactive Multimedia	Non Hypermedia	**Interactive Multimedia**
linked list	circular list	**Hyper media**
Browser	Notepad.	**Browser**
Integrated Tools	Authoring tools	**Authoring tools**
GUI	GPRS	**GUI**
content	storyboard	**Platform**
fonts	web-based pages & documents	**web-based pages & documents**
pictures	authoring tool	**Banners**
principle data agency	principle data assistants	**personal data assistants**
Bluetooth	Intranet	**Bluetooth**
Video raster	video response	**Virtual reality**
video raster mode language	video raster modeling language	**virtual reality modeling language**
digital virtual disk	dynamic versatile disk	**digital versatile disk**
Microsoft	IBM	**Apple**
hexadecimal	decimal	**Apple**
Marketing	Delivering	**Marketing**
point	link	**type face**
group	link	**font**
no of characters	points	**points**
0 .0318	0 .0381	**0.0138**
character metrics	type face	**character metrics**

tracking	points	**kerning**
tracking	trimming	**tracking**
gothic	arial	**Serif**
gothic	kerning	**white space**
anti – aligning	alignment	**anti – aliasing**
HTML	FTP	**HTML**
netscape	Unicode	**Portrait**
flat file	portrait	**Landscape**
cascading spread styles	cascading spread sheets	**cascading style sheets**
Photo shop	Power builder	**Macromedia Flash**
when you see is when you get	what you see is where you go	**what you see is what you get**
enhanced software quality	enhanced screen quantity	**enhanced screen quality**
link	tag	**link**
navigate text	document text	**hyper text**
post script	true script	**fontographer**
Macro media	Microsoft	**Macro media**
localization	serilization	**localization**
FONT MAP . DOC	FONT MAP.TXT	**FONT MAP.TXT**
font exchange	font – editing	**font substitution**
Advanced national standard institute	Advanced nation standard institute	**American national standard institute**
Sound	Video	**Odors**
Adobe state manager	Adobe data manger	**Adobe type manager**
aliasing	filtering	**anti – aliasing**
1979	1987	**1987**
CSS	CCS	**CSS**
inter cap	joint cap	**inter cap**
hyper media	hyperlink	**digitized**

software tools	software packages	**Bandwidth**
mozilla	internet explorer	**macromedia flash**
smart media card	laser disc	**smart media card**
Apple	IBM	**Apple**
Tally	Inspro	**3D Studio**
frequency	categories	**truncation**
characters	lines	**lines**
Adobe's Script	Font script	**PostScript**
Adobe Pro	Foxpro	**OminiPage Pro**
Both a& b	U-lead	**Both a& b**
portable network graphic	thumbnail	**thumbnail**

Enable | Enlighten | Enrich
(Deemed to be University)
(Under Section 3 of UGC Act 1956)

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MUL

S.No	Questions	opt1
1	Favorities and recent buttons in the _____ let you quickly access recent files	save dialog box
2	The open dialog box offers _____ browsing	web
3	The _____ menu has an open recent command	View
4	You can undo a step backwards or redo a step forward from the _____	File menu
5	Command for step backward _____	crtl+alt+z
6	Command for step forward_____	shift+z
7	_____ creates a guide in a designated location	view->new
8	The brush palette is attached to the bar	menu
9	Pressing the key hides all palettes except the tool palette and options bar	Tab
10	Descriptive labels are called _____	tool box

11	The in the tool palette contains the icon,name and shortcut key	File menu
12	When you click a tool,its options appear at the of the screen	left
13	_____dims the portion of the image outside the crop marquee	shield cropped area
14	The provides a method of quickly drawing vector shapes	crop tool
15	The let you to attach written or audio notes to your document	crop tool
16	The _____ are used to cut an image into smaller component	slice select tool
17	_____option lets you bend and flex type into large variety of shapes	text
18	_____is the method of organizing your documents into accessible dynamic components	layer
19	To name a layer ,press_____ and double click the layer to display the layer properties dialog box	option/ctrl
20	Blending and advanced blending options have been included in the dialog box	blending
21	TIFF refers to	Text-Image File Format
22	GIF refers to	Graphical Interchange Format
23	JPEG refers to	J-P Expert Group
24	PNG refers to	Ping Net Graphics

25	Photoshop keeps track of all your edits in the _____ palette.	Family Tree
26	The new _____to select & modify shapes & paths.	crop tool
27	The new _____let you attach written or audio notes to your document for later reference.	zoom tool
28	_____ support the selection of slices created n photoshop6.	save for web
29	The _____ fills similarly colored areas with the foreground color.	Paint Bucket tool
30	If you change your mind you can click the Undo command or you can press _____.	CTRL+Z
31	The Letter used as shortcuts for Lasso Tool	Q
32	The Letter used as shortcuts for Switch background / forground colors Tool	X
33	The file menu has an _____	Open recent command
34	An annotation tool has _____	brash tool
35	_____tools is used to cut an image	slice tools
36	To create a new document_____	edit-->view-->new
37	Where will you choose path illustrator.	file-->export-->path to illustrator
38	_____consists of all the photoshop available options	toolbox

39	_____has various tools for editing the image	palettes
40	_____palettes displays the names of its colors	swatches
41	MPEG stands for_____	Moving picture Expert Group
42	_____application is used for viewing and converting still images among many standard image-file formats.	Viewer
43	_____schemes preserve the original data precisely.	Lossy
44	_____indicates the URL to link to when the movie is clicked.	REF
45	The Zoom tool is represented in the Toolbox by a _____glass	Magnifying
46	The layer _____ shows a small image of the contents of the image	thumbnail
47	The Letter used as shortcuts for Switch background / forground colors Tool	X
48	Shortcut key for select all	alt+a
49	Shortcut key for deselect	alt+d
50	Shortcut key for reselect	shift+ctrl+d
51	Shortcut for painting brush is	v
52	_____ tool is used to copy an ares of the image and paint it elsewhere with a brush.	brash tool

53	_____brush restore a portion of the image.	Painting tool
54	_____ Contains numerous options for setting brush painting characteristics, such as color dynamics, brush shape dynamics, texture, and paint scattering.	Tool Presets picker
55	In the color model HSB refers to	High, Saturation, and Brightness
56	The Letter used as shortcuts for Marquee Tool	Q
57	The Letter used as shortcuts for Lasso Tool	Q
58	_____ tool enables to select a foreground and background color in any of several ways	painting
59	If you change your mind you can click the Undo command or you can press _____.	CTRL+Z
60	_____ is the artists term for trimming away unwanted parts of a picture	crop
61	_____ lets you lighten image areas	Dodge

DEMY OF HIGHER EDUCATION

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SS : III-B.Sc COMPUTER SCIENCE(2015-2018)

Online Examination

TIMEDIA SYSTEMS(15CSU504)

UNIT II

opt2	opt3	opt4	Answer
open dialog box	tool dialog box	Edit dialog box	**open dialog box**
windows applications	thumbnail	web application	**thumbnail**
Edit	open	File	**File**
View menu	Edit menu	Tool menu	**Edit menu**
Alt+z	Crtl+z	shift+ctrl+z	**crtl+alt+z**
ctrl+z	alt+z	ctrl+shift+z	**ctrl+z**
file->new	edit->new	insert->new	**view->new**
status	tool	option	**option**
Shift	Shift+tab	ctrl	**Shift+tab**
view tips	tool tip	file tip	**tool tip**

view menu	tool menu	edit menu	**tool menu**
right	top	bottom	**top**
cropped shield area	shield area	crop area	**shield cropped area**
annotation tool	slice tool	shape tool	**shape tool**
annotation tool	slice tool	shape tool	**annotation tool**
slice tool	slice select tool and slice tool	crop tool	**slice select tool and slice tool**
wrap	wrap text	text wrap	**wrap text**
tool	text	pattern	**layer**
option/alt	shift/alt	ctrl/shift	**option/alt**
style	layer	layer style	**layer style**
Title-Image File Format	Tagged-Image File Format	Table-Image File Format	**Tagged-Image File Format**
Geometrical Interchange Format	Gamma Interchange Format	Geological Image Format	**Graphical Interchange Format**
Jagged Photographic Expert Group	Joint Photographic Expert Group	H-P Photographic Expert Group	**Joint Photographic Expert Group**
Part Net Graphics	Pass Network Graphics	Portable Network Graphics	**Portable Network Graphics**

Edits	Marquee	History	**History**
zoom tool	navigator tool	path component selection tool	**path component selection tool**
navigator tool	annotation tool	crop tool	**annotation tool**
save for file	zoom tool	crop tool	**save for web**
Art History brush tool	History Brush tool	gradient tools	**Paint Bucket tool**
CTRL+A	CTRL+U	CTRL+F	**CTRL+Z**
L	A	M	**L**
Z	I	G	**X**
images	windows	palettes	**Open recent command**
Notes tool	Painting tool	selection tools	**Notes tool**
brash tool	selection tools	Audio annotation tool	**slice tools**
edit-->new	file-->new	image-->new	**file-->new**
edit-->export-->path to illustrator	view-->export-->path to illustrator	image->export-->path to illustrator	**file-->export-->path to illustrator**
palettes	interface	menubar	**menubar**

toolbox	menubar	interface	**toolbox**
info	layers	history	**swatches**
Movie Picture Expert Group	Music Pic Expert Group	Media Picture Expert Group	**Moving picture Expert Group**
Editor	Convertor	Picture Viewer	**Picture Viewer**
Lossless	decompression	Transferring	**Lossless**
Click	HREF	URL	**HREF**
diminishing	zooming	alternative	**Magnifying**
mask	list	Icons	**thumbnail**
Z	I	G	**X**
shift+a	ctyl+a	tab+a	**ctyl+a**
shift+d	ctrl+d	tab+d	**ctrl+d**
shift+alt+d	alt+ctrl+d	shift+del+d	**shift+ctrl+d**
p	b	t	**b**
editing tool	Painting tool	history tool	**clone stamp tool**

history brush	brash tool	editing tool	**history brush**
Paint	Brush Presets picker	Brushes palette	**Brushes palette**
Hue, Saturation, and Brightness	Heavy, Saturation, and Brightness	Hitech, Saturation, and Brightness	**Hue, Saturation, and Brightness**
L	A	M	**M**
L	A	M	**L**
brushes	history	color picker	**color picker**
CTRL+A	CTRL+U	CTRL+F	**CTRL+Z**
Single column marquee	Magic Wand	Magnetic Lasso	**crop**
crop	slice	magic wand	**Dodge**

UNIT-III
SYLLABUS

Displaying the Images - Using Ruler, Guides and Grids – Making Selections- Layers and Types-Choosing Colors-Creating Brushes- painting & editing Tools- Making and Applying Gradients.

DISPLAYING THE IMAGE

i) The Zoom Tool

Choose the Zoom tool from Tool palette. Place your cursor on the area of the image. you will see the Zoom tool cursor with a plus sign indicate the Zoom tool with enlarge the view .The image appear larger to maximum view size of 1600 percent.

ii) Scrolling in Photoshop

The Hand Tool: choose the Hand tool .click the image and drag to move the image.
Scroll Bar: Click and Drag scroll Handle or click an arrow at end of the scroll bar.
Keyboard : you can use the keyboard to scroll the image up ,down, left, or right.

Keyboard commands for scrolling

Scroll Action	Mac KB	Mac Extended KB	Windows KB
Up	Control+K	PgUp	PgUp
Up Slightly	Shift+Control+K	Shift+PgUp	Shift+PgUp
Down	Control+L	PgDn	PgDn
Down Slightly	Shift+Control+L	Shift+PgDn	Shift+PgDn
Left	Cmd+Control+K	Cmd+Control+PgUp	Ctrl+PgUp
Left Slightly	Shift+Cmd+Ctrl+K	Shift+Cmd+Ctrl+PgUp	Shift+Ctrl+PgUp
Right	Cmd+Control+K	Cmd+Control+PgDn	Ctrl+PgDn
Right Slightly	Shift+Cmd+Control+L	Shift+Cmd+Control+PgDn	Shift+Ctrl+PgDn

iii) Navigation shortcuts

Centering the image: This technique centers and zoom and area of image on the screen.
Restoring the display to a 100 % view: Double click the Zoom tool icon in the tool palette
Toggling to the Zoom tool:

- Hold down the command or ctrl key and space bar and click the mouse to zoom in.
- Hold down the option or alt key and space bar and click the mouse to zoom out.

Toggling to the Hand tool:

The hand tool lets you scroll around the image when it exceeds the size of the image window.

iv) The Navigator

The navigator is map of the image displayed as thumbnails showing the exact location of what appears in the image window relative to the entire image. Navigational features are,

View box:

The red rectangle on the thumbnail indicates what is currently displayed in the image window .you can choose a color from pull down menu or click the swatch to choose a color from the color picker.

Zoom slider:

You can Zoom in on the image by moving the slider to the right , or zoom out by moving the slider to the left.

Zoom in & Zoom out buttons:

The button with the small mountains on the left of the slider zooms out, and the button with the large mountain to the right of the slider zooms in. The buttons use the same predefined increments as the Zoom tool.

Magnification Box

At the bottom-left of the Navigator palette, you can enter a specific percentage at which to view your image.

Sizing the Navigate Palette

You drag the lower-right corner of the Navigator box to increase or decrease the size of the Navigator palette and its image thumbnail.

v) The View Menu

For example, the View→Zoom In command achieves the same result as the keyboard shortcut Command /Ctrl + plus sign; The Zoom Out command is the same as typing Command/ctrl+minus sign. These techniques are identical to the Zoom tool and ,of course, all of

these commands are similar to the function of the Navigator and the magnification box, slide variations.

The other options in the View menu are

Fit on screen displays the image at the maximum horizontal or vertical size the monitor screen will accommodate.

Actual Pixels displays the image in a 1:1 ratio with the monitor's screen resolution.

Print Size accurately displays the height and width dimensions of the image.

New View the View→New View command displays multiple windows of the same document. Multiple windows give you the ability to observe two or more views of your image simultaneously, so that you can see the close-up detail in which you are working and the global effect on the entire image. When you edit the image, you will see the changes on both views.

vi) Display Modes

Three icons on the Tool palette determine how the image is seen on screen. These modes act like electronic mats. There are three options:

Standard Background The default view displays the image up against the operating system's desktop.

Full Screen with Menu bar The image takes up almost the entire surface of the monitor screen and displays menu bars across the top. When you zoom to a smaller display size, the image appears centered against a great background.

Full Screen The image takes up the entire surface of the monitor screen. When you zoom to the smaller display size, the image appears centered against a black background.

USING RULERS, GUIDES, AND GRIDS

Rulers, guiders and grids are used to align image content. Alignment of visual elements is critical to maintaining a cohesive structure to the composition. A good composition gently guides the viewer's eye across its surface so that important elements are emphasized. Rulers, guiders, and grids are also used to assure the precision measurement and placement of image components.

i) Setting Preferences for Rulers and Guides

Photoshop can display a horizontal ruler across the top of the screen and vertical ruler along the left side of the screen; to display them, choose View→Show Rulers. Rulers give you a

visual remainder of the physical size of your image, which you may forget from time to time as you zoom in or out. Ruler units can be changed by choosing Edit→Preferences→Units &Rulers.

The zero point or point of origin for all measurements is in the upper-left corner of the image, where the ruler intersects. The point of origin can be changed by lacing your cursor on the cross hairs, clicking and dragging down and to the right, positioning to the desire location, and releasing the mouse.

Graphic designers use grids and guides to align element within a layout. Aligning visual elements creates a composition structure, which helps to control the view's eye. The importance of good composition in a Photoshop document can't be stressed enough. The View menu contains the commands that let you create guides and display a grid which are superimposed over the image to help you align elements within the composition. Neither guides nor grids print. The color and properties of guides or grids can be changed by choosing Edit→Preference→Guides &Grids.

ii) Using Guides

Guides are horizontal or vertical lines that can be positioned anywhere on the image's surface. To create a horizontal or vertical guide, choose View→Show Rulers. Place your cursor on the ruler, click your mouse, and drag down or to the right, releasing the mouse wherever you want to place a guide.

Display or Conceal Guides

You can hide or reveal guides. The operation is under the new Show of command in version 6. Choose View→Show→Guides toggle them on and off; if the option is checked, they'll be visible, and if it's and checked they'll be hidden.

Snap To Guides

When moving a portion of a layer is a selected area of the image, you can snap it to a guide to assure the accuracy of its position. The operation is under the new Snap to command in version 6. Choose View→Snap To→Guides to the toggle snapping on and off.

Move a Guide

With the Move tool currently selected, click the guide and drag. If another tool is selected, Command-click(Mac)or the ctrl-click(Win)the guide and drag.

Delete a Guide

Select the guide as if you were going to move it and drag it out of the image window.

Delete All Guides

Choose View→Clear Guides.

Lock a Guide

Choose View→Lock Guides. This prevents accidentally moving a guide while you work

New Guide

Another method of generating a new guide is to Choose View→New Guide. This has the advantage of enabling you to enter a value for the guide's exact location. A dialog box appears where you can determine whether the guide is horizontal or vertical.

Change the Orientation of a Guide

You can change a guide from horizontal to vertical or vertical to horizontal. While in the Move tool, place your cursor on the Guide. Hold down the Option key(Mac)or the Alt key(Win)and click the guide.

Change Guide Characteristics

The color and style of your guides can be modified by choosing Edit→Preferences Guides &Grid. Choose a color from the pull-down menu, or click the swatch to display the Color Picker. From the Style pull-down menu, choose either a dashed or solid line.

iii) Using a Grid

A grid helps you see the global relationships between aligned elements on a page. A grid is a series of equally spaced horizontal and vertical lines that creates a virtual matrix. Like guides, grids do not print.

Display or Conceal the Grid Choose View→Show→ Grid.

Snap To Grid When moving a portion of a layer or a selected area of the image, you can snap it to a horizontal or vertical grid line. The operation is under the new Snap To command in version 6. Choose View Snap To→Grid.

Grid Characteristics The color and style of the grid can be modified by choosing Edit→Preferences→Guides &Grids. Choose a grid color from pull-down menu, or click the

swatch to display the Color Picker. From the Style pull-down menu, Choose either a dashed line, a solid line, are dots. You can also change 5the grid size by entering values in the Gridline and Subdivisions boxes.

Making Selections

The Power of Masking

Making or the process of protecting portions of an image, used to be an entirely manual process.

Photoshop's selection tools are similar in principle, but quite difference in application to the traditional mask. Masking techniques in Photoshop 6 afford even more control and are even more user friendly than in previous version. The selection tools range from purely manual, like the Lasso, to semi manual, likely marquee, to semi automatic, likely magnetic Lasso, to fully automatic, like the magic wand. Each selection tool is designed to hasten the masking process, developing on the characteristics of the image.

There are many situations were one selection tool is insufficient and several must be combined to surround the target area. Often, other selection techniques will be employed in combination with tools for grated accuracy or to isolate a tricky area.

Using Selection Tools

When you make a selection in Photoshop, an animated marquee defines the boundaries of the selected area. This moving dash lined border is sometimes referred to as the "Marching ants" because of its resemblance to a column of tiny insects on the move.

There are Photoshop's selection tool are located at the top of the tool palette. When you press and hold the mouse on the rectangular marquee tool, the palette expanse to reveal three additional tools. When you expand the Lasso tool, two more tools are revealed, for a total of eight different selection tools.

i) The Selection Tool Options Bar

Photoshop 6's Options bar replaces the tool options palettes of prior versions. Choosing a tool displays its options automatically in the Options bar. Each tools has specific options, but some options are universal to all of the selection tools.

When you choose a selection tool, the icon that represents it appears on the left end of the options bar. The next four icons represent selection option that in format version were performed only by key commands.

*__New Selection__ Click this button to create a new selection with the chosen selection tool.

*__Add To Selection__ Click this button to add to an existing selection with the chosen selection tool. You can perform the same function by holding down the shift key as you drag with the selection tool.

*__Subtract From Selection__ Click this button to omit from an existing selection with the chosen selection tool. You can perform the same function by holding down the option or alt key as you drag with the selection tool.

*__Intersect Selection__ After the first selection is made, you draw another selection that overlaps it. Photoshop makes the selection from only the overlapping area of the two selections. You can perform the same operation by pressing shift+options or shift + alt as you use the second selection tool.

*__Feather__ Prior to drawing a selection, you can program a tool to produce a soft edged selection by specifying a numerical value in the feather field in the tools Option's bar.

Feathering creates a gradual transition between in inside and the outside of the border. When u apply an effect tool a feathered selection, it diminishes and becomes more transparent, producing a softening of blurring effect.

When you choose select→Feather, a dialog box appears; Enter the value for a feather Radius, The Feather Radius extends the specified number of pixels into the selection outline and outside the selection border.

A feather differs from anti-alias in that you can determine the size of the soft edge in pixels that the marquee will affect. The width of an anti-alias is determined by the resolution of the image; you have no control over its size.

When you apply a feather to an existing selection border, sometimes you will see it decrease in size or slightly change shape.

***Anti-Aliased** An anti-alias is a two-or three-pixel border around an edge that blends into the adjacent color to create a small transition zone. It is intended to simulate depth of field in a photograph. Without the anti-alias, an image would look "aliased" stair-stepped, without smooth transitions between colors

ii) Shapes Selection Tools

The Rectangular Marquee tool and its fly-out, the Elliptical Marquee tool, are useful when you need to select a fairly standard shape within your image-a rectangle, square, circle, or ellipse.

From the Tool palette (but for some reason not included in the Shift+M key short-but when you cycle through them), you have more options for these"predefined" selections: the Single Column Marquee and the Single Row Marquee.

Rectangular Marquee

The Rectangular Marquee tool is used to select rectangular or square portion of the image. Click the image and dragging any direction to select rectangular area of the image.

The Style menu in the Marquee tools' Options bar enables you to choose from three methods for sizing the Rectangular and Elliptical Marquees.

***Normal** By choosing Normal, you determine the size and proportion of the marquee by dragging.

***Constrained Aspect Ratio** Enter numerical values for the proportion of the marquee in the Height and Width fields.

***Fixed Size** The size of the marquee is determined by the values in pixels, that to enter in the Height and Width fields. The marquee size is defined by pixels because it can't select anything smaller.

Elliptical Marquee

Use this tool to create ellipses or circle. Its performance is identical to the Rectangular Marquee: Click and drag in any direction to produce and elliptical or circle selection.

Single Column Marquee

The Single Column Marquee tool selects a single vertical column or pixels. Click anywhere in the image, and a selection marquee appears around single column of adjacent pixels that runs vertically across the entire image.

One way you can use this feature used to create stripes that can later the colorizes to produce wood-grain effects. Here's how:

1. Open an RGB document with a white background.
2. Select a single column of pixels.
3. Choose Filter→Noise→Add Noise→400, and click OK,
4. Choose Edit→Transform→Scale. Drag the center handle of the left or right edge to the left or right.
5. Press the Return/Enter key to initiate the transformation (or the Esc key to cancel).

Single Row Marquee

The Single Row Marquee tools select a single horizontal row of pixels. Click enters on the image, and a selection marquee appears around single, continuous row of adjacent pixels that runs horizontally across the entire image.

iii) Free-Form Selection Tools

Photoshop offers three main ways to make irregular-shaped selections. The Lasso tool (and its fly-outs, the Polygonal Lasso and Magnetic Lasso)draw selection based on your mouse movements, in varying degrees of freedom. Cycle through these tools by pressing Shift+L.

The Magic Wand tool (shortcut key Shift +W) allows you to select without regard for position, instead based on the brightness of the pixels in your image.

Lasso

The Lasso tool draws free-form selections. Click the edge of the area you want select and drag the tool surround the area with the selection border. Close the marquee by placing the cursor on the starting point are release the mouse to close the selection with a straight line.

Polygonal Lasso

The Polygonal Lasso tool is used to create straight –edged selection borders. Click and release mouse. Reposition the mouse to the next corner of the polygon, and click and release again. Repeat the process until the area is surrounded. Close the marquee by clicking the starting point again.

Magnetic Lasso

The Magnetic Lasso tool intuitively makes selections based on the contrast values of pixels. As you click and drag, the Magnetic Lasso deposits a path that is attracted to areas of the most contrast. When the mouse is released, the path becomes a selection.

The tool as 3 settings in the Options bar that affect is behavior:

*__Width__ (in pixels)This setting determine the distance from the path of mouse within which pixels will be evaluated for contrast by the Magnetic Lasso.

*__Edge Contrast__ This is the minimum percentage of pixel contrast that the Magnetic Lasso will be attracted to. The higher the number, the smaller the range of contrast, hence the more selective the tool will be.

*__Frequency__ Enter the value for the frequency with which points are automatically deposited. The points create segments along the path that fix the previous segments and better control its behavior.

Magic Wand

The Magic Wand tools select the areas of an image that are similar in brightness. To use the Magic Wand, place your cursor on the area to be selected and click your mouse. Adjacent pixels of similar color will be included in the selection.

You can affect the range of pixels that are selected by adjusting the Tolerance in the tool's Options bar. Higher Tolerance values include in the selection more pixel of grater color and brightness range. Lower values include fewer pixels in the selection.

Other values in the Options bar enhance your ability to control the operation of the Magic **Wand tool:**

*__Contiguous__ By default, the Contiguous box is checked, which limits the selection to adjacent pixels. Uncheck this box to select all the pixels in the image with in the same Tolerance range.

*__Use All Layers__ If this box is unchecked, you will limit the selection to only pixels within the same Tolerance range on the same layer.

Applying Selection Techniques

There are several ways to modify a selection outline; among them, you can conceal it, transform it, add to it, subtract from it, soften its edges, and eliminate it. These commands are important because they facilitate the process of masking.

i) The Select Menu

Some selection adjustment can be automatically applied by accessing them from the Select menu or applying a shortcut key command.

*__Select All__ (Cmd + A on Macintosh, Ctrl+A in Windows) This command selects the entire content of an image or a targeted layer.

*__Deselect__(Cmd/Ctrl+D) Use Select→Deselect to deactivate the selection. Another method is to click off the selection, anywhere on the image.

*__Reselect__(Shift + Cmd/Ctrl+D) Choose this command to reactivate the last deselected selection border.

*__Inverse__(Shift+Cmd/Ctrl+I) To deselect the selected portion of the image and select the masked portion, choose Select →Inverse. This technique can save time when an image has been photographed on a single color background. The background can be selected quickly with the Magic Wand and inverted to select desired content.

*__Hide Edges__ (Cmd /Ctrl+H) Use Select→Hide Edge to conceal and reveal the marching ants from view whiled selection remains active. This command is useful to be able to see changes to the image without the distracting selection border.

*__Feather__ After you've made a selection, you can soften its edges by applying a feather radius to it.

*__Modify__ Once a selection has been made, you can alter its dimensions by choosing one of the Select→Modify sub commands. Each command changes the selection marquee and alters its dimensions:

` ➔ **Border** frames a selection and deselects the inside area of the outline, producing a selected "border" of specific thickness. When you choose Select→Modify→Border, you are presented with a window. To determine the thickness of the border by entering a value in pixels into the Width field.

➔**Smooth** round sharp corners of a selection, eliminating protrusions and stair-stepped areas of the selection border. When you choose Select→Modify→Smooth, you are asked to put in a Sample Radius value. Enter the large values to increase the effect.

➔**Expand and Contract** both perform in the same way to enlarge are reduce the size of the selection by a specified number of pixels. This command is quite useful for trimming off stubborn, unwanted edge pixels**.** Choose Select→Modify→Expand or Contract. And enter the value between 1 &16 pixels. Click OK to implement the operation.

*__Grow__ The value entered in the Tolerance field of the Magic Wand's Options bar determines how much selection will grow. When you choose Select→Grow, the select marquee expands to include adjacent pixel that are lighter or darker by no more then the Tolerance range.

* **Similar** In order to use this operation, a selection must be activated. When you choose Select→Similar, Photoshop select all pixels within the image that are the same colors as the pixels within the selected area.

ii) Transforming a Selection

Once you have made a selection, you may want to alert it safe before applying one of Photoshop's many powerful operations to its content. Photoshop gives you the ability to scale, rotate, or move a selection border. To transform a selection, choose Select→Transform Selection. The Rectangular transformation box appears around the selection border. You can then transform the size, angle, or position of the selection border with the following procedures:

*__Move__ To move the selection, place your cursor within the rectangular transformation box; the Move cursor appears. Press your mouse button and drag the selection into position, then release the mouse.

*__Scale__ To scale a selection border, place your cursor on one of the square handles on the corners or sides are the box. The Scale cursor appears. Press your mouse button and drag. To constraint the selection border to its current position, press your Shift key while dragging.

*__Rotate__ To rotate a selection, place your cursor outside the box. The Rotate cursor appears. Press your mouse button and drag to rotate the selection.

After you have chosen Select→Transform Selection and the transformation box is displayed, you can also apply many more transformation to the selection by choosing Edit→Transform. A list of options appears, including Skew, Distort, Perspective, and various precise Rotate commands. The Flip Horizontal or Flip Vertical commands will mirror the marquee across a horizontal or vertical axis passing through its point of origin icon.

iii) Other Selection Techniques

Once selection has been made, you can reposition the marquee with or without its contents using the following techniques:

Move Selection Outline

While in any selection tool, click inside the marquee and drag. When you've relocated the outline, release the mouse.

Nudge Selection Outline

While in any selection tool, press the right, left, up, or down arrow keys to move the selection name increments of one pixel. Press the shift key plus any of the arrow key to move the selection outline ten pixels at a time.

Move Selection Content

Choose the move tool; click inside the marquee and drag. When you have relocated the marquee, release the mouse. You can also move the contents while in any selection tool: Cmd_click or Ctrl_click inside the marquee and drag. When you've relocated the selection, Release the mouse and then the key.

Nudge Selection Contents

You can nudge the selection content in one pixel increment: With the move to active press the right, left, up, or down arrow keys press the shift key plus any of the arrow key to

move the selection outline ten pixels at a time.

Duplicate Selection Contents

Position the cursor inside the marquee, hold down the option+command (Mac)or alt+ctrl(Win) while you click and drag.(Or get the move tool and hold down option or alt while you drag.)When you have relocated the copy to the desired position, release the mouse.

Layers and Types

Getting Started

Once you have launched Photoshop with default preferences, here's how to begin the Hands-On project:

1. Insert the Mastering Photoshop6 CD in the CD ROM drive.
2. Choose File→Open; Select and open Flying_Women_start.psd in the Ch08 folder on the CD.
3. Save the file to your disk us Flying_Women.psd

Arranging Layers

Viewing Layers

1. When you open the file Flying_Women_start.psd, you see only the transparency checkerboard. The Layers Palette, however, reveals that the image contents 2 layer sets (containing two layers each),8 additional layers, and a Background. To reveal the contents of the Background , click the 1st column next to its thumbnail. An eye icon appears, and the Background image appears in the image window
2. Reveal the contents of all layers. Option-click or Alt-click the eye icon of the Background, The two layer, set folder are closed, are closed, but their content are visible in the image window.
3. Then conceal the layers that we don't need right now. click the eye icon next to the following layer sets to conceal their content:Purpul,Layer1,Layer2,Bule.

Moving Layers

The contents of layers can be repositioned. We will move the planets into their vertical and horizontal positions on the image.

1. Be sure the rulers are visible (choose View→Show Ruler if they're not).
2. Target the Mars layer by clicking its thumbnail or its name.
3. Select the Move tool. Place your cursor in the approximate center of Mars, click, and drag until Mars aligns with the 12"vertical and 8"horizontal marks on the rulers. Release the mouse
4. Target the Jupiter layer. Using the same technique, place the center of Jupiter on the 2"vertical and the 8"horizontal ruler marks
5. Save your work (press Cmd/Ctrl+S or use File →Save).

Moving Linked Layers

When items or linked, the can be moved or transformed simultaneously.

1. Target the Saturn layer.
2. Click in the second column next to the Rings layer. The link icon appears.
3. With the Move tool. Drag and place the center of Saturn and its rings at the 7.25" vertical and 3"horizontal marks. Check your image against.

Naming Layers

To keep your document organized, name your layers.

1. Display Layer 1 and 2; target Layer 1. From the Layer palette pull-down menu, choose Layer Properties. The Layer Properties dialog box appears.
2. Name the layer Yellow Women.
3. Press the Option or Alt key and double –click Layer 2 to get the Layer Properties dialog again.
4. Rename Layer 2 as Yellow Costume.

Making a Layer Set

Layer sets organize your layers so that they can be easily managed.

1. Target the Yellow Women layer. Click the Create A New Set icon on the Layers palette. A new layer set folder appears above the targeted layer.
2. Double-click the layer set. The Layer Set dialog box appears. Rename the layer set Yellow. For Color, choose yellow.
3. Click the Yellow Costume layer and drag it on top of the Yellow layer set icon. The layer becomes part of the set.
4. Drag the Yellow Woman layer on top of the Yellow layer set. Notice that the layers inside the folder have been automatically color-coded yellow.
5. Save your work.

Moving Items Within a Layer Set

The costume is not on the yellow woman. She might be getting cold, flying around in deep space in her underwear. We need to dress her. You can reposition the contents of a layer and change its stacking order within the layer set.

1. Target the Yellow Costume layer, choose the Move tool, and drag the yellow costume onto the yellow woman.
2. The costume is behind the yellow woman. In the Layer palette, drag the Yellow Costume layer above the Yellow Woman layer within the layer set.
3. With the Move tool, on the image window, reposition costume so that it aligns with the yellow woman.

Changing the Order of Layers

You can change the position in the stacking order of a layer or of a group of a layers in a layer set. Use the order, from top to bottom in the Layers palette, to control which content lays" on top of" other image elements. Note that you can restack all of the layers0 within a set simultaneously-no other does this.

1. Option-click or Alt-click the 1st column of Layers palette to make the content of all layers visible. Notice that the Blue Woman is behind Mars.

2. To bring all the layers in the layer set forward, they must be moved up in the stacking order. Place your cursor on the Blue layer set floder or name. Click and drag the layer set to the top of the stack. The women and her costume appear in front of Mars.

Using Layers to Create and Edit

Cutting and Copying Images to a New Layer

New layers can be made from the contents of existing layers. This can make it easier to apply effects to specific pieces of your image.

1. Target the Uranus layer.
2. Option-click or Alt-click the eye icon of the Uranus layer to reveal only its contents against a transparent checkerboard.
3. Choose the Rectangular Marquee. Draw a marquee around the blue planet.
4. Choose Layer→New Via Copy or Press Cmd/Ctrl+J. The selected planet is copied onto a new layer. Name the layer Galaxy.
5. Target the Uranus layer again. Draw a rectangular marquee around the green planet.
6. Choose Layer→New Via Cut or press Shift+Cmd/Ctrl+J. The selected planet is cut to a new layer. Name the Layer Mercury.

Editing the Contents of a Layer

1. Target the Galaxy layer
2. Option/Alt-click the eye icon of the Galaxy layer to reveal only its content against a transparent checkerboard.
3. Choose the Move tool. In the Option bar, choose Show Bounding Box.
4. Click the top-middle handle of the bounding box and drag downward to squash the circular planet into an oval. Press Return(Mac)or Enter (Win) to implement the transformation.

5. Choose Filter→Blur→Gaussian Blur→10 to blur the edges of the oval.
6. Draw a Rectangular Marquee around the oval.
7. Choose Filter→Distort→Twirl, and set a value of -999 to twirl the oval into a galaxy.
8. Press Cmd/Ctrl+D to deselect.
9. With the Galaxy layer still targeted, choose the Move tool and drag the galaxy into the upper-left corner of the document so that its approximate center aligns with the 1"vertical and 2" horizontal marks on the rulers.
10. View and target the Mercury layer. Press the Shift key as you drag Mercury to constraint its horizontal movement; reposition the planet so that its center aligns with the 6.5" vertical and 8.75"horizontal marks on the rulers.
11. View and target Uranus layer. Move Uranus so that its center aligns with the 14" vertical, 2.25"horizontal marks on the rulers.
12. Save the Document.

Moving layers From Another Document

You can easily move layers from one document to another .Here we will move two linked layers.

1. In the Flying_Woman.psd file, click the eye icon next to the Background and the Saturn and Ring layers to make them visible. Target the Saturn layer.
2. Open the file Red_Woman.psd from the Chapter 8 folder on the CD, and target the Red Costume layer.
3. In Red_Woman.psd, click in the second column next to the Red Women layer to link it with Red Costume.
4. Place your cursor on the Red_women.psd image. Press your mouse, drag the image ,and place it on the Flying_ Woman.psd document. Release the mouse and a new layer appears between the Saturn layer and the Ring layer.
5. Choose the Move tool and position the Red Woman and the Red Costume between Saturn and its rings.

There are 3 Different ways to drag layer and place them on another image. Make sure you use the right one:

- You can drag and individual layer from the Layers palette or from the image window to another image.
- To drag linked layers and maintain the linked relationship, you must target one of them and drag from the image window.
- To drag a layer set from an image, drag from the name or folder of the layer set in the Layer palette.

Apply a Style To a Layer

A drop shadow adds realism and depth to an image. Creating the drop shadow as a layer style is easy.

1. With the Red Woman layer targeted, double-click the layer to bring up the Layer Style dialog box.
2. Click the Drop Shadow option to display its control.
3. Set the following specifications, then Click OK.

Opacity➔63%

Distance➔13 px

Spread➔10%

Size➔5 px

Entering Type

Photoshop 6's Type tool is powerful for producing sophisticated text effects. Combined with Photoshop's layer styles, the graphic possibilities are endless.

1. Display all of the layers in the document by pressing the Option /Alt key and clicking the eye icon next to the background.
2. Choose the Type tool and enter the following specification in the Options bar:

Font	Helvetica
Size	100 pt

Anti-Alias	Smooth
Alignment	Centered
Color	Red

3. Display the character palette (Window ->Character, or click the palettes button on the option bar); in the palette set leading at 100 pt.
4. Click the image, somewhere between the galaxy and Saturn. (if necessary, you can reposition the type after you've entered it.) You see a blinking insertion point. Type this: amazing <return>flying women. When you're finished typing, click the check mark on the option bar. This will create a new typing layer named amazing flying women.
5. Change the settings on the option bar to font: Helvetica Bold, Size: 45, and color: yellow. Form the character palette pull_down menu, choose all caps.
6. Type the words: form outer space. Click the check mark in the option bar to create a new type layer. You text should resemble.

i) Warping Text

Photoshop6 lets you bend and twist type to any shape.

1. Target the amazing Flying Women layer and choose the text tool
2. Click the create warped text button in the option bar.
3. Choose style -> flag.
4. Enter the following values and click ok.

Bend	50%
Horizontal distortion	-34%
Vertical distorting	0%

5. Target the from outer space layer.
6. From the style list, again choose flag.
7. Enter the following values and click ok.

Bend	66%
Horizontal distortion	-24%
Vertical distorting	0%

8. In the layers palette, adjust the opacity of from outer space layer to 55% your text

should now look like.

ii) Applying Multiple Effects To Layer

We've seen how you can apply a drop shadow layer style to a layer. We 'll now apply several difference effects to a type layer.

1. Target the Amazing Flying Women layer.
2. Double click the layer to display the layer style dialog box.
3. From the style list on the left, click the name inner shadow. The check box is automatically checked, and the inner shadow controls are displayed.
4. set the following specification (use the default values for settings that aren't listed here):

Angle	63
Distance	8px
Choke	0%
size	5px

5. Click the bevel and emboss style. Set the following specification(Use the default for the remaining options):

Style	outer bevel
Techniques	smooth
Depth	201%
Direction	up
Size	5px
Soften	5px

6. Click the satin style.
7. Click the color overlay style.
8. Click the strike style. set the color to yellow, and use the default for the other settings.

Adjusting Opacity of A Layer Set

Now that all of the poster elements are in place, You can subdue the color of the planets so the flying women stand out more.

1. Link all of the planet layers except Saturn and rings. That includes Jupiter, Mars,

Uranus, Mercury, and Galaxy.

2. Make a new layer set by choosing, from the layer palette pull_down menu, new set from linked.

3. Name the layer set the planets.

4. In the layer palette, adjust the opacity of the planets layer set to 75%.

Merging Layers

IN order to reduce the file size and more efficiently manage your document, you can merge layers.

1. Click off the eye Icons next to all the layers but the blue, purple, and yellow layer sets. Target one of the layer sets.

2. Choose merge visible from the layers palette pull-down menu. The content of all three of the layers sets is merged into one layer. (Name that layer purple). Notice the reduction in the file size in the information field in the lower-Left corner of the image window.

3. Choose image -> duplicate. Name the new image Flying_Women_Flat.psd.

4. Be sure all layers are visible, and make a note of the file size in the information field in the lower-Left corner of the image window. From the layers palette pull-down menu, Choose flatten image. Notice the dramatic reduction of the file size.

5. Save the image

CHOOSING COLORS

Picking a color in Photoshop 6 is as simple as squeezing paint from a tube. It is a matter of choosing a color from one of Photoshop's three color interfaces. In addition you can sample color directly from an image.

There are two color swatches near the bottom of the tool palette, representing the current foreground and back ground colors. The swatch on the left is this foreground color, a which is applied by any of the painting tools. The default foreground color is black. The background color on the right is applied with this eraser tool or if you cut a selected portion of an image on the background. The default background is white.

You can reverse the fore ground and background colors by clicking the curved arrow to the upper _right of the swatches.

i)The color picker

`To choose the fore ground or back ground color, click its swatch; the color picker appears. The color picker lets you choose from four methods of defining your colors: HSB, RGB, Lab, and CMYK. Your main tool in the color picker is a vertical slider and a large colors field.

Hue: This is the position of the color on a color wheel. When the H radio button it's selected in the color picker, the vertical slider is displays in the spectrum of all of the available hues, and the color fields presents that hue's saturation and brightness variation. Notice that the top and bottom of the spectrum slider or both red. If you drag the slider to the top or bottom of the color bar, the values in the hue box are the same: 0 degrees. No, we are not taking the hue's temperature; we're determining its position on a color wheel. The vertical bar is actually a color wheel that has been cut and straightened at the 0 degree, or red, position drag the slider anywhere on the bar, notice that the hue values change the to a number between 0 and 360 degrees. As you move the slider, the field to the left changes color.

Saturation: The color field on the left determines the saturation and brightness of the hue. Saturation is the intensity of a particular hue. There are two ways to determine the saturation of color in the color picker: Enter the value in the saturation box, or click or drag within the coloe field. If the value in the saturation box is 100%, or if the circle on the color fields is to the far right, the color will be as intense as it can possibly be. If a 0 is entered in the saturation box, or if the circle is the placed at the far left of the field, the color will be gray.

Brightness: The value of the color is controlled in a simalar manner. Brightness is the lightness or darkness of a color.Lower values produce darker color,with 0% equaling black.Higher values produce lighter colors,with 100%equaling white when there is no colors saturation or the lightest possible combination of hue and saturation. Click toward the bottom of the color field to darken the color or toward the top to lighten it.

ii) Active parameters of colors

By default, the color picker opens in HSB mode with hue as the active parameter. The slider represents the colors (hues) on the color wheel, and the field represents the saturation and brightness of the selected hue. The color picker can be changed to display several different configurations: the color section of this book includes a side by side comparison of the color picker's appearance when using each of the value fields.

The color picker can be configured for HSB, RGB, Lab, and CMYK active parameters by clicking a radio button next to the desired model. Then vertical bar then represents the selected characteristic in the selected model When the S radio is active, for instance, active parameter of the color picker shifts to saturation mode and the vertical bar becomes a saturation slider. The color field now displays hue and brightness variations. If you click or drag in the field to the left or right, you affect the hue: if you click or drag up or down, you affect the brightness.

When the B radio button is checked, the active parameter of the color picker shifts to brightness, on the vertical bar becomes a brightness slider the color field now displays hue and saturation variation: clicking in field or dragging the circle to the left or right affect the hue and dragging it up or down affect the saturation.

In the case of RGB and Lab (lightness, a, b) when a color channel's radio button is selected the vertical slider displays the variation of the color within that channel, and the color field becomes the other two color is channels, one represented the horizontally and the other represented vertically.

The color swatch at the top of the color picker has two parts. The bottom of the swatch shows the current color setting: the top shows the color you have selected in the color picker

Specifying CMYK Colors

Let's say a client walks into your office and wants you to add a logo to an image with specific CMYK color values to correspond to the official corporate colors of her business. Once you have scanned to logo, you can define the colors in the color picker and fill the logo with the exact tint values of cyan, magenta, yellow, black needed to produce the corporate color.

To define and apply CMYK colors:

1. Click the foreground swatch to display the color picker.
2. Enter the CMYK %value in the boxes.
3. Click OK. The color appears as the foreground color.

4. Select the area to be filled.

5. Press option + delete (Mac) or Alt + Backspace (Win) to fill the selected area.

The CMYK Gamut Warning

You would think that because CMYK is represented by 4 color channels instead of three would be more colors available in this color mode. But in fact, a high percentage of black plus any combination of cyan, yellow and magenta usually yields black. This greatly limits the possibilities of CMYK. In fact, the CMYK gamut is so small that some colors can't be produce at all especially highly saturated one's the color section includes a schematic comparison of the gamut of visible, RGB, and CMYK Colors.

If you choose a color in HSB or RGB that is outside the printable range or gamut of CMYK, you will see the percentage values in the CMYK boxes. However, you will also see a CMKY Gamut Warning next to the swatch in the Color Picker. The small swatch blow the warning is a representation of how the color will print. Some CMYK colors, especially highly saturated colors, can vary significantly from their RGB counter part. If you get a warning, you may want to specify a different color for a close match, or be prepared to accept considerable variation of the color on the printed piece.

Specifying Web Colors

In HTML code, colors are coded with a combination of six hexadecimal digits so that WWW browsers can read and display them. Not all browses can display all colors you can use the Color Picker to assure that the colors you use are browser-safe.

To Specify a Web color, check the Only Web Color box at the bottom of the Color Picker. The color bar and color field then unique themselves to 216 Web-Compatible colors.

Like CMYK colors, Web colors have a very limited gamut compared to RGB. When the Only Web Colors box is unchecked, the Color Picker displays a Web Color Gamut Warning next to the large swatch in the Color Picker. The small swatch below the warning shows how the color will be seen on Web browser.

Specifying Custom Colors

The PANTONE Matching System is a group of inks used to print spot colors. where CMYK mixes only 4 colors to produce a full color a spectrum, PANTONE inks are solid colors used to print rich solid or tinted areas.

To specify a custom color:

1. Click a color swatch to display the Color Picker.
2. Click the Custom button to display the Custom Color dialog box.
3. From the Book pop-up list, choose the desire matching system.
4. Enter the color's number using the keypad. you can, instead, scroll through the color list using the slider; when you find the color you want, click it.
5. Click OK.

iii) Using color palettes

While the color picker displays all of the color characteristics and models in one integrated fields, it is sometimes cumbersome to use because it is not context-sensitive. A context-sensitive palette's will response immediately to your commands without having to click an OK button. But the color picker must be displayed by clicking the foreground or background swatch. You must then choose a color model and a color. Finally you must click OK. This process can be time-consuming because of the many steps involved. Instead, you may want to use the context-sensitive color and swatch palettes that conveniently float on the desktop.

The Swatches Palette

To display individual swatches of color, choose the Swatches palette from the palette cluster. Predefined color can be chosen, or new colors can be added and saved.

Swatches Technique	**How To Do It**

To Select a Foreground Color	Click it; the color will appear as the foreground swatch on the Tool palette
To Select a Background Color	Press the Option(Mac)or Alt(Win) key while clicking the color
Add Color	Place your cursor in the blank space below the color swatches. The cursor changes to paint can. Click your mouse, name the color and the foreground color will appear in the palette as a new swatch.
To Delete a Color	Press the Command (Mac) or Ctrl(Win) key and click the swatch. Or, control-click (Mac)or right-click(Win) and select Delete Swatch from the shortcut menu.
To Save a Swatch Palette	Once you have added colors to the swatches, you may want to save the palette for use in other documents. From the Swatches palette menu, choose Save Swatches. Designate a folder in which to store your palette
To Load Swatches	To access a saved palette, choose Load Swatches from the Swatches palette menu. You can then access the Swatch from folder in which you saved it, or choose a specific palette like PANTONE, Focoltone , ANPA, or Web Save Colors from the list.
To Reset Swatches	The Reset Swatches command on the palette menu restores the swatches to the Photoshop default palette.
To Name a Swatch	Color Swatches can be named for identification. To name a swatch, double-click it and enter the name in the Swatch Name dialog box. Or

	Control-click (Mac) or right-click (Win) and select Name Swatch.

iv) Sampling Colors

Foreground and background colors can be specified by sampling directly from the image. To sample a color, choose the Eyedropper from the Tool palette and click or drag across the image. As you drag, notice that the foreground swatch changes to the color the eyedropper is touching. To sample a background color, hold down the Option or Alt key as you click.

Creating Brushes

Photoshop provides you with many brushes that apply color to your image in a variety of ways. In addition, you can create new brushes and control their size, hardness, spacing, roundness, and angel you can also make custom brushes in virtually any shape.

In Photoshop 6, the brushes are display on the left side of the Options bar of all of the painting and editing tools. Choose a brush, choose a painting tool, click the small arrow to the right of the Brush icon in the Option bar to expand the panel, and then click the desired icon. The currently loaded brushes are displayed as icon in a grid.

From a pull-down on the expand Brush panel, you can add new brushes to the palette, change the characteristics of existing brushes, and name brushes .As with Swatches, you can and load brushes as well.

i) Make a New Brush

From the Brush pull-down menu, choose New Brush and a dialog appears. Adjust the following characteristics.

Diameter Determines the size of the brush, from 1 to 999 pixels. Higher resolution documents need larger brushes; f or eq, a 72 pibrush on a 72 ppi document will paint a stroke 1 inch in diameter .the same brush will paint a half-inch stroke on a 144 ppi document.

Hardness Specifies the gradient transition of the edges of the brush,0%to 100%.

Spacing Affects how frequently the color is deposited as you drag, from 0% to 100%.

Roundness Affects The shape of the brush, from 0% (a line) to 100%(a full circle).

Angel Determines the angle of the brush store if you have modified its roundness so that it political. Angel values range from+180 degree counterclockwise from horizontal to-180 degree clockwise from horizontal.

ii) Modify an Existing Brush

If you wish to change the characteristics of an existing brush, click it in the brush palette; its icon will appear in the Options bar. Now, click the Options bar icon to display the Brush Characteristics dialog box, which is similar to the New Brush dialog. Make the desire adjustment to the brush, then close a dialog by clicking the icon in the upper –left corner.

iii) Create a Custom Brush

A brush of virtually any shape can be made from a selected piece of your image and later be used to clone an area of the image or paint it with a texture. The process of creating a custom brush has changed significantly in photo shop6 in that the brush shape now needs to the isolated on a separate layer.

To create custom brush, follow the steps:

1. Select an area of an image. Choose layer-> new -> via copy to isolate it to a transparent layer.(you can also paint on a new layer or copy and paste an image to an new layer)
2. Choose edit -> define brush. The brush name dialog box appears.
3. Name the brush and click OK. The new brush dialog box appears.(no, you're not confused -naming the brush brings of the new brush dialog, which also has a name field. These could have been combinated into one dialog box.)
4. Choose a desired spacing and click OK. The brush appears on the brush palette.
5. Choose a painting tool. Choose the custom brush from the brush palette, choose a color, and paint with brush. The brush image is content of the entire layer.

USING THE PAINTING AND EDITING TOOLS

The painting and editing tools are used to manually apply color or to modify an area of the image. You can access the painting and editing tool by clicking them in the tool palette or by pressing the appropriate letter key on the keyboard.

i) The Painting Tools

The painting tools include the Airbrush, paintbrush and pencil; these tools are designed to simulate real studio painting techniques.

Airbrush (Shortcut Key-J)

Use the airbrush to spray color. By placing your cursor on the image, clicking your mouse, and dragging, you can spray a pattern of color. If you drag slowly or stop dragging the color will build just like a real airbrush. You can adjust the pressure of the airbrush in the options bar, which controls amount of color that is deposited.

Paintbrush (B)

You apply color to the image with the paint brush by clicking your mouse Button and dragging. By default, the stroke is a solid color. You can adjust the characteristics of the tool to alter quality of the paint stroke.

Opacity The transparency of the stroke is controlled with the opacity slider from 0% to100%.When painted on a colored surface, the transparent of translucent stroke will reveal the pixels underneath it.

Wet Edges this adjustment provides a water color stroke that looks as though the color is concentrated along its edges and translucent in its center.

Pencil (B)

The pencil is the only tool that produces an aliased or hard-edged stroke. Use the pencil to draw crisp horizontal or vertical lines or stair-stepped diagonals.

Like the paint brush, you can adjust the opacity or assign a color mode to the stroke.

You can use the pencil as an eraser by checking the auto eraser box. If you start painting an a area containing the foreground color, the auto erase function replaces it with background

color. If you start painting on an area containing any color other than the foreground color, the pencil paints with the foreground color.

ii) The Editing Tools

The editing tools include the clone stamp, pattern stamp, history brush, Art history brush, eraser, background eraser, magic eraser, blur, sharpen, smudge, dodge, burn, and saturate tools. While the editing tools don't apply the color directly to the image, they are essential for manipulating small regions with in the image and modifying existing colors.

Clone Stamp (S)

To clone an area,you must 1st sample it:

1. Choose the Colne Stamp from the Tool paletee.
2. Choose an appropriate brush from the Bush menu on the Options bar.
3. Press the Option(Mac) or Alt(Win) key and click your mouse on the point that you want to copy.
4. Release your mouse and reposition the cursor were you want sample to be painter.
5. Click your mouse and begin painting. As you paint, that tool will begin coping the point of the image that was sampled.A small cross will indicate the area that is begin copied as you drag the brush across the image.

Pattern Stamp(S)

Use the pattern stamp to paint an area with a repeating pattern that you choose from the pattern pull-down menu on the options bar.

Check the aligned option to maintain the alignment of the brush with the pattern. Each time release the mouse, move the brush, and resume painting, the alignment of the pattern continues. If aligned is unchecked, the image time you click, the center of the pattern till will again the source of the new image.

History Brush(Y)

The History Brush restores a portion of the image to a formal state. Choose the History Brush and target a state in the History palette, choose a brush size, press the mouse and drag across the image.

Art History Brush(Y)

This tools is quite handy for creating instant Impressionists effects. When you paint with the Art History Brush,color is deposited rapidly in several directions. Choose from a list of characteristics in the Options bar that affect the style of the stroke and the rapidity in which it is deposited.

***Style** Determines the size and shape of the strokes that art deposited. Choose from a list that includes Tight,Loose,Short,Long,Dabs,and Curls.

***Fidelity** Is a percentage(from 0% to 100%) that affects the color of the stroke and how close it will be to the color on which your painting. Higher values produce more monochromatic affects,and lower values produce more color variation.

***Area** Determines how wide a region the strokes will be deposited over, from 0 to 500 px. Higher –resolution files need higher values.

***Spacing** Control the freequency(from 0% to 100%) at which the stroke is deposited as you drag. Dragging faster produces wider gaps between stroke clusters.

Eraser(E)

The Eraser performs differently depending on whether you're working on the Background or a layer.when working on the Background,the Eraser replace the area with the background color in the Tool palette.When erasing to a layer,it replaces the layer content with transparency.if the transparency option on the layer is locked,then the pixels are replaced with the background color.

The Eraser offers 4 modes in which to work:Airbrus,Paintbrush,Pencil,or Block. The characteristics of each tool are inherent in the erasure. For eg,if you choose the Wet Edges option in paintbrush mode, the Eraser erases to a watercolor effect.

You can erase the image back to a history state by clicking the 1st column in the history palette to set a source and choosing the Erase To history option from the options bar.

Background Eraser(E)

The Background Eraser tool is a combination of the Magic Wand tool and the eraser,in that it lets you sample and set a tolerance to determine what range of color will be erased. You can also determine the sharpness of the remaining edges. The Background Eraser erases to transparency of a layer,or automatically converts the Background into a layer when applied there.

1. **Erasing Modes** Control what pixels will be erased. Choose:

   @ **Discontiguous** To erase all of the pixels within the tolerance range on the entire layer.

   @ **Contiguous** To erase pixels of the sampled color that are adjacent to each other.

   @ **Find Edges** To erase pixels of the sampled color that are adjacent to each other but better preserve the sharpness of the edge pixels of the remaining iamge.

2. **Tolerance** Controls the range of colors to be erased. Low tolerance erases colors that are similar to the sampled colors : High tolerance erases to colors that are more diverse in range.

3. **Sampling Option** Determines the method in which the colors will be chosen

   @ **Continues** Sample color continuously as you drag, erasing area‘s of different colors.

@ **Once** Samples a color when you 1st click and then continues to erase only that color. Use this option to erase areas of solid color.

@ **Background Swatch** Erases areas that are the current background color.

Magic Eraser(E)

The Magic Eraser erases all px of similar color within the Tolerance range when you click the color you want to erase . It allows you isolate the erasure 2 specific colors.

1. **Tolerance** In the options bar controls the range of colors to be erased. Low tolerance erases color that are similar to the sampled colors ; High tolerance erases to colors that are more diverse In range.

2. **Opacity** Determines the strength of the erasure.

3. **Contiguous** Determines what px will be erased. When checked, you erase only adjacent px of the color. With Contiguous unchecked,the magic eraser erases all px of the color on the layer.

4. **Use All Layers** Determines where the information will be erased. With this option checked,the magic eraser erases through all of the visible layers ; without this option, it erases only the px on the target layer.

Blur(R)

The blur tool soften the region us you apply it by decreasing the relative contrast of adjacent pixels. Use it to blend colors and soften edges,or to reduce focus of a background. Increase the pressure setting in the options bar to strengthen the effect.

Sharpen(R)

The sharpen tool increases the relative the contrast values of adjacent pixels. As you drag over an area, the px randomly change color. Sharpening fools your eyes into thinking and image is in focus. This tool can be used to enhance portions of an image that you want to emphasize,or as a quick fix for photographs that are slightly out of focus.

Smudge(R)

Use the smudge tool to simulate charcoal or pastel effects . As you drag with the smudge tool,you move one area of color into another while blending and mixing the colors as you move them.

Dodge(O)

Dodging is a technique used by photographer in the darkroom to overexpose or lighten specific areas of an image. In photoshop,the dodge tool performs a similar function by increasing the brightness values of pixels you paint with it. The effect on the specific range of tonality by choosing Highlights,Midtones, or Shadows from the range pull-down menu.

Burn(O)

Photoshop's burn tool darkens by lowering the brightness values of pixels as you move it over the image .As with dodge tool, the options bar lets you pick a range of px to effect by choosing Highlights, Midtones, or Shadows from the menu.

Sponge(O)

The sponge tool changes the intensity as it touches pixels. From the Option bar, choose either Saturate to enhance a color or desaturate to diminish the color and push it toward gray.

iii)Brush Dynamics

The behavior of all of the painting tools can be controlled from the brush dynamics menu on the right side of the options bar. This control lets you fade ,taper, or changed the color of a stroke over a specified distance.

Choose from the following characteristics:

Size Specify a number of steps to gradually taper the thickness of the brush stroke until it disappears.

Opacity Set a number of steps to gradually fade the brush until it completely disappears.

Color Enter a number of steps gradually fade the foreground color into the background color.

iv)Color Blending Modes

Blending modes control the relation of the color that is begin apply to the existing colors on the image. The normal blending mode, at 100% opacity, applies in a color as if it were painted straight out of a tube.

v)Painting Tools Shortcuts

Here are a couple of shortcuts that will increase your dexterity in handling the painting tools and performing tasks the would be otherwise impossible. For horizontal and vertical lines, press the Shift key as you drag up or down, left or right. for straight line in any other direction, click and release your mouse, then move the cursor to a new location as shift-click

Making and Applying Gradients

The ability to gradually blend color is essential to the credibility of a realistic image. Photoshop gradient blend multiple color into each other or into transparency over a specified distance.

i) Choosing Gradients

Choose the gradient tool from the tool palette .At the far left is a preview bar, or gradient swatch, with a down –arrow ; clicking in this swatch calls are in the gradient editor, while

clicking the arrow pops up a similar gradient picker panel. Both display all saved gradient, beginning with the several preinstalled gradients. The default gradient creates a fill that blends from the foreground color to the background color. Use it to gradually fade a single color or multiple colors.

If you click the arrow at the upper-right of the gradient picker path – up panel, you will display the gradient options pull – down menu. The second group displays different ways of view the gradient in the menu at the bottom of the menu is a list of additional pre-made Photoshop gradients.

Gradient Type	**Effect**
Linear	applies a continual gradient over a specified distance from beginning point to end point.
Radial	radiates around a center point to its end point.
Angle	radiates counter clockwise around a center point.
Reflected	creates to linear gradients on each side of a center point.
Diamond	radiates from a center point into a diamond blend.

ii) Making Custom Gradients

Use the gradient editor to edit existing gradients or make new custom gradients and add them to the list. You can also save and load entire gradient palettes from the gradient editor or from the preset manger.

Call up the gradient editor by clicking the gradient swatch in the option bar. Click a gradient in the preset list to select it. T he gradient preview bar shows the gradient's colors, there proportional distribution, and the position of any transparency. These characteristics can be editor.

Editing Gradient Color

The house shaped makers alone the bottoms of the color bar are color stops, used to determine where a solid color ends and where a gradient begins. You can assign a color to a color stop by clicking it to highlight it. Move the cursor off the gradient editor and on to the image, the color palette, or this swatchs palette to sample a color. Another method of choosing a color is to double click the swatch in the stops area: the color picker will be displayed .To

redefine a stop's location, drag it left or right set a value In the location field as a %of the gradient length.

To an add a color to a gradient, click underneath the preview bar and a new color stop will appear. Determine a color for a color stop, drag the stop into position, and adjust the colors midpoint. To delete a color drag its color stops off gradient editor.

Editing Gradient Transparency

The house shaped markers alone the top of the gradient preview bar determine were transparency ends and where it begins. To blend transparency into the gradient, click a transparency stop and enter a % value in the opacity field drag a stop to determine its location or enter a number in the stops area.

If transparency is set anywhere along the gradient, a diamond on top of the preview bar marks the center point of the transparency range. Move the midpoint to redistribute the portion of transparency in the gradient.

To add transparency to a gradient, click above the color bar. Determine an opacity value in the Opacity field, move the stop into position, and adjust its midpoint. To delete a transparency, drag the transparency stop off the Gradient Editor.

Editing an Existing Gradient

1. Choose the Gradient tool and click the gradient swatch on the Options bar to display the Gradient Editor.
2. At the top of the Editor is a list of Presets-the gradients that have already been saved. Double-click the gradient you want to edit. The Gradient Name dialog box appears. If desired, enter a new name and click OK.
3. On the preview bar in the Gradient Editor, you see the configuration of color and transparency of the selected gradient as determined by the number and position of the color and transparency stops and the midpoint diamonds. Slide the stops to the left or right to adjust the color or transparency proportions. Slide the midpoint diamonds to adjust the centers of the blend.
4. Add a color by clicking under the preview bar to create a new stop.
5. Double-click the stop to display the Color Picker. Choose a color for the stop and click OK.

6. When satisfied with the edited gradient, click OK to leave the Gradient Editor. The edited gradient now appears in the Option bar.
7. Choose a Gradient tool, click in the image, and drag. Release the mouse to apply the gradient.

Making a Noise Gradient

The Noise option under Gradient Type in the Gradient Editor adds random colors to a gradient depending on the predefined colors you choose. The result can be somewhat unpredictable, so experiment to achieve the best results. To create, a noise gradient

1. In the Gradient Editor, under Gradient Type, choose Noise.
2. For Roughness, choose or enter a percentage. This will determine the strength of the noise.
3. Choose a color mode or model-RGB, HSB, or Lab. The effect will vary significantly with each system.
4. Check Restrict Colors to prevent oversaturation.
5. Check Add Transparency to create a transparent gradient.
6. Click Randomize to preview variation of the effect.

Creating a New Gradient

1. Click the gradient swatch on the Options bar to display the Gradient Editor.
2. Click the new button. The name field displays the name of the currently selected gradient, and the preview bar displays its properties.
3. Enter a name for the new gradient
4. Target each of the color or transparency stops and change their colors and locations as described under "Editing an Existing Gradient"
5. Add color or transparency stops if desired by clicking under or over the preview bar
6. click OK to finalize the gradient and to select it into the gradient swatch

iii) Applying Gradients

All gradients are applied over a specified distance. You choose the gradient tool, click the image where you want the gradient to start, and drag in the desired direction. Release the mouse where you want the gradient to end. You will fill a selection if one is active or the entire

Background or layer if no selection is active. The distribution of the gradient depends on its color content and the position of the stops, but just as important are the placement of the cursor and the length and direction you drag on the image

PART-B

POSSIBLE QUESTIONS(8 Marks)

1. Discuss about Displaying Images in Photo shop.
2. Illustrate about Making & Applying Gradients.
3. Explain in detail about Rulers, Guides & Grids.
4. Discuss about Painting & Editing Tools
5. Explain in detail about Navigation shortcuts.
6. How can you create animated artwork images with beautiful lighting in Photoshop
7. Discuss about Creating Brushes in Photo shop with a neat sketch
8. Write about displaying the images with a neat sketch

KARPAGAM ACADEMY OF HIGHER ED

Pollachi Main Road, Eacharani Post, Coimbatore-6

CLASS : III-B.Sc COMPUTER SCIENCE(2

Online Examination

MULTIMEDIA SYSTEMS(15CSU504

Sno	Questions	opt1	opt2	opt3
1	Which among the following is not the selection tool	marquee	Move	lasso
2	Which among the following is not the Painting tool	Airbrush	Lasso	Pencil
3	_____ enables to combine images and create collages by working on one part of an image at a time	channel	Layer	swatces
4	_____ sketches is an artist's term for a small version of a picture	List	Details	Thumbnail
5	The _____ Tool is used to select adjacent pixels based on color similarites	crop	Single column marquee	Magic Wand
6	When you have to select irregular shapes _____ tool is used	crop	Single column marquee	Magic Wand
7	_____ tool creates hard-edged lines	Airbrush	paintbrush	eraser
8	_____ tool sprays paint or pixel on the canvas	Airbrush	paintbrush	eraser
9	_____ tool is applied more evenly and is the arthouse of all painting tools in Photoshop	Airbrush	paintbrush	eraser
10	A photo edit of shrinking is considered in the _____ category of edits.	Resize and Focus	Enhancements and Layering	Color
11	_____ is the process of changing the photo to make it most effective for its purpose.	Magnification	Zoomify	Maximization
12	_____ option works the same as holding down the shift key when new selection is active	subtract from selection	intersect with selection	feather

13	_____ option removes all of the selected areas except for those included in your new selection	subtract from selection	intersect with selection	feather
14	_____ setting determines whether the edges of the selected area are sharp or blurred	Anti-aliasing	intersect with selection	feather
15	The _____ option determines whether the edge of the selected area is smooth or jagged	Anti-aliasing	intersect with selection	feather
16	New layer set creates a _____ inside the layer palette	scene	task	Frame
17	The Opacity setting allows you to change the opacity of your layer from invisible ____ to opaque	25% to 75%	0% to 50%	0% to 100%
18	_____ lets you select a specific color in an image for use another part of your image	slice	crop	eyedropper
19	The ratio of the height and width of the actual document	aspect ratio	matrix ratio	reference ratio
20	_____ lets you distort type to conform to a variety of shapes	pencil	Warping	air brush
21	_____ Stores saved brush tip settings, such as brush size, hardness, and airbrush, and the brush options available in the Brushes palette.	Tool Presets picker	Paint	Brush Presets picker
22	_____ Stores saved settings of a brush tip preset, other options from the options bar such as opacity or blending mode, and paint color.	Tool Presets picker	Paint	Brush Presets picker
23	The window containing an open file is also called the_____	document window	screen window	dialog box
24	_____ tool removes the red reflection caused by a flash.	The Healing Brush	Patch	The Clone Stamp
25	The _____ tool paints with a sample of an image.	The Healing Brush	Patch	The Clone Stamp

26	The _____ tool repairs imperfections in a selected area of an image using a sample or pattern.	The Healing Brush	Patch	The Clone Stamp
27	The _____ tool paints with a sample or pattern to repair imperfections in a image.	The Healing Brush	Patch	The Clone Stamp
28	The _____ changes the color saturation of an area.	Sponge tool	Smudge tool	Sharpen tool
29	The _____ smudges data in an image.	Sponge tool	Smudge tool	Sharpen tool
30	he _____ sharpens soft edges in an image.	Sponge tool	Smudge tool	Sharpen tool
31	The _____ erases pixels and restores parts of an image to a previously saved state.	Eraser tool	Background Eraser tool	Magic Eraser tool
32	The _____ erases areas to transparency by dragging.	Eraser tool	Background Eraser tool	Magic Eraser tool
33	The_____ erases solid-colored areas to transparency with a single click.	Eraser tool	Background Eraser tool	Magic Eraser tool
34	The _____ paints a copy of the selected state or snapshot into the current image window.	Paint Bucket tool	Art History brush tool	History Brush tool
35	The _____ paints with stylized strokes that simulate the look of different paint styles, using a selected state or snapshot.	Paint Bucket tool	Art History brush tool	History Brush tool
36	The _____ create straight-line, radial, angle, reflected, and diamond blends between colors.	Paint Bucket tool	Art History brush tool	History Brush tool
37	The _____ fills similarly colored areas with the foreground color.	Paint Bucket tool	Art History brush tool	History Brush tool
38	_____palettes is used to adjust the zoom level of an image	swatches	Navigator	layers
39	_____tool is a fast way take a closer look at the image.	hand tool	image tool	zoom tool
40	_____shortcut key is used to zoomin	alt/spacebar	ctrl/spacebar	enter/spacebar

41	_____shortcut key is used to zoomout	ctrl/spacebar	enter/spacebar	shift/spacebar
42	There are_____types of selection tools	5	2	4
43	_____selection tools selects a single line of pixcels vertically	single row tool	single column tool	rectangle tools
44	_____selection tools selects a single line of pixcels horizontally	single row tool	single row tool	rectangle tools
45	_____tools draws free form selection	lasso tool	elliptical tool	polygonal tool
46	_____tool is used to create straight edged selection borders.	lasso tool	elliptical tool	polygonal tool
47	_____tools makes a selection based on the contrast values of pixcels.	slice tool	magnetic tool	polygonal tool
48	The default foreground color is	red	white	black
49	The default background color is	red	white	black
50	In HSB top and bottom of the spectram slider are both___	blue	green	red
51	The hue value is changes from _____	0 to 80	0 to 360	0 to 30
52	If 0 is entered in the saturation box, the color will be___	gray	red	white
53	If 0 is entered in the brightness box , the color will be___	gray	red	white
54	In HTML code, colors are coded with a combination of __hexadecimal digits.	1	4	6
55	Brushes are displayed on the _____of the option bar.	top	bottom	right
56	In the brush pull bown menu, diameter determines the size of the brushes from _____	1 to 350	1 to 100	1 to 99

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opt4	Answer
Eraser	**Eraser**
Rubber Stamp	**Lasso**
path	**Layer**
Icons	**Thumbnail**
Magnetic Lasso	**Magic Wand**
Lasso	**Lasso**
Pencil	**Pencil**
Pencil	**Airbrush**
color picker	**paintbrush**
Correction	**Resize and Focus**
Optimization	**Optimization**
Add to Selection	**Add to Selection**

Add to Selection	**intersect with selection**
Add to Selection	**feather**
Add to Selection	**Anti-aliasing**
folder	**folder**
negative to positive	**0% to 100%**
magic wand	**eyedropper**
max_ratio	**aspect ratio**
pencil brush	**Warping**
Brushes palette	**Brush Presets picker**
Brushes palette	**Tool Presets picker**
full screen	**document window**
Red Eye	**Red Eye**
Red Eye	**The Clone Stamp**

Red Eye	**Patch**
Red Eye	**The Healing Brush**
Dodge tool	**Sponge tool**
Dodge tool	**Smudge tool**
Dodge tool	**Sharpen tool**
Sharpen tool	**Eraser tool**
Sharpen tool	**Background Eraser tool**
Sharpen tool	**Magic Eraser tool**
gradient tools	**History Brush tool**
gradient tools	**Art History brush tool**
gradient tools	**gradient tools**
gradient tools	**Paint Bucket tool**
history	**Navigator**
slice tool	**zoom tool**
shift/spacebar	**ctrl/spacebar**

alt/spacebar	**alt/spacebar**
3	**4**
double row tools	**single column tool**
double row tools	**single row tool**
slice tool	**lasso tool**
slice tool	**polygonal tool**
lasso tool	**magnetic tool**
gray	**black**
gray	**white**
black	**red**
0 to 100	**0 to 360**
black	**gray**
black	**black**
8	**6**
left	**left**
1 to 50	**1 to 99**

UNIT-IV

SYLLABUS

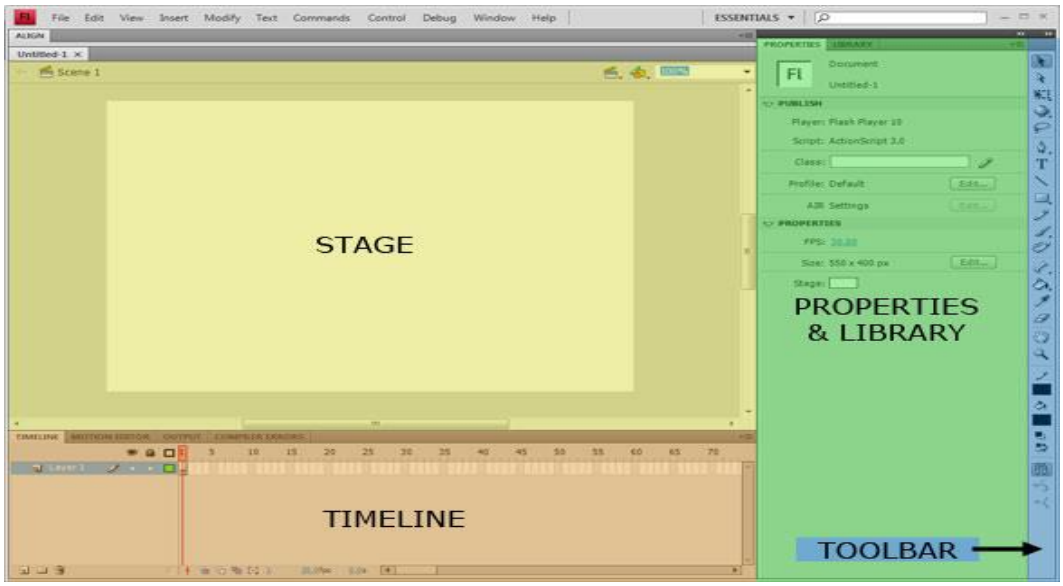
Introduction to Flash: Variables & data types- Data types in Action Script-Creating and placing variables – Buttons with text fields.

INTRODCTION TO FLASH

Macromedia's popular application Flash has redefined the way web developers approach web design. With flash the web developer is now able to create a user experience that is rich in media and relatively quick loading, especially compared to traditional methods like GIF animations.

Websites made up of music, videos, and custom, graphic intensive interfaces are all possible with Macromedia Flash. In flash you can create unique text, animations, movies, web applications, games and more. Although flash is somewhat more complex than traditional web development technologies like HTML and CSS, this tutorial will give you the basics you need to immediately get started with designing your own flash projects.

Flash is an incredibly powerful program that has seemingly endless potential. Flash can be used for creating games, making presentations, animations, visualizations, webpage components, and many other interactive applications. Some of the Flash interface components will look familiar to you, as they have the same functionality as other Adobe applications. However, Flash requires a certain mindset to work in it properly, especially when animating with vector graphics and coding with action script 3.0.



Action script:

Adds interactivity and/or playback efficiency to a movie via coding.

General characteristics of the ActionScript:

1) ActionScript is an object-oriented programming language. The approach focuses on treating all of the elements in a program as an object.. A scene,frame, a text box, a drawing, and a symbole are all Actioscript objects. The objects have attributes that can be altered by actioscript and each object has a unique ID that can be referenced by Actionscript. Objects can live in hierarchy. An object can be made up of several other objects.

2) The ActionScript is very similar to the Javascript; if you know Javascript, the syntax and the style of ActionScript will seem imediately familiar to you. You can find the differences between both languages in the help that accompanies Flash.

In most cases, it will not be necessary "to program" indeed, Flash places at our disposal an impressive collection of "functions" already implemented that do what we looked for. It will be enough to place them in the suitable place.

3) ActionScript is a modular programming language. This means that the scripts are little modules that do particular things such as stop or play a movie.Each

module stands alone but is related to the rest of the flash movie. Actionscript involves understanding where and how to use familiar programming structures such as conditionals, arrays and loops.

VARIABLES & DATA TYPES:

One of the fundamental components of any kind of programming is the variable. As the name implies variable change .the best way to think of a variable is as box of different things .in programming variables store data of different sorts with different values

For example: a pet store can be considered a variable because its contents may change initially the pet store (variable)may sell only puppies .waiting to expand the owner of the pet store may decide to offer kittens ,fish, birds, and lizards as well as puppies. The pet store (variable)is the same store with the same name but it has different mix of animals therefore its quality has changed.

Is the variable going to store text ,integers or floating point numbers.Actionscript automatically deals with different types of data stored in variables.

NAMING VARIABLES:

The name to select for a variable should give a clue to what the variable does. Name such as “Variable A” Variable B” and so forth are virtually useless.

Variables must be a single string of connected characters with no spaces between the words Variable name such as “petstore” or “johnsmith” are not acceptable however “petstore”,pet_store”or “petstore” are moreover Action script is not case sensitive if a variable is named petstore you can use “PETSTORE” or “petstore” to call the variables current value.

However “pet_store will not be recognized as the same variable as petstore because it contains an extra characters the underscore. This lack of case sensitivity makes it easier

Another naming convention you need to consider in naming Variable is the use of reserved words or keywords .the keywords in the action script vocabulary cannot be used as labels variable names, or function name.

Break continue delete else for function if in new return this type of var void while with

Keywords are as follows:

- break
- continue
- delete
- else
- for
- function
- if
- in
- new
- return
- this
- typeof
- var
- void
- while
- with

Two more terms-true and false-are Boolean literals, which also cannot be used.

ARRAYS:

A Special type of variable called an array and is now part of ActionScripts structure. Arrays are similar to variables. It is a containers for data, except that they can hold more than one piece of data, each element(piece of data) is referred to by an index. Arrays can be used to keep your scripts more organised, they are usually used to group together multiple values that are in some way related to each other, the values use an index to distinguish them from each other. Suppose you wanted to write out 3 quotes for use in your movie and use variables for each quote. Arrays have one or more dimensions. Objects are a collection of properties and those properties are the array elements. For

example, a simple or one dimensional array named “Fruit” has four elements and looks like the following

Ex:

Fruit[0]=”apples”

Fruit[1]=”oranges”

Fruit[2]=”peaches”

Fruit[3]=”pears”

VARIABLES & DATA TYPES: DATA TYPES IN ACTION SCRIPT

STRINGS

A variable of type String is made up of any combination of alphanumeric characters (a-z, A-Z, 0-9). The value of a string (its sequence of alphanumeric characters) must be enclosed in quotes, either single or double , when the value is assigned to a variable. One string may be concatenated to another with the "+" operator. Strings used as messages. For example, a string in a variable can be

Airplane=” Cessna Cardinal”

The variable is “Airplane” and the string literal is “Cessna Cardinal”. A literal is the raw data that goes into a variable. A string can be a numeral such as ,

StreetNumber=”250”

The variable “StreetNumber” is just another string literal that consists of numeric characters. Any alphanumeric string of characters is a string. The phrase “string of characters” means that it can contain most punctuation marks and spaces as well as alphabetic characters and numbers can be used in any combination..

Expressions:

Here are some example string operations.

- Set variable excerpt_str to be the 3rd to 5th characters in string phrase_str

```
var excerpt_str:String = phrase_str.substr(2, 3);
```

- Set variable found to true if string main_str contains another string ('abc')

```
var found:Boolean = (main_str.indexOf('abc') >= 0);
```

- Save the numeric position of the start of findme_str within phrase_str in variable posn

```
var posn:Number = phrase_str.indexOf(findme_str);
```

- Get length of (number of characters in) string phrase_str and save it in phraselen

```
var phraselen:Number = phrase_str.length;
```

- Concatenate strings city_str and state_str into another variable, citystate_str

```
var citystate_str:String = city_str + ", " + state_str;
```

- Make string lowercase

```
word_str = word_str.toLowerCase();
```

- Append a string to an existing string

```
citystate_str = citystate_str + "  " + zipcode_str;
```

or, abbreviated:

```
citystate_str += "  " + zipcode_str;
```

- Replace piece of string ("Main" with "18th") in addr_str

```
var addr_str:String = "402 Main Street";
addr_str = addr_str.split("Main").join("18th");
```

EXPRESSIONS

Expression are considered compound because they contain more than a single element in action script.

Total=7+5;

The value of “total is 12 the expression is compound but the value of total12 because it is not broken down into its component properties.

STRING CONCATENATION

Two or more string are joined together the process is know as concatenation .all concatenation are treated as expression in action script the added operator + or the string operator add joins string

The expression: both=”johnnie”+”Sally”;

: both=”johnnie”add”Sally”;

Result in “johnnieSally “ the value of the variable “both” become “johnniesally” concatenation is very useful when putting together strings that go together such as first and last names.

BOOLEAN EXPRESSIONS

Boolean expressions can also be used in action script the result of a Boolean expression In flash are 0(no false) or 1(yes true).named after george boole a brilliant British mathematician

For ex : the following variable “Bigger” declares that 10 is greater than 15 because that’s not true the variable”Bigger”is false

Bigger=10>15;

Boolean Objects

Boolean literals are very smart if you assign a Boolean value to a variable

Boovar=9<10;

The result is true but it can also be interpreted as a 1

The Boolean object acts as a container for the Boolean properties. three Boolean objects are available in action script:

1. new Boolean(0-Acts as a container for the Boolean property.
2. toString()-Converts Boolean literal to string “true” or “false”
3. valueOf()=Returns the Boolean primitive

The following script uses all three objects.

1. The variable "booVar" provides a name for the Boolean object with the contents of the Boolean literal "true" or "1" because 8 is greater than 7.
2. The variable "s" then stores the string literal of "booVar". Which is true.
3. The variable "v" stores the primitives value of "booVar" which again is the Boolean literal of "true" or "1".
4. The variable "textVal"uses the plus sign(+), whish works like ass for concatenation. Because adding a string to anything else returns the string and the number as a string, the outcome should be "true2."
5. When the Boolean literal is treated as a value, the results should be 3(1+2=3) and stored in the variable "realVal".

```
booVar=new Boolean(8 > 7);
s=booVar.toString();
v=booVar.valueOf();
textVal=s+2;
realVal=v+2;
output=textVal+newline+realVal;
```

The variable "output" is a textfield sothat the results show on the screen.

NUMBERS

Numbers are pretty straightforward unlike strings numbers must be written only as such .A variable defined as a numbers is a number and has all the properties of a number. Numbers can have positive or negative values. you can create a variable that includes both positive or negative.

```
Nuts=-5+15;
```

INTEGERS

Integers are simply whole numbers with any decimals lobbed off. in creating variables you do not have to declare what type of variable you are using. To create integers however you must tell the variable that the numbers are to be treated as integers. an integer is declared as such by using the integer function

For ex:

Whole=int (allstuff/parts);

REAL NUMBERS (FLOATING POINT)

To avoiding losing those added decimals and to have greater accuracy most programmers use real or floating point numbers .The default character of numbers in action script is floating point.

Movie Clips:

The final type in Action script is the movie clip. Unlike other data types, it is only one That references a graphic. Like arrays, movie clips(MCs) have their own methods that can be used with the Movie Clip object. MCs can issue actions only to other MCs or go to a specific frame.

The following are examples of MovieClip objects.In this example the instance name "flame" is a reference of the MC.

flame.getandstop(8);

flame.gotoandplay(6);

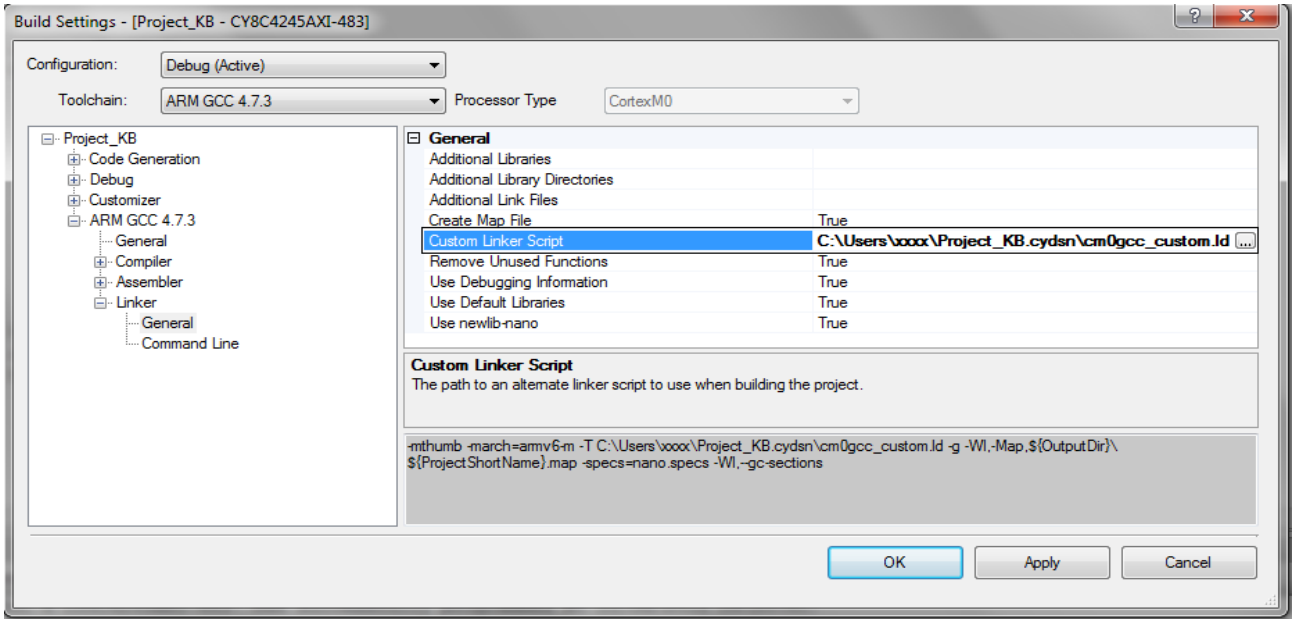
flame.play();

flame.stop();

flame.nextframe();

CREATING AND PLACING VARIABLES

That you have an idea of the data types you need a way to get them into an action script and use them in flash. Flash tries to make this easy with the action script editor in the action panel but variables are also associated with text fields.



Example using both types of variable placement and setting so pull out flash and follow these instructions:

1. Create a new page in flash.
2. double click on layer1 and rename it “sales tax”
3. Select window |panels|text options from the menu bar to bring the text options panel to the screen. Create a text field by selecting the text tool from the tools window .With the text filed selected choose dynamic text from the pulldown menu in the text options panel
4. in the text options panel window select html and border/bg checkboxes
5. in the variable window type in the word “result”

placing a text field on the stage is a great utility and learning tool with variables when the flash movies runs you can see whats going on in your action scripts by assigning different

values to the text variables .Because no action script is written the next step is to place on action script in the action script editor.

1. Click on the keyframe in frame 1.
2. Select window|Actions from the menubar or ctrl+Alt+A(windows)/Cmd+option+A(Macintosh) to open the frame actions window and the action script editor.
3. in the left pane of the action script editor you will see basic action and action folders among other folders click on the actions folder to open it.
4. Double-click on set variable from the action list.
5. At the bottom of the action script editor in the right panel you will see variable name and value

The following script set the remaining variables and their values.all the values are expressions so be sure to check the expression checkbox to the right of the value window.

Itemcost=12;

Tax-itemcost*0.08;

Result=itemcost+tax;

After all of the variables and their associated values are entered test the script select control |test movie from the menu bar or ctrl+Enter/cmd+return.

Global Variables:

A Variable has a scope that encompasses either the whole movie or just segments of it. Before, the Actionscript variables were global.. As long as the addressing was done correctly, you could access any variable on any level and in any scene.

Global variables are the default variables established using the set variable action. Every object can affect and be affected by the changes in a global variable. Global variable can be very helpful.For example, a common loop variable is “I” because it has conventionally been shorthand for “increment”. If the same loop variable is used in two different scripts inside the same timeline, the value of the variable may have been changed in one loop, yet it affects another loop.

Local variable:

Local variables are ones declared using the var statement inside of a script. When a variable is declared using var between the curely braces({}) of a script, only changes within that script affect the variables value. For example, whenever a button is used to launch a script, it creates a block of code contained within curly braces.

Example of a script with local variables:

```
on(release){
var retail=50;
var wholesale=30;
var markup=(retial-wholesale);
output=markup;
}
```

Several different buttones can use the same variable names in their scripts as can scripts in movie clips and frames.

BUTTONS WITH TEXT FILEDS

This movies uses scripts in three buttons to demonstrate how to manipulate data entered into a variable through text fields the layer include following

1. concatenate strings
2. add numbers
3. test Boolean
4. output window
5. input window

Create a Page with Action script:

How button work with variables follow these instructions to create a page and its associated action script.

1. create a single button symbol and name it change variable

2. Create three instances of the button one each in these layers:concatenate strings add numbers and test Boolean.
3. Add an output windows layers which will contain the text fileds.
4. Add an input window layer where users can change values and watch the results note that there are two input windows.

Each of three buttons uses the action script editor set variable action to the list in the action script editor

1. create a symbol by drawing a button on stage and selecting insert|convert to symbol from the menu bar or pressing f*.alternatively you can create a button in the symbol editor by selecting insert new symbol editor by selecting insert|new symbol from the menu bar or ctrl+f8/cmd+f8 and drawing the symbol in the editor.
2. in the symbol properties dialog box select button as the behavior type in name in the name window this examples uses the name change variable
3. select window |library or ctrl+l/cmd+l to open the library window drag an instance of the button to the stage for each of the button layers
4. Select each button and enter the action script in the action script editor if the actions panel is not on the screen. open it by selecting window|actions or ctrl+alt+A/cmd+Option+A as you select each button the script you enter automatically becomes the script associated with the selected button..

Start off by creating a new file. Then choose the Text Tool (it's the letter A) from the Tools window and choose Static Text from the Properties window.

Left click and drag a textbox like we have on the stage to create a default text field.

Within the text field type: "I am writing some text that is more than one line"

Notice that the text field is now three lines of text, this is because the default text field will automatically wrap to the next line when your text reaches the width limit. Your text should look something like this, but if it doesn't do not worry, we are just about to start playing around with the Text Properties

CONCATENATE STRING LAYER

The change string layer is used to create a change variable button with the following action script

BUTTON -CONCATENATE STRING

(An instance of change variable button)

```
on (release)  {

a=inputA:

b=inputB:

output=a+b;

}
```

Either the add operator or the plus sign can be used to concatenate strings.

ADD NUMBERS LAYER

The add numbers layer is used to create a change variable button with the following action script

Button -Add(An instance of change variable Button)

```
on (release)  {

a=Number(inputA):

b=Number(inputB):
```

output=a+b;

}

Number function to change the text into real numbers.using parseint() & parsefloat() allows you to change a string or text field data into exactly the type of number.

TEST BOOLEAN LAYER

In the test boolean layer the outcome of a boolean expression is either true or false if the variable inputA has a larger value than that in InputB the output is true otherwise the output is false"

Button -Test Find String Boolean(An instance of change variable button)

on (release) {

a=inputA:

b=inputB:

output=a+b;

}

if you enter a number you can get some interesting result

OUTPUT WINDOW AND INPUT WINDOW LAYERS

The output window layer sets up the movie clip for fisplaying the outcome of a particular action script.

1. Create your text fields using the values in table2.3 remember that all text field variable associations are entered in the text options panel

2. open the text options panel by selecting window|panels|text options or pressing ctrl+T/Cmd+T.Create the text fields by selecting the text tool from tools and

selecting input text from the top pulldown menu provide the variable name in the variable window.

3. Set text alignment in the paragraph panel.the paragraph panel is in the same panel window as the text options and character panels.

Text Options panel and names

Variable name	**Border/Bg**	**Text Alignment**
Output	None	Right
Input1	Yes	Right
Input2	Yes	Right

Concatenate	7	Output
Add	88	InputA
Find String Boolean	95	InputB

PART-B

POSSIBLE QUESTIONS(8 Marks)

1. Write in detail about Buttons with Text field in Flash.
2. Why Flash is used in multimedia? Explain the data types in flash with example.
3. Illustrate with examples about Variables in Flash.
4. Describe about Creating & Placing variables in Flash.
5. Elucidate in detail about Data types in Action Scripts.
6. Describe the steps involved in creating animation in flash.
7. Illustrate the steps to create moving objects using buttons

KARPAGAM ACADEMY O

Pollachi Main Road, Eacharani

CLASS : III-B.Sc C

Online Exami

MULTIMED

S.No	Questions
1	Action script is a ----------.
2	The _____ operator joins two strings in actionscript.
3	The _____ function returns the boolean primitive
4	Anything that is a collection of properties in ActionScript is considered as _____
5	_____ eliminates the first array element andreturns it.
6	Buttons are _____ sources for changing variables.
7	The _____layer sets up the movie clip for displaying the outcome of a particular action script.
8	_____ in flash can now have their own scripts.
9	_____ keyword cannot be used as a variable name
10	There are _____ keywords in actionscript
11	_____ must be a single string of connected characters with no spaces between the words.

12	String datatype should be enclosed within _____
13	Expressions are considered _____ because they contain more than a sinlge element.
14	_____ acts a container for the boolean property.
15	_____ converts boolean literal to string
16	The default character of numbers in ActionScript is _____
17	_____ are objects containing several properties.
18	to create an array use _____ object
19	_____ joins two or more arrays.
20	_____ is used to find the length of the array with no arguments
21	_____ is used to reverse the order of the array elements
22	_____ datatype references a graphic.
23	_____ is used to open the frame actions windows
24	Global variables are default variables established using the _____ variable action.
25	Local variables are declared using _____ statement inside a script.

26	_____ can use data that is generated either by other frames or by buttons.
27	In Flash 4, a _____ was used to trace a path to a movie clip and its varaibles
28	In Flash 5, a _____ was used to trace a path to a movie clip and its varaibles
29	The _____ layer is the top layer.
30	To test a movie in flash use_____
31	_____ must be a singlestring of connected characters, with no spaces between the words.
32	_____ is an invalid variable name.
33	A _____ is a raw data that goes into a varaible.
34	there are _____ boolean objects in Actionscript
35	The syntax to extract a substring of the array is _____
36	_____ is used to delete specfied number of elements in an array.
37	_____ is used to add elements to the end of the array and return new array length
38	length."hello world" returns the result as
39	_____ canbe used to test the action scirpt

40	buttons canbe created in _____
41	_____is used to open the library window
42	The ----------layer is used to create a change variable button, with the action script to demonstrative how a string variable is changed by user input
43	The output layer contains----------and----------but no key frames.
44	MCs means
45	_____Are simply whole numbers with any decimals lobbed off
46	The _____sign uses for concatenation
47	_____converts Boolean literal to string “true”or “false”
48	_____literals contain true or false values.
49	One of the fundamental component of any kind of programming is the _____
50	ActionScript uses _____
51	A _____data type is a type of data that isn't based on any other data types.
52	A _____ is the value that a variable contains before you set its value.
53	Array in Actionscript is an _____

54	Variable names cannot use special characters except _____
55	Which of the following is not a valid varaible name?
56	For variables of type Number, the default value is _____
57	The value of an uninitialized variable depends on its _____
58	A _____ is a variable that you define outside of any function or class definition.
59	_____are symbols that contain four frames.
60	The only object type in Flash, that can detect mouse events is the_____ object.

F HIGHER EDUCATION

Post, Coimbatore-641 021

OMPUTER SCIENCE(2015-2018)

ination

DIA SYSTEMS(15CSU504)

opt1	opt2	opt3	opt4	Answer
modular programming language	Structure programming language	non-linear programming	hierarchical programming	**modular programming language**
join	add	merge	concat	**add**
new boolean()	toString()	valueOf()	boolean()	**valueOf()**
object	variable	method	event	**object**
shift()	push()	pop()	slice()	**shift()**
static	dynamic	local	global	**dynamic**
display	output	monitor	input	**output**
movieclips	moviemaker	frames	movieframe	**movieclips**
this	there	that	then	**this**
12	14	15	16	**16**
datatype	variable	keywords	array	**variable**

single quote	double quotes	underscore	dollar	**double quotes**
static	dynamic	compound	connected	**compound**
new Boolean()	toString()	valueOf()	indexOf()	**new Boolean()**
new Boolean()	toString()	valueOf()	indexOf()	**toString()**
integer	negative	floating point	positive	**floating point**
arrays	methods	movie clips	instances	**arrays**
new array	array	create array	new	**array**
concat()	join()	merge()	joined()	**concat()**
length()	arraylen()	arraylength()	long()	**length()**
sort()	reverse()	rev()	change()	**reverse()**
arrays	movie clip	clips	frame	**movie clip**
Ctrl+Alt+A	Ctrl+Shift+A	Ctrl+Alt+O	Ctrl+shift+A	**Ctrl+Alt+A**
get	set	var	create	**set**
get	set	var	create	**var**

local varaibles	frames	global varaibles	varaiables	**frames**
dollar syntax	hypen syntax	slash syntax	dot syntax	**slash syntax**
dollar syntax	hypen syntax	slash syntax	dot syntax	**dot syntax**
mainline	mainframe	mainheading	maintitle	**mainline**
Ctrl+Enter	Ctrl+Alt	Ctrl+Shift	Ctrl+shift+Enter	**Ctrl+Enter**
datatype	varaible	movieclips	arrays	**varaible**
Pet Store	Pet_Store	PetStore	PETSTORE	**Pet Store**
literal	non-literal	local varaible	global variable	**literal**
two	one	three	four	**three**
splice(start,end)	extract(start, end)	slice(start,end)	move(start,end)	**slice(start,end)**
slice	splice	delete	del	**splice**
pop()	add()	push()	modify()	**push()**
12	11	10	9	**11**
control+run	control+debug	control+testmovie	control+movie	**control+testmovie**

symbol editor	symbol drawing	symbol buttons	symbol tool	**symbol editor**
ctrl+b	ctrl+l	ctrl+o	ctrl+w	**ctrl+l**
Add number layer	Test Boolean layer	Change string layer	Mainline layer	**Change string layer**
text fields and combo box	text field and labels	labels and text box	text field and option button	**text field and labels**
Model click	master clip	movie clip	movie component	**movie clip**
Int	decimal	integer	float	**integer**
-	+	*	/	+
toString()	new Boolean()	valueOf()	toValueOf()	**toString()**
Character	Boolean	interger	float	**Boolean**
Variable	function	object	array	**Variable**
modular programming	OOP	linear programming	simple programming	**OOP**
primitive	composit	compound	user defined	**primitive**
local value	default value	global value	null value	**default value**
object.	variable	keyword	operator	**object.**

&	!	_	-	_
new	sum	sub	total	**new**
null	o	undefined	NaN	**NaN**
data type	range	array	object	**data type**
local varaible	primitive varaible	global variable	composite varaible	**global variable**
Buttons	labels	order	text	**Buttons**
Text	labels	array	Button	**Button**

UNIT-V
SYLLABUS

Basic Actions: Play, stop, Back & forth- Between frames and scenes – Timelines – External scripts-Loops.

Basic Actions

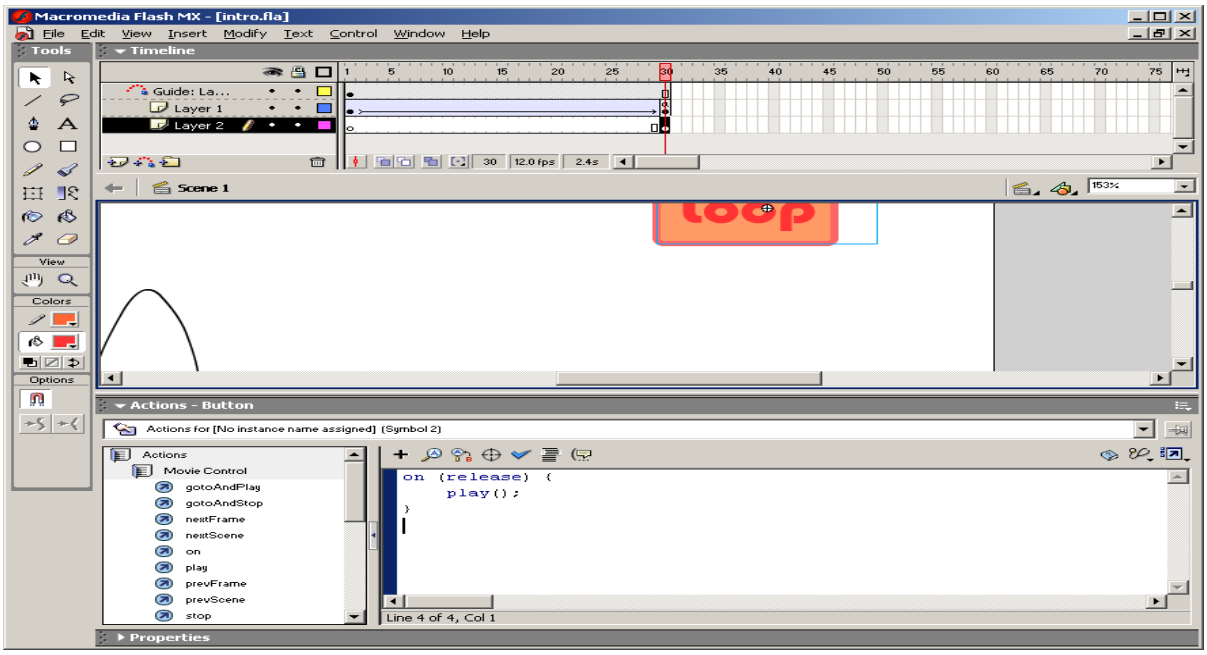
Play, Stop, Back & forth:

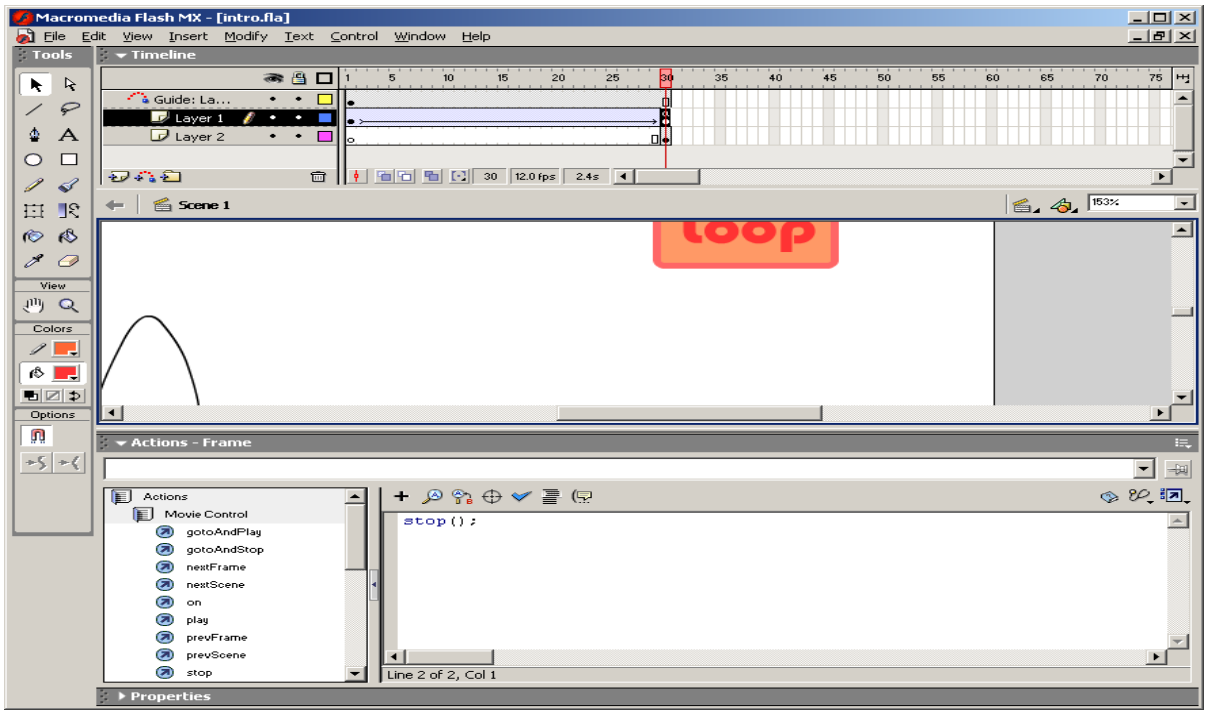
An action script may use both Stop and Play actions, which contradict each other. For example, what happens if a movie includes a goto And Stop action to a frame that has a Play() script

Stop or Play and Buttons:

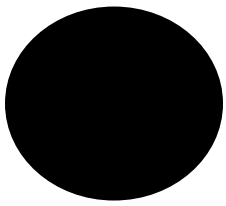
This movie shows the effects of scripts in frames and stop or play commands associated with Go To actions. The two layers in this movie are:

The Stop or Play layer contains five key frames with actions. Each is labeled as shown in below.

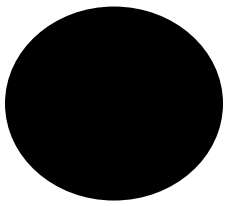




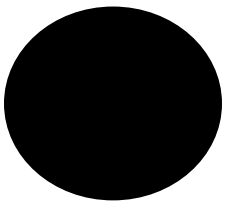
The Beginning



Go to Play & Stop



Go to Play & Play



Go to & Stop at Go

Stop or Play Layer

On the first layer, the keyframes are labeled as indicated and contain a text message added at the keyframe. The following labels and messages are used in the frames.

Frame 1- stopFirst(label)

Put a text message on the page that reads, “The Beginning”.

Stop();

Frame 10-Playlt(label)

The message on the page is “Thios is the Play Place”.

Play();

Frame 18-Stop Me(label)

The message on the page is “You are stopped”.

Stop();

Frmae 27-GoAway(label)

The message on the page is “Go Away”

gotoAndPlay(“Away”);

Frame 36-Away(lable)

The message on the page is “Away”

Stop();

Button Layer

Buttons are organized by the frame grouping. The button is Figure 3.6 are all identified by a functional label beneath each button and are referenced as such. The first frame (stopFirst)has three instances of a button symbol named ButtonUp:

GotoAndPlay & Stop

On(release)

{

gotoAndStop(“playIt”);

}

GotoAndStop & Play

On (release)

{

gotoAndPlay(“StopMe”);

}

GotoAndStopat Go To

On(release)

{

gotoAndStop(“GoAway”);

}

The button in the Stop Me and Away frames are additional instances of the ButtonUpSymbol.They simply contain a play action and are labeled “Click to continue”.

Click to continue

```
On(realease)
{
Play();
}
```

Watch carefully when you run this movie. Scrutinize the movie as the message that begins in the playit frame coasts by until the movie reaches the stop me keyframe.However you will never see the message “Go Away!”. Why is it clearly in the movie, but never viewed?

To solve the mystery of the missing message, consider the Action Script in the Go Away Frame:

```
gotoAndPlay(“Away”);
```

As soon as the movie encounters the key frames with the Action Script, it executes the action command and never stop to display the frame itself. As a result, when the sample movie encounters Go to and Play(“Away”) in the Go Away frame, it immediately past the frames that display the “Go Away” message.

Back and Forth between Frames and Scenes

Besides going to a specified frame by number or label, you may also write script that sends your movie one frame ahead or back. In the previous section, you saw how movies that jumped to a frame would either play or stop. If no script is in a frame when a Go to and Play action is issued, the movie keeps playing. If a Go to and Stop action is selected, the movie stops. However, no matter whether the action is Stop or Play, any action script in a frame is initiated by a go to that frame.

Next and Previous Frames:

This next set of actions goes just one frame forward or backward and stops. In most respects, these action targets are like a gotoAndStop statement. Unless script is in the frame, the movie stops. Because this action moves the playhead oneframe either forward or backward, regardless of whether it is a keyframe or not, unlabeled frames can be navigated relative to a timeline instead of to a specific frame number or label. The action itself is quite simple and unique in that no "Go To" of any kind is mentioned. For example, in the following button script, the command to go to the previous frame specifies only the target:

```
on(release){
prevframe();
}
```

The script for going to the next frame is equally simple.

```
nextFrame();
```

either action can be used in an MC, button, or frame.

Next and Previous Scenes:

ActioScript also contains a set of targets to the next or previous scene. The action statements are almost identical to those for frames, but the next or previous scene constitutes the targets. A move to the next scene in a button script would look like the following:

```
on(release)
nextScene();
}
```

Going to a scene where the movie had just been uses a similar statement:

```
prevScene();
```

Going to another scene has interesting consequences. If you go frame by frame, the first frame number of the new scene is 1 plus the frame number of the previous scene. For example, if the last frame scene 1 is 30, the first frame in scene 2 will be 31 and can be referenced as such. SO the statement

```
gotoAndPlay(31)
```

would go and play Frame 1 of Scene 2. You could also use the statement.

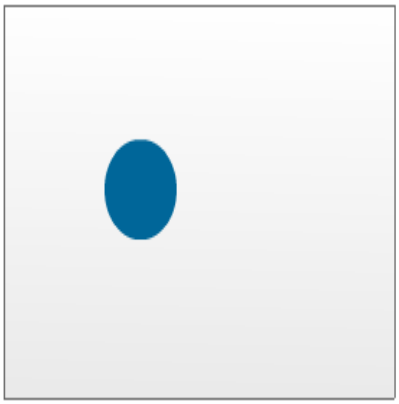
gotoAndPlay("Scene 2",1)

to go to the same frame.

Frame labels are accessible across scenes anywhere in the main timelines. Flash will search all scenes in the main timeline to find the one referenced in an action script.

Frames and Rates

When you are dealing with motion, you are often working with frames. A frame is a snapshot of what you are currently depicting such as a blue circle on a light gray background:



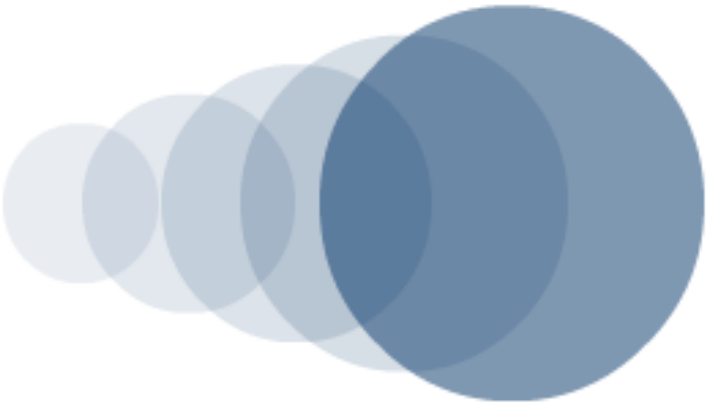
A single frame by itself does not really convey much. Get enough of these frames (with some slight changes in what you are depecting) and start cycling through them:

The end result is an animation. There are two things that determine how well your animation works - the number of frames and how quickly you change these frames

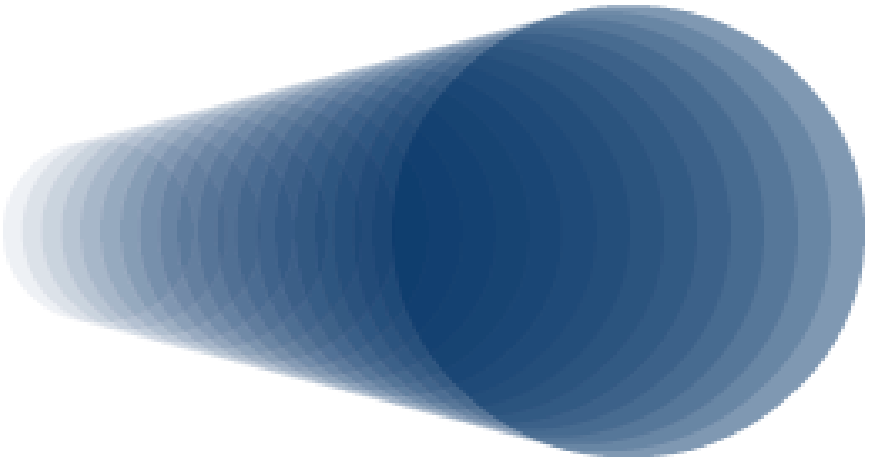
Number of Frames

Creating the illusion of motion requires a transition between two points. How jerky or

smooth the transition depends partly on how many intermdiate points you define. Let's say I have an example of a circle scaling and shifting over a period of time:



You have a starting point, an ending point, and a few intermediate points where the circle's scaling and shifting are defined. This entire animation is only five frames long. To contrast that, let's add more intermediate frames to define this animation:



This time around, more of your circle scaling and shifting is explicitly defined. There are around 20 frames that make up our animation this time.

Based on just what I've provided, which one would you think looks smoother when played back? This depends, as you will see in the next section, on the frame rate. If you were to ignore the frame rate for a moment, with both animations played back at the same frame rate, the one with more intermediate frames would look smoother because there are more points defined.

Frame Rate

The next thing we will look at is the frame rate. The frame rate determines how many frames are played in a given second of time. This value is measured in frames per seconds or fps for short:

$$\text{fps} = \frac{\text{number of frames}}{\text{second}}$$

The higher your fps the faster your animation will proceed to completion because you are running through all of your frames at a faster pace. Likewise, the slower your fps, the slower your animation will proceed to completion. You saw this much in the Flash example above where, when you slowed your frame rate down greatly, the animation looked really jerky.

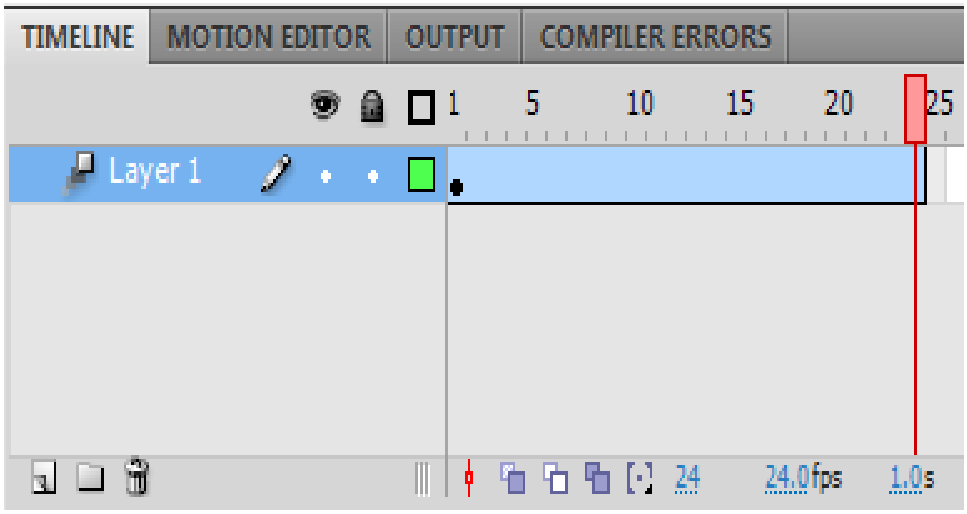
The frame rate you will use determines largely on what you are creating. In general, I like to use 24 as a good number for the frames per second for the content that I create. This means that every second of animation requires 24 frames. In the more recent versions of Flash, the default frame rate is set to 24 as well. If you remember long ago, Flash used used to be 12 (or was it 15?).

You can easily get away with great animations whose frame rates are either lower or higher than 24. The thing you need to keep in mind, especially when working with Flash, is performance. A higher frame rate requires a user's computer to do more work to cycle through all of the visual information quickly. Having a high frame rate on simple content should not be a problem. Having a high frame rate on visually complex content may be a problem with many of your users viewing your content at a lower frame rate than what you would have preferred.

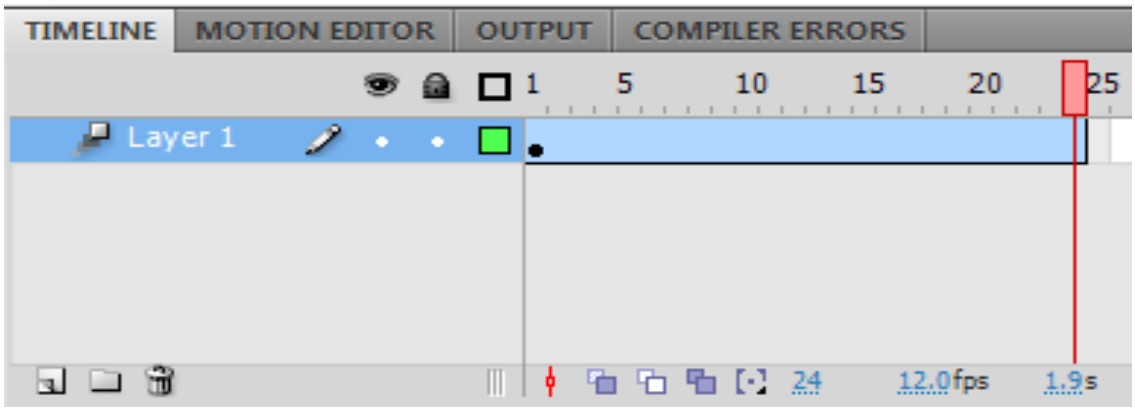
Flash and Frames and Rates

Flash, like many digital animation programs, abstracts away a lot of the details related to frames and frame rates. In fact, all you really ever have to worry about is your frame rate and how long your animation will be running for. Generating intermediate frames are taken care of by the tweening engine. The only times you have to worry about the intermediate frames is if you are actually drawing each frame by hand.

Let's look at how what you learned in the previous page applies in practice. For a 1 second animation, your timeline will look as follows:

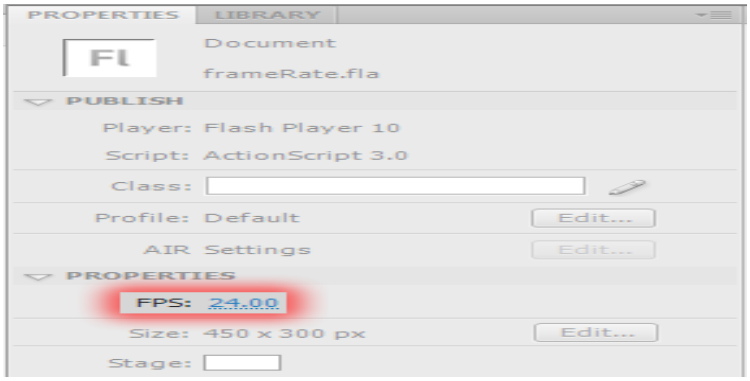


The key things to notice are the values at the bottom right. The duration of the animation is 1 second, the frames per second is 24, and the playhead is currently on Frame 24. If I change the frame rate to 12, as you can guess, it now takes twice as long for the animation to finish:



The duration of my animation jumped from 1 second to 1.9 seconds. Despite all of this changing, notice that I never had to define additional frames. This should seem very casual because the equation for determining the frame rate is number of frames divided by the duration. You can mathematically manipulate these variables to solve for the missing value. A 24 frame animation with a frame rate of 12 frames per second will take around 2 seconds to finish.

Using the UI to Change the Frame Rate



The most common way to change your frame rate is to use the Properties panel and change it globally for your entire application:

The default rate is 24 in more recent versions of Flash, and like I mentioned in the previous page, that is a good value to keep your frame rate at.

Programmatically Changing the Frame Rate

When you are working with more interactive types of animations, you may want to change your frame rate while your application is running. Fortunately, in ActionScript 3, you have easy access to the frame rate property.

The way you access the frame rate is through:

```
stage.frameRate
```

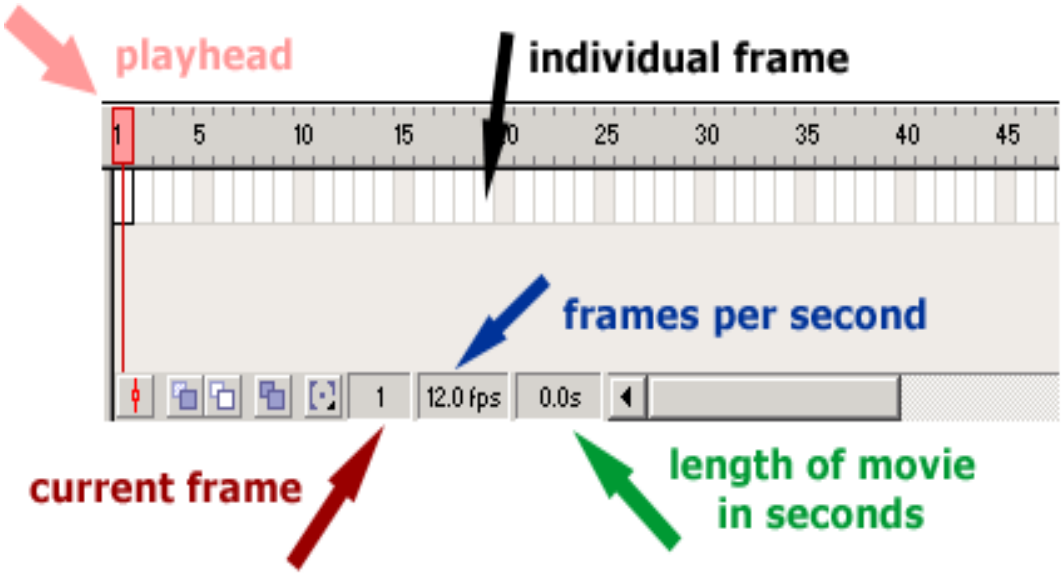
Because stage is global, you can call the frameRate property from pretty much anywhere in your application. You can easily set the frame rate value as well since this is a property that you can both read and write:

```
stage.frameRate = 25;
```

That's all there is to programmatically being able to set the frame rate.

Timelines:

The timeline is the area on the screen where you will be working with layers and frames to alter your movie's content and animation. A movie is a collection of frames and the timeline is the area in Flash where you will be configuring those frames (like the way a cartoon is made, with a collection of still pictures run together really fast to give the illusion of motion). Below you can see a visual description of the timeline:



Current Frame: The current frame indicates the frame number whose contents are directly visible on the stage (see stage below) and is the current position of the play head. So, what you see on the stage, when there is no movie playing, is the current frame.

Frames per second: Frames per second (or Frame rate) is the actual frames per second setting for your movie, when the movie is not playing. When the movie is playing, it dynamically shows the actual playback speed. However, frames per second and actual playback speed can differ dramatically based on the processor of the computer being used. Frames per second will always stay the same, but with a slower processor a user will view slower actual playback.

Length of Movie: The term "length of movie in seconds" may be a little deceiving. The number is actually the elapsed time between the first frame of the movie and the current frame. Depending on where you place the playhead, the number will dynamically change as well.

Playhead: The playhead allows you to select the frame to be altered. It also allows you to view the movie by scrubbing, or dragging the playhead across the timeline ruler.

The output created with Macromedia´s Flash program is called a movie - an animated movie. When learning to make a Flash movie, it helps to view the work areas in terms of movie making. The Timeline is one of the most important areas which can be compared to the editing area of the movie set. Flash uses Timelines to plan and lay out the movie,

allowing you to choose where and when a particular object starts, how long it runs, and where and when it ends.

The Timeline consists basically of blocks laid in a linear pattern - each block or frame represents a moment in time. Just like the frames in a movie reel, only laid out flat for you to work with. The major components of the Timeline are layers, frames, and the playhead. Special frames called keyframes mark significant changes in the timeline. Keyframes are used to designate a special effect such as a motion change, morphing, a change in scenery or alpha blending. A keyframe span have a light-gray background and consist of a single keyframe followed by one or more frames of identical content.

Flash 5 offers two different formats of timelines: the original one that users of earlier versions of Flash, especially version 4 are used to. The other version mimicks the timelines used in Macromedia Director. Experienced Flash designers often first use storyboards to map out their movies, just as cartoon, commercial or animation designers would do, before actually working with the Flash timelines.

Layers are organized in a column to the left of the Timeline. Frames contained in each layer appear in a row to the right of each layer´s name. The Timeline header indicates the frame number. The playhead points out which is frame is the current one being displayed on the movie´s stage. You can add, delete, and move frames around within the Timeline. You can also add tweening and frame actions, which are signified using keyframes. For instance, if you wanted two objects to move at once, you would need to create two layers with two different timelines. You would then set frames and build tweens for the objects on those lines. Eventually, you end up with a hierarchy of timelines, just as you would have a hierarchy of files or directories in other programs.

Once your objects (text, images, sounds) are prepared, begin to place them into the scene, at particular points in the timeline by assigning each image to its own layer. The timeline controls actions in a linear way, even though symbols can have their own timelines and act independently of other elements in the scene.

Each black circle on the timeline represents one frame of your animation. The illusion of movement is created by having images in different locations on successive frames. The smoothness of the animation is determined by how similar the images are

from frame to frame. Many small changes to the image in each successive frame will make the animation appear smoother than a few large changes. However, the smaller the changes per frame the more frames are required to make the complete animation.

The other important factor is the number of frames that are displayed per second. As the frames per second (fps) increase, more frames can be packed into the same amount of time, and thus smaller changes can be made on each frame making the animation smoother. Flash defaults to 12 fps, which is shown beneath the layer timelines. You can change the fps by double clicking on the indicator. 12 fps is good rate for web-based animation since it minimizes file size yet keeps the animation smooth

The timeline shows you the key frames in your animation. Most computer animation is created by using key frames. These key frames indicate the final positions or changes to the symbol or graphic. Flash calculates the in-between frames for you to make your animation flow from keyframe to keyframe.

How to Create an Interactive Timeline in Flash

Timelines are compelling ways to express information in an online environment. From historical sites to an illustration of the family tree, a timeline is a quick way to see the order of events that have happened in the past. An ordinary timeline can be created with just a graphic imaging program, but it will be static and non-interactive. Flash allows for the creation of an interactive timeline that will display appropriate data or information when the user clicks or mouses over certain sections

Plan & Design Your Timeline

1.Before you get into Flash, you will find it much easier if you design your Timeline using pen and paper. First draw the timeline as you see it.

2. Include areas on the timeline where events take place, such as the dates. These should be indicated with lines that are perpendicular across the main timeline.

3.Write a brief description of what takes place at each event. You will be able to include as much or as little information as you want in the program. A brief note is sufficient for now.

4.Decide on graphics that you will want in your timeline, if any.

Draw your Timeline in Flash & Create Objects

The first thing you will do in Flash is to create the main timeline itself. This can be as simple as a line drawn with the line tool, or an image you import. For this example we will use a straight line drawn from left to right across the middle of the stage.

Create your event objects. Event objects are the perpendicular hash marks or lines on the main timeline that indicate where something has happened. You only need to create one for this timeline. Simply draw a vertical line that is large enough to have presence if laid across your main timeline. Do not create it on your timeline.

Convert the event object to a symbol. With the line to represent your event object selected, press "F8" to convert it to a symbol. Give it any name that you can remember, such as "eventObject."

Place your event objects on the timeline. Now that your event object is a symbol you can drag as many instances of it out of the library (press CTRL+L to view the library) and onto the stage as you need. Place as many event objects on the stage as you need for your timeline in the appropriate places.

Create your main text/information area. Use the text tool to draw out a text box on the stage anywhere near your timeline. This is where the information for each eventObject will appear when the user puts their mouse over it. With the empty text field selected in the Properties Inspector for the type of text, make sure the dropdown box is set to "Dynamic Text" and in the field for the instance name, call it "myText."

Program your Timeline

Select the first eventObject on your timeline. In the Properties Inspector, give it a name like "eventObject1." Select the second eventObject in your timeline and give it a unique name as well such as "eventObject2." Do the same for all of your event objects.

Open the ActionScript panel by pressing "F9" on your keyboard. Make sure the first keyframe in the timeline is selected.

Assumning you named your eventObject as the example, paste in this code:

```
eventObject1.onRollOver = over1;
eventObject1.onRollOut = out;
```

```
function over1(){
myText.text = "Put whatever you want between these quotes";
}
function out(){
myText.text = " "
}
```

Repeat step, changing the appropriate parts of the code and the text that appears between the quotes for each eventObject as appropriate. This code will have the text you choose appear whenever someone rolls their mouse pointer over the specific timeline event. When they roll their pointer away, the text will disappear.

If you want to add images to each section, you can do so by either manually placing them on the stage next to each eventObject or by using code to make them appear and disappear onRollOver and onRollOut using the ._alpha feature

Actions from External script:

If you have certain code that you use repeatedly win scripts, write it once and then access it whenever we want to use it in a script. You can Actionscript code in any text editor such as notepad or simple text. Flash 5 introduces the action that can be used to open a script written in an external text file. The format is fairly straightforward. For example , the following button script opens a text file named “remote.as”.

```
on(release) {
#include “remote.as”
}
```

The path to the external file is the same as for any URL. External file is stored in the same directory as the SWF file, no special directory list needs to be included.

In using the include statement in a button or MC script, do not include an event handler in the external text file. Any event handler, such as on(release) brings in the code itself from the text file and launches it. An additional event handler negates any action from taking place. For example, if you wanted a button to send the movie to a frame named “Score”.

gotoAndStop(“Score”);

The button script would have just the event handler and the include action to call the next file with the script in it.

Flash ActionScript loops

ActionScript loops are tools used to execute a segment of code repeatedly for a number of times or while a certain condition is satisfied. This can save time and effort by not having to type the same code multiple times to repeat a process.

For example, if we wanted to duplicate a movie ten times, without a loop, we would have to type the same code ten times.

Using a loop to do this would reduce the amount of code significantly while generating the same identical result. Below is an example of the same command to duplicate a movie ten times using a loop.

```
for (i=1;i<11;i++){
duplicateMovieClip("movie_mc", "new_"+i, i);
}
```

Loop Types

There are three main types of ActionScript loops, the `for` loop (which we used in the example above), the `while` loop, and the `do-while` loop. The `for` and `while` loops do exactly the same thing but with different syntax, the `do-while` loop differs in one small aspect. We will go through all of these types in turn.

The `For` loop

I think that the For loop is the most commonly used because it is the most compact and the easiest to understand and use. You can use this loop to execute a number of code statements multiple times using this format:

```
for (counter; condition; action){
statements;
}
```

The example above shows the syntax used, the counter (i) sets the starting point for your counter, the condition will determine the point at which the loop will have to stop, and the action operate counter to eventually make it make the condition untrue to stop the loop. The code to be repeated is placed with in the curly brackets.

For example, if we want to output some text ten times, we can do it this way.

```
for (i=1; i<11; i++){
trace ("This code is repeated ten times");
}
```

In regular words the code above says, start counting i from 1, repeat the code below as long as i is less than 11, and add 1 to i each time the loop is repeated. We start with i as 1, when the code is repeated the first time then the value of i increases by 1 making it equal 2, when the code is repeated again it becomes 3, then 4, 5, 6, 7, 8, 9, and 10. After that it becomes 11, and at that moment the condition is no longer satisfied because i is not less than 11 (i>11), and so the loop ends at that point.

The While loop

The while loop repeats a set of code as long as the condition specified is true.

```
while (condition) {
statements }
```

This looks very similar to a conditional, which execute a code once if the condition is satisfied, but here the code is executed repeatedly instead of just once. If the condition remained true forever, this means the loop will be repeated over and over again forever as well, and that should be avoided at all costs, because an infinite loop will crash the Flash player. So there is usually something within the statements that eventually makes the condition untrue.

```
var i = 1;
while (i < 5){
trace ("This code is repeated");
i++; }
```

In the example above, the code will get repeated as long as `i` is less than `5`, we made sure that `i` increases by `1` each time the loop is cycled through.

The Do-While **loop**

This type of loop runs the code to be repeated before checking for the condition so that it guarantees that the code is executed at least once whether the condition is satisfied or not. It is used in the following format:

```
do { statements;
} while (condition);
```

This loop could just be used like the previous two as shown in the example here.

```
var i = 1;
do {  trace ("This code is repeated");
```

```
i++;
}while(i<5);
```

The upper example is exactly the same as the one we used for the while loop, but this one would execute the code once even if i was never less than 5 (for example, if we set its value of i as 10 from the start).

Practical Examples of loop Usage

Loops are very often used to manipulate and access the content of arrays. Arrays are lists of data under which each item is identified by its order within the list. It is possible to extract all the contents of an array using a simple for loop as illustrated in the example below.

```
var oman3d = ["home", "tutorials", "features", "competitions", "forum"];
for (i=0; i<oman3d.length ; i++){
trace (oman3d[i]);
}
```

The code above cycles through the array as long as does not exceed the total number of items within an array (its length). The code should be self-explanatory if you understand the basics of arrays.

Another common use of loops involves the creation and control of dynamic movieclips. While the process for creating such movieclips is quite easy using a loop, referencing to these movieclips to control them later on can be quite tricky. The easiest method for achieving that is by using the square brackets to generate those references dynamically. The example below shows you how movieclips are created and then positioned next to each other using a loop. The name of each movieclip is generated in the second line and called back in the third line using the square brackets.

```
for (i=1;i<6;i++){
duplicateMovieClip("movie_mc", "new_"+i, i);
this["new_"+i]._x=this["new_"+i]._width*i;
}
```

You can alternatively save the reference to the movieclip in a temporary local variable which you can use within the loop to easily refer to your various movieclips in turn.

```
for (i=1;i<6;i++){
duplicateMovieClip("movie_mc", "new_"+i, i);
temp_mc = this["new_"+i];
temp_mc._x=temp_mc._width*i; }
```

PART-B

POSSIBLE QUESTIONS (8 Marks)

1. Write about the Basic Action Play, Stop, and Back & Forth in detail.
2. Discuss in detail about Loops.
3. Explain about Between Frames & Scenes in Flash with an Example
4. Write short notes on External Scripts.
5. Explain about Timelines in flash.
6. Illustrate the steps in creating an external script file and include it in the movie creation

7.Create a movie with buttons in action script.

Sno	Questions
1	Two of the most important actions in the flash are ---------- and ----------
2	---------- layer is used for setting a variable in a single frame on to the layer.
3	The ----------property returns the current frame it specified MC or the main time line through root.
4	Flash 5 introduces the ---------- action that can be used to open a script written in an external text file.
5	When data from multiple fields is placed in the same field, the data already in that field is ----------
6	_____ is used to open the frame panel
7	_____- property returns the current frame of a specified MC
8	_____ command is used to stop the script
9	movie clips have their own _____
10	Flash provides _____ basic types of looping actions.
11	In the _____ loop, a condition at the beginning of the loop specifies the conditions under which the loop terminates
12	the _____ loop specifies a beginning value, a termination condition and the counter for the loop
13	_____ loop applies only to properties of objects.
14	_____ loops are contained in a single frame, button or movie clip script.
15	loops exisiting within other loops are called as _____loops
16	The _____ layer in a movie contains the background patterns.
17	The ---------- event is triggered by placing the mouse pointer on the button and pressing it.
18	A _____ statement excutes a process for n number of times
19	The statement gotoAndPlay(5) plays the _____ frame
20	The syntax for moving to next frame is _____
21	The syntax to go to previous frame is _____
22	the _____ function moves script to the next scence
23	The _____ fucntion moves script to the previous scence
24	A frame can be inserted by _____ function key.

25	when you use a _____ action at a frame with a Play action , themovie just keeps on going.
26	All of thebuttons contain _____ variable codes to show the current frame.
27	Ususally _____ button is used to move to the previous frame.
28	You can write actionscript code in any _____
29	A _____ expression is used to determine when a loop should stop running
30	All loop actions take place between the _____ brackets.
31	Structured loops have similar conditional structures as the _____ condition
32	Each element in an array can be identified by a number, beginnning with _____
33	Loops are often used to go through the _____ and either assign values or pull them out.
34	the _____ command is used to open the align panel
35	A _____ is made up of a name and a value.
36	he _____ organizes and controls a document's content over time in layers and frames.
37	The *timeline* represents all _____of an animation
38	Each block or _____ mark in a timeline represents a single frame.
39	Frames are numbered in increments of ____ (by default) along the top of the timeline.
40	The _____ is the red rectangular marker located within the frame numbers.
41	To stop your movie after it has played, use_____ function .
42	_____ add a higher level of interactivity to your Flash animations
43	_____and Illustrator can both use bitmaps and vector images.
44	_____are defined as 'movies within movies whose properties and timelines are independent of the main movie'.
45	The _____property returns a Scene object that represents the scene that is currently playing.
46	SWF stands for _____
47	_____is a file extension for a Shockwave Flash file format
48	The _____file format is the "master" document format for Flash projects.
49	_____ event is triggered when you click the button.
50	_____event if triggereed, when you clicked the button, then released your mouse.
51	_____ stops the timeline from playing.
52	_____starts playing the timeline.
53	_____ goes to the next frame.
54	_____ goes to the previous frame.
55	_____ stops at the frame you specify.
56	_____goes to and starts playing at the frame you specify.
57	_____goes to the next scene.
58	_____goes to the previous scene.
59	Audio files embedded in flash takes _____ time to download
60	Flash is _____based

' OF HIGHER EDUCATION

rani Post, Coimbatore-641 021

Sc COMPUTER SCIENCE(2015-2018)

e Examination

:DIA SYSTEMS(15CSU504)

opt1	opt2	opt3	opt4	Answer
goto and play , goto and stop	goto and reply, goto and stop	goto and play,goto and reply	goto and start ,goto and stop	**goto and play , goto and stop**
output layer	buttons layer	forms layer	mainline layer	**mainline layer**
current frame	present frame	this frame	that frame	**current frame**
Remote	move	include	swap	**include**
over written	removed	blank space	field with zero's	**removed**
modify+frame	frame+open	open+frame	modify+open	**modify+frame**
current frame	current	current value	current movie	**current frame**
stop()	end()	stop script()	end script()	**stop()**
frames	scences	timelines	layers	**timelines**
3	4	2	5	**4**
do while	while	for	for…in	**while**
do while	while	for	for…in	**for**
do while	while	for	for…in	**for…in**
structured	unstructured	conditional	unconditional	**structured**
structured	unstructured	conditional	nested	**nested**
under	background	button	timeline	**background**
Press	release	release outside	drag out	**release outside**
looping	decision	control	non-looping	**looping**
4	5	6	1	**5**
gonext()	gonextframe()	nextframe()	next()	**nextframe()**
prev()	prevframe()	previous()	previousframe()	**prevframe()**
nextScene()	next()	nextS()	scenceNext()	**nextScene()**
prev()	previous(0	prevScene()	scenePrev()	**prevScene()**
F2	F3	F4	F5	**F5**

gotoAndPlay	gotoAndStop	gotoAndgo	gotoAndEnd	**gotoAndStop**
global	local	constant	dynmaic	**local**
>	<	-	+	**<**
texteditor	notepad	both a & b	excel sheet	**both a & b**
unconditonal	arithmetic	conditional	logical	**conditional**
{}	[]	()	<>	**{}**
If	Do	while	Switch	**If**
1	2	0	3	**0**
functions	methods	arrays	objects	**arrays**
Ctrl+A	Ctrl+P	Ctrl+K	Ctrl+L	**Ctrl+K**
statement	expression	variable	datatype	**variable**
movieclip	Timeline	movieeditor	movieframe	**Timeline**
layer	movies	frames	movieclip	**frames**
tick	symbol	underscore	cross	**tick**
10	15	5	20	**5**
framehead	playhead	moviehead	layerhead	**playhead**
stop()	end()	close()	last()	**stop()**
layer	movies	frames	Buttons	**Buttons**
Photoshop	Flash	both a & b	firework	**Flash**
movie frames	movie editor	Movie clips	moviemaking	**Movie clips**
currentFrame	currentObject	currentPlaying	currentScene	**currentScene**
Small Web Format.	Small World Format	Small Web Flash	Small World Falsh	**Small Web Format.**
SWF	SFF	SWFF	SF	**SWF**
SWF	FLA	SWD	FS	**FLA**
on(release)	on (press)	on(hold)	on(rollover)	**on (press)**
on(release)	on (press)	on(hold)	on(rollover)	**on(release)**
go()	stop()	play()	end()	**stop()**
play()	stop()	go()	end()	**play()**
prevFrame()	nextFrame()	gotoAndStop()	gotoAndPlay()	**nextFrame()**
gotoAndStop()	nextFrame()	prevFrame()	gotoAndPlay()	**prevFrame()**
nextFrame()	prevFrame()	gotoAndPlay()	gotoAndStop()	**gotoAndStop()**
gotoAndPlay()	nextFrame()	prevFrame()	nextScene()	**gotoAndPlay()**
prevScene()	nextFrame()	nextScene()	prevFrame()	**nextScene()**
prevFrame()	nextFrame()	nextScene()	prevScene()	**prevScene()**
longer	milliseconds	seconds	nano seconds	**longer**
bitmap	vector	JPEG	raster	**vector**

Register Number: _____

[15CSU503]

KARPAGAM ACADEMY OF HIGHER EDUCATION
KARPAGAM UNIVERSITY
(Under Section 3 of UGC Act 1956)
Eachanari, Coimbatore - 641021.
(For the candidates admitted from 2015 onwards)

B.Sc. COMPUTER SCIENCE
FIFTH SEMESTER
FIRST INTERNAL TEST – JULY 2017
Multimedia Systems

Class: III B.Sc CS (A & B) **Duration: 2 Hours**
Date & Session: **Marks : 50**

PART-A (20*1=20 Marks)
(Answer All The Questions)

1. The people who weave multimedia into meaningful tapestries are _____.
a. Multimedia producers b. **Multimedia developers**
c. Multimedia Projectors d. Multimedia Creatures.

2.___ multimedia allows an end user to control what and when the elements delivered.
a. Hyper media b. **Interactive Multimedia**
c. Non interactive Multimedia d. Non Hypermedia

3. A family of graphic characters that usually include many type sizes and styles is called
a. **type face** b. font c. point d. link

4. A _____ is a collection of characters of a single size.
a. Attribute b. **font** c. group d. link

5. The taller-than-wide orientation used for printed document is called _____.
a. **Portrait** b. Newsscape c. Netscape d. Unicode

6. CSS stands for _____.
a. cascading sheet styles b. **cascading style sheets**
c. cascading spread styles d. cascading spread sheets

7. The _____ paints a copy of the selected state or snapshot into the current image window.
a. Paint Bucket tool b. **Art History brush tool** c. History Brush tool d. gradient tools

8. The _____let you to attach written or audio notes to your document.
a. crop tool b. **annotation tool** c. slice tool d. shape tool

9. VR stands for _____.

a. **Virtual reality** b. Visual random c. Video raster d. Video response

10. The _____ fills similarly colored areas with the foreground color.
a. **Paint Bucket tool** b. Art History brush tool c. History Brush tool d. gradient tools

11. _____palettes displays the names of its colors.
a. **.swatches** b. info c. layers d. history

12. MPEG stands for_____.
a. **Moving Picture Expert Group** b. Movie Picture Expert Group
c. Music Pic Expert Group d. Media Picture Expert Group

13. _____application is used for viewing and converting still images among many standard image-file formats.
a. Viewer b. Editor c. Converter d. **Picture Viewer**

14. _____schemes preserve the original data precisely.
a. Lossy b. **Lossless** c. decompression d. Transferring

15. _____ tool enables to select a foreground and background color in any of several ways.
a. painting b. brushes c. history d. **color picker**

16. _____ is the artists term for trimming away unwanted parts of a picture.
a. **crop** b. Single column marquee c. Magic Wand d. Magnetic Lasso

17. Which of the following is multimedia software?
a. **3D Studio** b. SPSS c. Tally d. Inspro

18. _____ is searching for a word with any of its possible suffixes.
a. Association b. **truncation** c. frequency d. categories

19. Leading is the space between _____.
a. Alignment b. words c. characters d. **lines**

20. Multimedia elements are typically seen together into a project using_____.
a. Editing tools b. Unauthoring tools c. Integrated Tools d. **Authoring Tools**

PART – B (3 * 10 = 30 Marks)
(Answer ALL the Questions)

21. a) Discuss in detail about basic software tools for making multimedia.

The tools used for creating and editing multimedia elements on both Macintosh and windows platforms support the authoring systems.

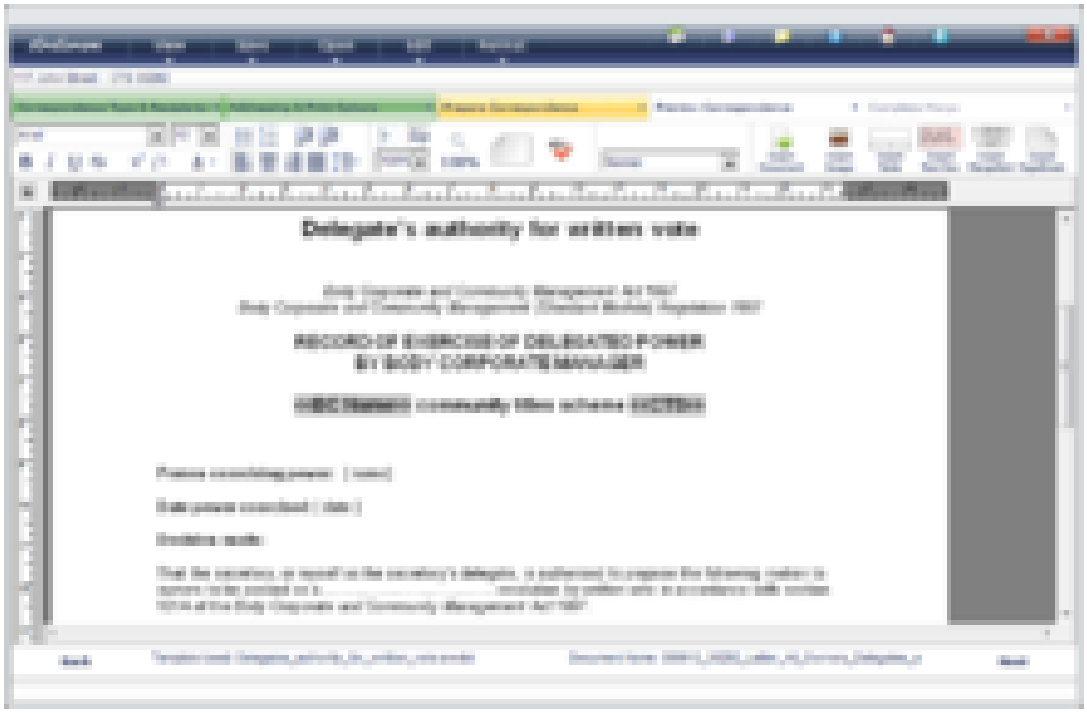
- **Text editing and word processing tools:**
  1. It is usually the first software tool computer users learn.

2. From letters,invoice,and storyboards to project content
3. Workgroup will choose a single word processor to share documents in a standard format.

Include spreadsheet,database,e-mail,Web browser and presentation applications.

Word processors such as

- ❖ Word and WordPerfect
- ❖ Include spell checkers,table formatters prebuilt templates for
- ❖ letters,resumes,purchase orders.
- ❖ Multimedia elements such as sounds,images and video.



- **OCR Software**
  - ❖ Optical Character Recognition.
  - ❖ Often you will have printed matter and other text to incorporate into your project, but no electronic text file. With *Optical Character Recognition*
  - ❖ (*OCR*) software, a flat-bed scanner and your computer you can save many hours of typing printed words and get the job done faster and more accurately.
  - ❖ Reading 8 to 36 point characters at 300 dpi(dots per inch)
  - ❖ Processing speeds 150 charaters per second.
  - ❖ The text areas of the images are then converted to ASCII characters using probability and expert system algorithm.
  - ❖ Ex: Perceive
  - ❖ **OCR** – for printed text recognition
  - ❖ **ICR** – for hand-printed text recognition
  - ❖ **OMR** – for marks recognition

- OBR – for barcodes recognition
- BCR – for business cards recognition
- DLR - for document layer recognition

- **Painting and Drawing Tools:**
  - *Painting and drawing* tools are the most important items in your toolkit because the impact of the graphics in your project will likely have the greatest influence on the end user.
  - ***Painting software*** is dedicated to producing excellent bitmapped images
  - *Such us Photoshop,Picture Publisher,and Fractal Design Painter*
  - ***Drawing software*** is dedicated to producing vector based line art that is easily printed to paper.
  - Drawing packages include powerful and expensive computer-aided design (*CAD*) software.
  - Such us CorelDraw,FreeHAnd Canvas.
  - software applications combine drawing and painting capabilities.
  - But many autoring systems can import only bitmapped images.
  - Ex: DeskDraw, DeskPaint, Designer

The following features in a drawing or painting packages:

- Paint tools to create geometric shapes,from squares to circles and from curves to complex polygons.
- Ability to pour a color,pattern or gradient into any area.
- Ability to paint with patterns and clip art.
- Eyedropper tool that samples colors.
- Zooming for magnified pixel editing.
- Multiple undo capabilities to let you try again.
- Airbrushing in variable sizes,shapes,and pattens
- Washing colors in gradients,blending and masking.
- Support for scalable text fonts and drop shadows.

- **3-D Modeling and Animation Tools**

  - 3 – D modeling software objects rendered in perspective appear more realistic
  - we can create stunning scenes and wander through them.
  - Choosing the right lighting and perspective for you final rendered image.
  - Powerful modeling packages such as Macromedia's Estreme 3D,AutoDesk's 3d studio Max.
  - Application also include export features enabling to save a moving view.
  - Each rendered 3-D image takes from a few seconds to a few hours to complete
  - Depending upon the complexity of the drawing and number of drawn objects.

Features

- ❖ Ability to drag and drop primitive shapes into a scene.
- ❖ Color and texture mapping.
- ❖ Ability to add realistic effects such as transparency.shadowing and fog.
- ❖ Ability to draw spline-based paths for animation.
- ❖ Unlimited cameras with focal length control.

- **Image-Editing Tools**

  - ❖ *Image editing applications* are specialized and powerful tools for enhancing and retouching existing bitmapped images.
  - ❖ These programs are also indispensable for rendering images used in multimedia presentations.

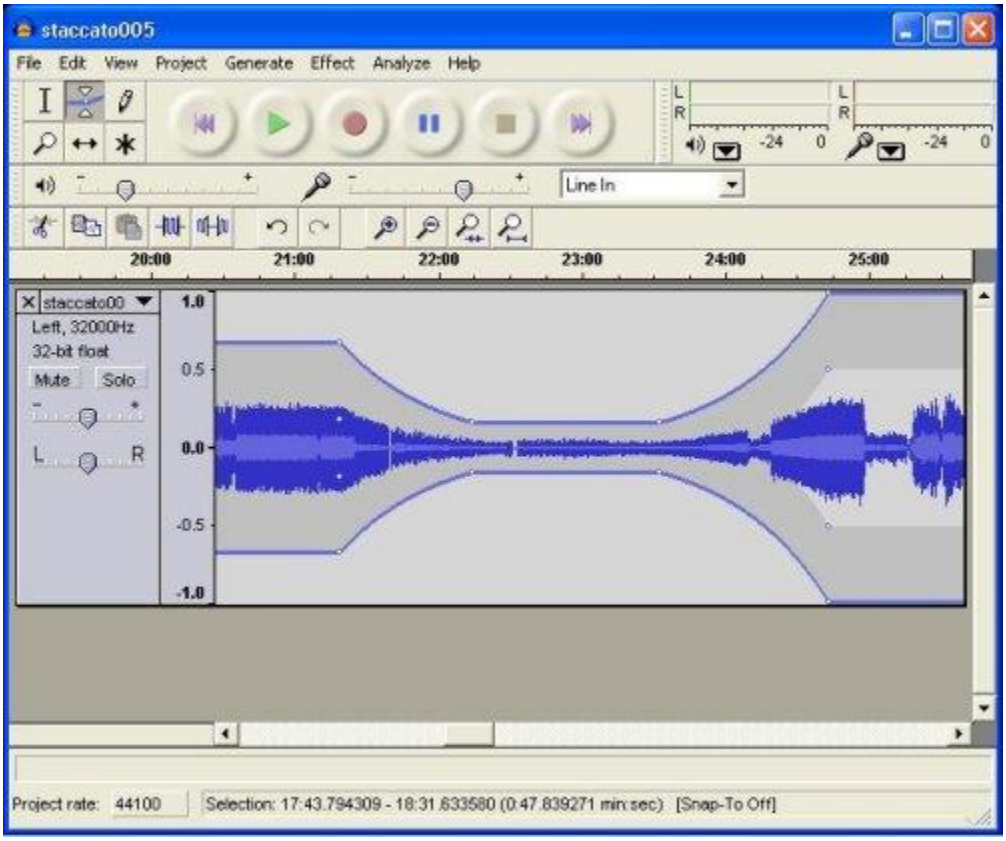
  - ❖ Modern versions of these programs also provide many of the features and tools of painting and drawing programs, and can be used to create images from scratch as well as images digitized from scanners, digital cameras or artwork files created by painting or drawing packages.
  - ❖ **Ex: Photoshop**

Features

- ❖ Multiple windows provide views of more than one image at a time.
- ❖ Good masking features
- ❖ Multiple undo and restore features.
- ❖ Direct inputs of images from scanner and video sources.
- ❖ Conversion of major image-data types and industry standard file formats.

- **Sound Editing Tools**

- ❖ Sound editing tools for both *digitized* and *MIDI* sound let you *see* music as well as *hear* it.
- ❖ By drawing the representation of the sound in a waveform, you can cut, copy, paste and edit segments of the sound with great precision and making your own sound effects.
- ❖ Using editing tools to make your own MIDI files requires knowing about keys, notations and instruments and you will need a MIDI synthesizer or device connected to the computer.
- ❖ Many MIDI applications provide both sequencing and notation capabilities
- ❖ Need a MIDI synthesizer or device connected to computer.
- ❖ MIDI files and multimedia project without learning any special skills.
- ❖ Editing software such as Creative Labs,WaveStudio.
- ❖ Ex: SoundEdit Pro



- **Animation Video and Digital Movie Tools**

  - ❖ *Animations and digital movies* are sequences of bitmapped graphic scenes (frames), rapidly played back.
  - ❖ But animations can also be made within an authoring system by rapidly changing the location of objects to generate an appearance of motion.

- ❖ *Movie-making tools* let you edit and assemble video clips captured from camera, animations, scanned images, other digitized movie segments.
- ❖ The completed clip, often with added transition and visual effects can be played back.

(OR)

b) (i) Explain the stages of developing a multimedia project.

Stages of a Multimedia Project:

(1) Planning

- Planning involve:-
  - Developing an idea
  - Identifying Objectives and Users
  - Identify Skills and Resources
  - Developing a graphic template, the structure, and a navigational system.
  - Estimating Time and Cost
  - Develop a small prototype or proof of concept

(2) Design and Production

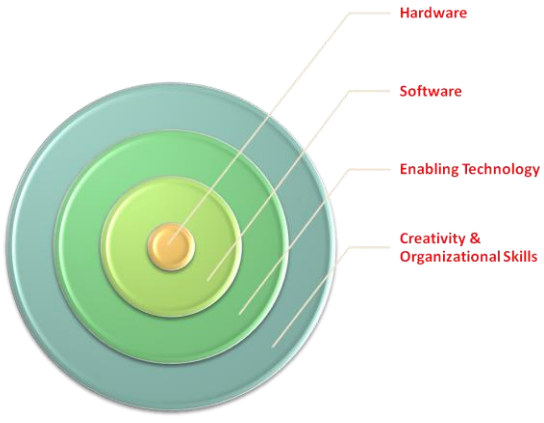
- The planned tasks are performed to create a finished product.
- Task include storyboarding, designing a detail navigation structure, GUI consideration and HCI consideration.
- The product is revised, based on the continuous feedback received from the client by doing an evaluation.

](3) Testing

- The program is tested to ensure that it:
  - meets the objectives of the project
  - works on the proposed delivery platforms
  - meets the client requirements.

(4) Deliver

- The final project is packaged and delivered to the end user.
  Requirements for a Multimedia Project



Where to use multimedia

Multimedia is **media** and **content** that uses a combination of different **content forms**. The term can be used as a noun (a medium with multiple content forms) or as an adjective describing a medium as having multiple content forms. The term is used in contrast to media which only use traditional forms of printed or hand-produced material. Multimedia includes a combination of **text**, **audio**, **still images**, **animation**, **video**, and **interactivity** content forms.

Categorization of multimedia

Multimedia may be broadly divided into **linear** and **non-linear** categories. Linear active content progresses without any navigational control for the viewer such as a **cinema presentation**. Non-linear content offers user **interactivity** to control progress as used with a **computer game** or used in self-paced **computer based training**. **Hypermedia** is an example of non-linear content.

Multimedia **presentations** can be live or recorded. A recorded presentation may allow interactivity via a **navigation system**. A live multimedia presentation may allow interactivity via an interaction with the presenter or performer.

Usage

A presentation using **PowerPoint**. Corporate presentations may combine all forms of media content. **Virtual reality** uses multimedia content. Applications and **delivery platforms** of multimedia are virtually limitless.VVO Multimedia-Terminal in **Dresden** WTC (Germany)Multimedia finds its application in various areas including, but not limited to, **advertisements**, **art**, **education**, **entertainment**, **engineering**, **medicine**, **mathematics**, **business**, scientific research and **spatial temporal applications**. Several Examples are as follows:

Creative industries

Creative industries use multimedia for a variety of purposes ranging from fine arts, to entertainment, to commercial art, to journalism, to media and software services provided for any of the industries listed below. An individual multimedia designer may cover the spectrum throughout their career. Request for their skills range from technical, to analytical, to creative.

Commercial

Much of the electronic **old** and **new media** used by commercial artists is multimedia. Exciting presentations are used to grab and keep attention in **advertising**. Business to business, and interoffice communications are often developed by **creative services** firms for advanced multimedia presentations beyond simple slide shows to sell ideas or liven-up training. Commercial multimedia developers may be hired to design for governmental services and nonprofit services applications as well.

Entertainment and fine arts

In addition, multimedia is heavily used in the entertainment industry, especially to develop special effects in movies and animations. Multimedia games are a popular pastime and are software programs available either as CD-ROMs or online. Some **video games** also use multimedia features. Multimedia applications that allow users to actively participate instead of just sitting by as passive recipients of information are called *Interactive Multimedia*.

Education

In **Education**, multimedia is used to produce **computer-based training** courses (popularly called CBTs) and reference books like encyclopedia and almanacs. A CBT lets the user go through a series of presentations, text about a particular topic, and associated illustrations in various information formats. **Edutainment** is an informal term used to describe combining education with entertainment, especially multimedia entertainment.

Journalism

Newspaper companies all over are also trying to embrace the new phenomenon by implementing its practices in their work. While some have been slow to come around, other major newspapers like **The New York Times**, **USA Today** and **The Washington Post** are setting the precedent for the positioning of the newspaper industry in a globalized world.

News reporting is not limited to traditional media outlets. Freelance journalists can make use of different new media to produce multimedia pieces for their news stories. It engages global audiences and tells stories with technology, which develops new communication techniques for both media producers and consumers. **Common Language Project** is an example of this type of multimedia journalism production.

Engineering

Software engineers may use multimedia in **Computer Simulations** for anything from entertainment to **training** such as military or industrial training. Multimedia for **software interfaces** are often done as a collaboration between **creative professionals** and software engineers.

Industry

In the **Industrial sector**, multimedia is used as a way to help present information to shareholders, superiors and coworkers. Multimedia is also helpful for providing employee training, advertising and selling products all over the world via virtually unlimited web-based technology

Mathematical and scientific research

In **mathematical** and **scientific research**, multimedia is mainly used for modeling and simulation. For example, a **scientist** can look at a **molecular model** of a particular

substance and manipulate it to arrive at a new substance. Representative research can be found in journals such as the **Journal of Multimedia**.

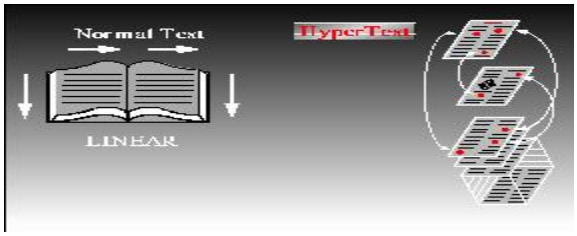
Medicine

In **Medicine**, **doctors** can get trained by looking at a virtual **surgery** or they can simulate how the **human body** is affected by **diseases** spread by **viruses** and **bacteria** and then develop techniques to prevent it.

(ii) Write short notes on hypermedia and hypertext

Hypermedia and Hypertext

- *Multimedia - combines text, graphics and audio*
- *Interactive multimedia - gives user control over what and when content is viewed (non-linear)*
- *Hypermedia -provides a structure of linked elements through which user navigates and interacts*
- *Hyper media* provides a structure of links
- *Hypertext* words are linked to other elements
- Hypertext is usually searchable by software robots



Hypermedia Structures

- Hypermedia elements are called *nodes*
- Nodes are connected using *links*
- A linked point is called an *anchor*
- Link - connections between conceptual elements (navigation pathways and menus)
- Node - contains text, graphics sounds
- Anchor - the reference from one document to another document, image, sound or file on the web
- Link anchor - where you came from

Multimedia and Hypertext

- Hypertext system.
- Using hypertext systems.
- Searching for words.
- Hypermedia structures.
- Hypertext tools.
- Hypertext System

- Hypertext is defined as the organized cross-linking of words, images, and other Web elements.
- A system in which words are keyed or indexed to other words is referred to as a hypertext system.
- A hypertext system enables the user to navigate through text in a non-linear way.

Using Hypertext Systems

- Information management and hypertext programs present electronic text, images, and other elements in a database fashion.
- Software robots visit Web pages and index entire Web sites.
- Hypertext databases make use of proprietary indexing systems.
- Server-based hypertext and database engines are widely available.

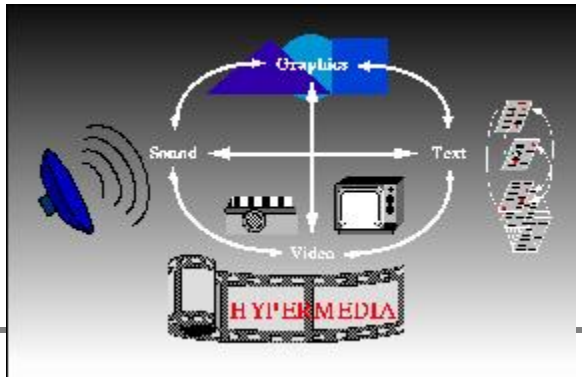
Searching for Words

- Typical methods for word searching in hypermedia systems are (cont):
  - Adjacency
    - ✓ Words occuring next to one another, usually in phrases or proper names
  - Alternates
    - ✓ Applying OR
  - Association
    - ✓ Applying AND

- Typical methods for word searching in hypermedia systems are (continued):
  - Negation
    - ✓ Applying NOT
  - Truncation
    - ✓ Words with its possible suffixes
  - Intermediate words
  - Frequency

Hypermedia Structures

- **Anchors.**
  - Anchor is defined as the reference from one document to another document, image, sound, or file on the Web.
  - The source node linked to the anchor is referred to as a link anchor.
  - The destination node linked to the anchor is referred to as a link end.



- **Navigating hypermedia structures.**
  - The simplest way to navigate hypermedia structures is via buttons.
  - Location markers must be provided to make navigation user-friendly.

Hypertext Tools

- Two functions common to most hypermedia text management systems are building (authoring) and reading.
- The functions of 'builder' are:
  - Creating links.
  - Identifying nodes.
  - Generating an index of words.

22. a) Discuss in detail about the usage of multimedia in different environment with examples.

Usage of multimedia

A presentation using **Powerpoint**. Corporate presentations may combine all forms of media content.**Virtual reality** uses multimedia content. Applications and **delivery platforms** of multimedia are virtually limitless.VVO Multimedia-Terminal in **Dresden** WTC (Germany)Multimedia finds its application in various areas including, but not limited to, **advertisements**, **art**, **education**, **entertainment**, **engineering**, **medicine**, **mathematics**, **business**, scientific research and **spatial temporal applications**. Several Examples are as follows:

Creative industries

Creative industries **use multimedia for a variety of purposes ranging from fine arts, to entertainment, to commercial art, to** journalism**, to media and software services provided for any of the industries listed below. An individual multimedia designer may cover the spectrum throughout their career. Request for their skills range from technical, to analytical, to creative.**

Commercial

Much of the electronic **old** and **new media** used by commercial artists is multimedia. Exciting presentations are used to grab and keep attention in **advertising**. Business to business, and interoffice communications are often developed by **creative services** firms for advanced multimedia presentations beyond simple slide shows to sell ideas or liven-up training. Commercial multimedia developers may be hired to design for governmental services and nonprofit services applications as well.

Entertainment and fine arts

In addition, multimedia is heavily used in the entertainment industry, especially to develop special effects in movies and animations. Multimedia games are a popular pastime and are software programs available either as CD-ROMs or online. Some **video games** also use multimedia features. Multimedia applications that allow users to actively participate instead of just sitting by as passive recipients of information are called *Interactive Multimedia*.

Education

In **Education**, multimedia is used to produce **computer-based training** courses (popularly called CBTs) and reference books like encyclopedia and almanacs. A CBT lets the user go through a series of presentations, text about a particular topic, and associated illustrations in various information formats. **Edutainment** is an informal term used to describe combining education with entertainment, especially multimedia entertainment.

Journalism

Newspaper companies all over are also trying to embrace the new phenomenon by implementing its practices in their work. While some have been slow to come around, other major newspapers like **The New York Times**, **USA Today** and **The Washington Post** are setting the precedent for the positioning of the newspaper industry in a globalized world.

News reporting is not limited to traditional media outlets. Freelance journalists can make use of different new media to produce multimedia pieces for their news stories. It engages global audiences and tells stories with technology, which develops new communication techniques for both media producers and consumers. **Common Language Project** is an example of this type of multimedia journalism production.

Engineering

Software engineers may use multimedia in **Computer Simulations** for anything from entertainment to **training** such as military or industrial training. Multimedia for **software interfaces** are often done as a collaboration between **creative professionals** and software engineers.

Industry

In the **Industrial sector**, multimedia is used as a way to help present information to shareholders, superiors and coworkers. Multimedia is also helpful for providing employee training, advertising and selling products all over the world via virtually unlimited web-based technology

Mathematical and scientific research

In **mathematical** and **scientific research**, multimedia is mainly used for modeling and simulation. For example, a **scientist** can look at a **molecular model** of a particular substance and manipulate it to arrive at a new substance. Representative research can be found in journals such as the **Journal of Multimedia**.

Medicine

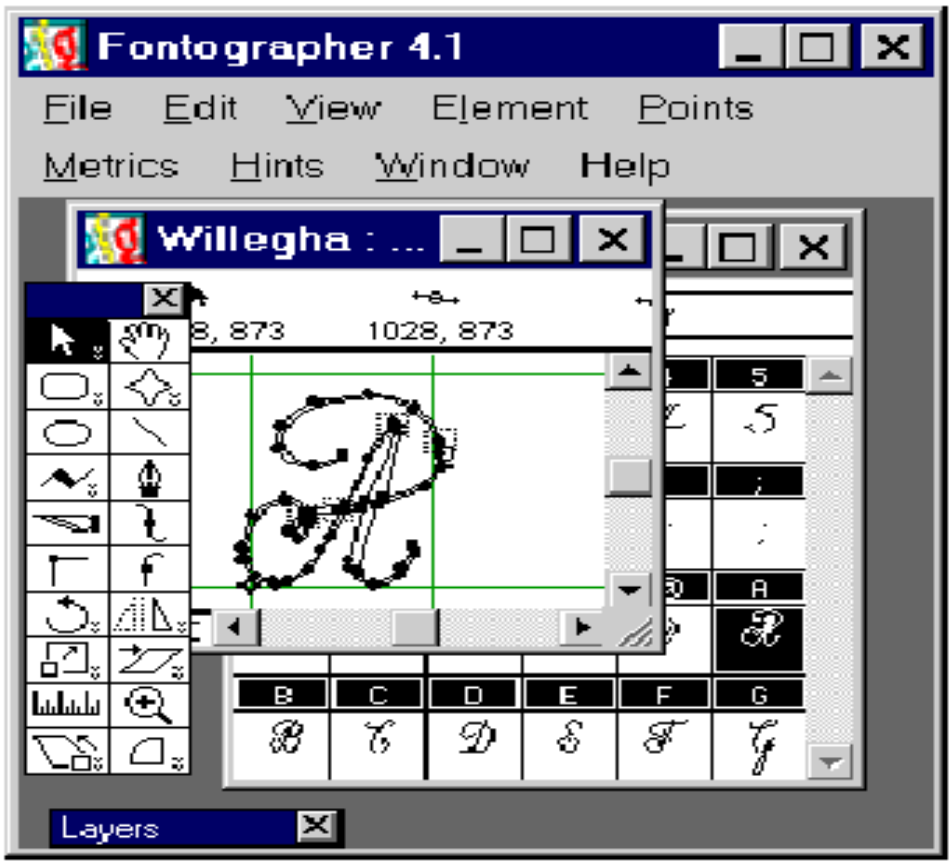
In **Medicine**, **doctors** can get trained by looking at a virtual **surgery** or they can simulate how the **human body** is affected by **diseases** spread by **viruses** and **bacteria** and then develop techniques to prevent it.

(OR)

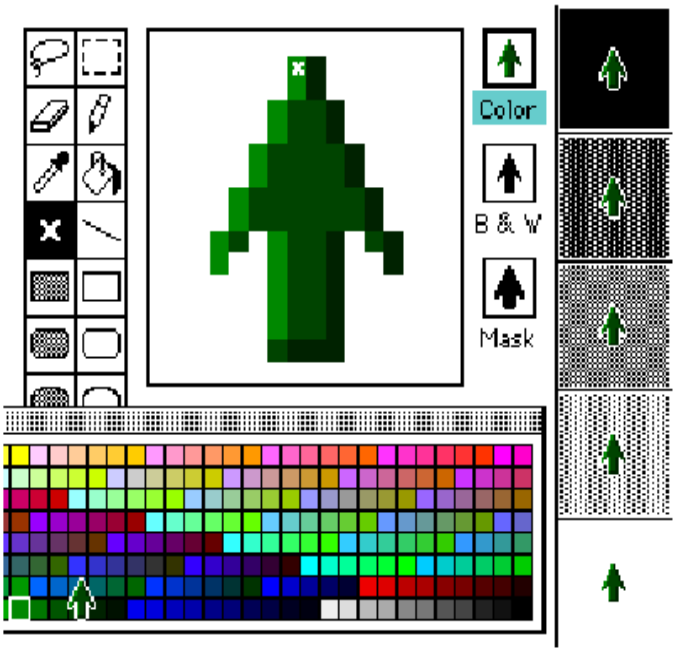
b) Write about Font Editing & Design Tools with neat sketch.

Fonts Editing and Design Tools

- Macromedia Fontographer
  - Fontographer is a specialized graphics editor.
  - It is compatible with both Macintosh and Windows platform.
  - It can be used to develop PostScript, TrueType, and bitmapped fonts.
  - It can also modify existing typefaces and incorporate PostScript artwork.



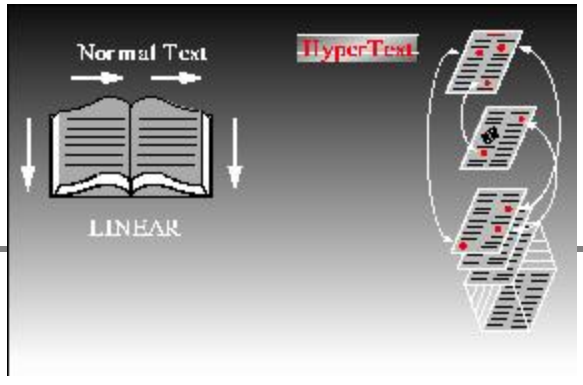
- ResEdit
  - Introduced by Apple Text to design text as a bitmap image.



- **Creating attractive texts.**
  - Applications that are used to enhance texts and images include:
    - ✓ Adobe Photoshop
    - ✓ TypeStyler
    - ✓ COOL 3D
    - ✓ HotTEXT
    - ✓ TypeCaster

Hypermedia and Hypertext

- *Multimedia - combines text, graphics and audio*
- *Interactive multimedia - gives user control over what and when content is viewed (non-linear)*
- *Hypermedia -provides a structure of linked elements through which user navigates and interacts*
- *Hyper media* provides a structure of links
- *Hypertext* words are linked to other elements
- Hypertext is usually searchable by software robots



Hypermedia Structures

- Hypermedia elements are called *nodes*
- Nodes are connected using *links*
- A linked point is called an *anchor*
- Link - connections between conceptual elements (navigation pathways and menus)
- Node - contains text, graphics sounds
- Anchor - the reference from one document to another document, image, sound or file on the web
- Link anchor - where you came from

Multimedia and Hypertext

- Hypertext system.
- Using hypertext systems.
- Searching for words.
- Hypermedia structures.
- Hypertext tools.
- Hypertext System
- Hypertext is defined as the organized cross-linking of words, images, and other Web elements.
- A system in which words are keyed or indexed to other words is referred to as a hypertext system.
- A hypertext system enables the user to navigate through text in a non-linear way.

Using Hypertext Systems

- Information management and hypertext programs present electronic text, images, and other elements in a database fashion.
- Software robots visit Web pages and index entire Web sites.
- Hypertext databases make use of proprietary indexing systems.
- Server-based hypertext and database engines are widely available.

Searching for Words

- Typical methods for word searching in hypermedia systems are (cont):
  - Adjacency
    - ✓ Words occuring next to one another, usually in phrases or proper names
  - Alternates
    - ✓ Applying OR
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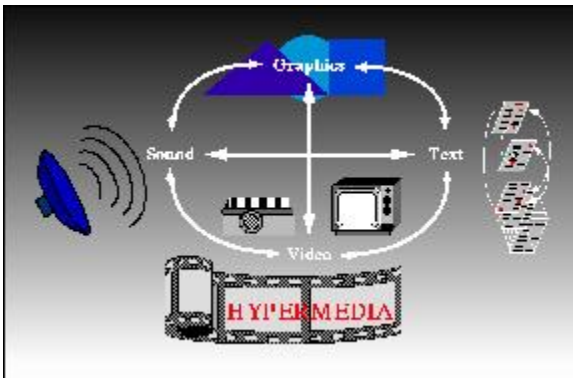

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- The functions of 'builder' are:
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  - Identifying nodes.
  - Generating an index of words.

23. a) Elaborate how to work in Photoshop.

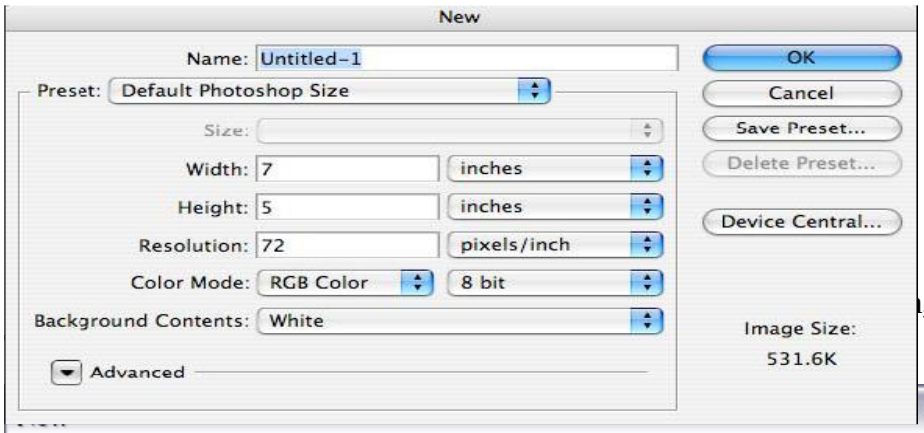
WORKING IN PHOTOSHOP

Adobe Photoshop is software's that will enable the students to use the various tools and effects available for photo editing and graphic design.

Because of the growth of technology in this day and age, it is necessary to have the ability to work with digital media. This presentation is an introduction to the basics of Adobe Photoshop.

CREATING NEW DOCUMENT

To create a new document, click **File > New**. This will open the **Document Setup** dialog box



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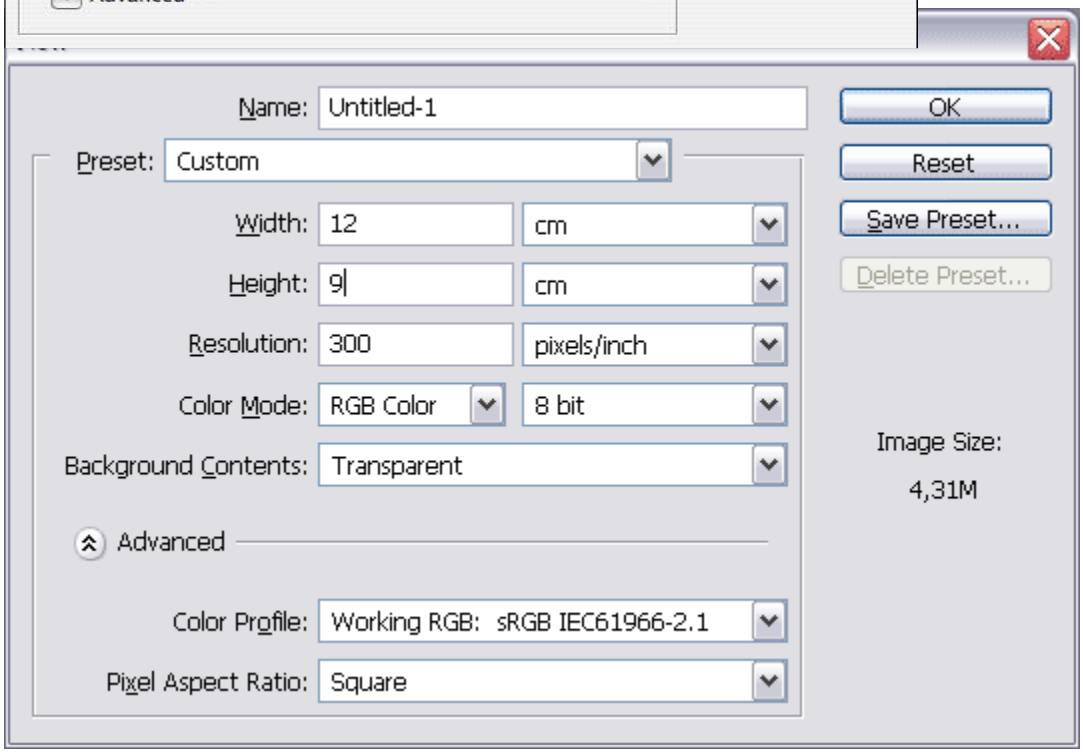
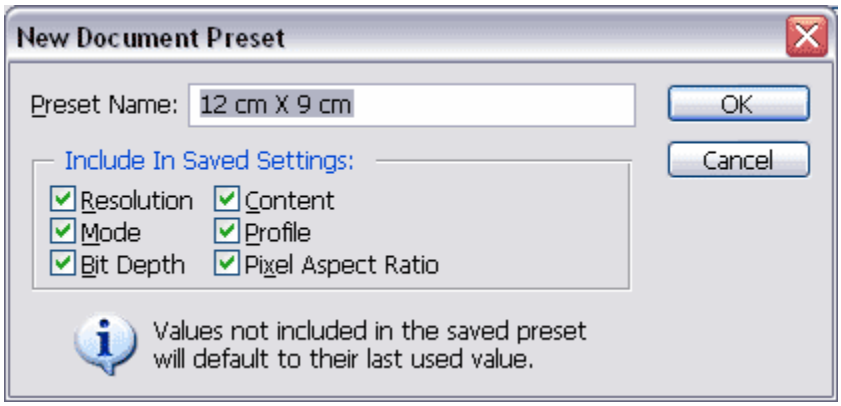


Step 3. Press **Save Preset...** and you will see the **New Document Preset** dialog box.

The program offers us to save the preset as **"12 cm x 9 cm"**. It's quite a good name, so we just press **Ok** to save the preset.



Step 4. Next time you need the document of this size, just call the command **File => New** and in the **Preset** fall-out menu in the New Document dialog box select the **"12 cm x 9 cm"** preset.

. Click **File** on the menu bar

- Click **New**
- Enter the required width in the Width text box
- Enter the required height in the Height text box
- Click **OK**

OPENING & SAVING AN FILES

If the image you have is saved on a disk, select **File > Open**, and then navigate to the disk drive where your image is saved. Choose the image file and click **Open**.

To save your file, select **File >Save As** and type in the new name of the file in the dialog box.

SAVING A FILE OPTIONS:

Use **Save As** to save a file under a new name and to preserve a copy of the original file .Open a file in one file format (e.g., .BMP) and save it in another file format (e.g., .JPG)

PHOTOSHOP SAVE FOR WEB:

The Save For Web dialog box doesn't provide as much flexibility in the output image file formats as the Save As dialog, but it does offer more flexibility with each supported option. Supported output file formats include:

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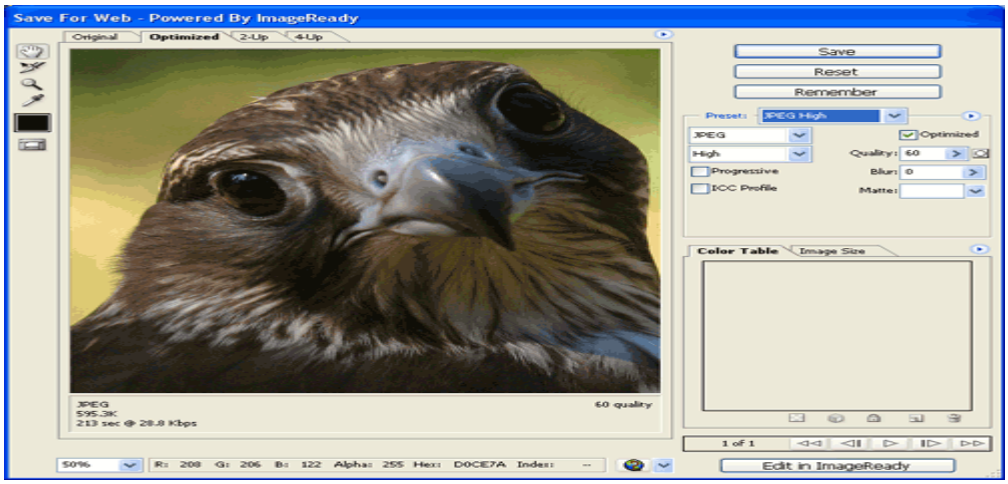
- **PNG-24** - "Lossless" 24-bit quality. Supports multi-bit transparency.
- **WBMP** - Black & White dithered output.



IMPORT AND SCANNED IMAGE
Get photos from scanners

Before you try to scan and open your photos in Elements Organizer, make sure that you've installed all the software that came with your scanner. Carefully read any documentation that came with your scanner to make sure that it's connected properly to your computer.

1. Make sure that your scanner is connected and switched on.
2. In Elements Organizer, do one of the following:
   - Click Import. Select From Scanner.
   - Select File > Get Photos And Videos > From Scanner.
3. In the Get Photos From Scanner dialog box, choose the name of the scanner from the Scanner menu.

 Click Browse to select a location for saving the photos.

 Choose a file format from the Save As menu. JPEG, the default format, is usually the best choice. If you choose JPEG, drag the Quality slider to increase or decrease the quality of the scan. The higher the quality, the larger the file size.

Quality slider

Click OK. If you're using a scanner with a TWAIN driver, Elements Organizer launches the driver that came with your scanner. Follow the instructions that came with the driver software to scan your photo. Typically, you can also select an area to scan or correct any color issues that you may see.

(OR)

b) Write short notes on Tools in Photo shop with a neat sketch.

TOOLS:

CROP TOOL
Selects and cuts parts of an image.

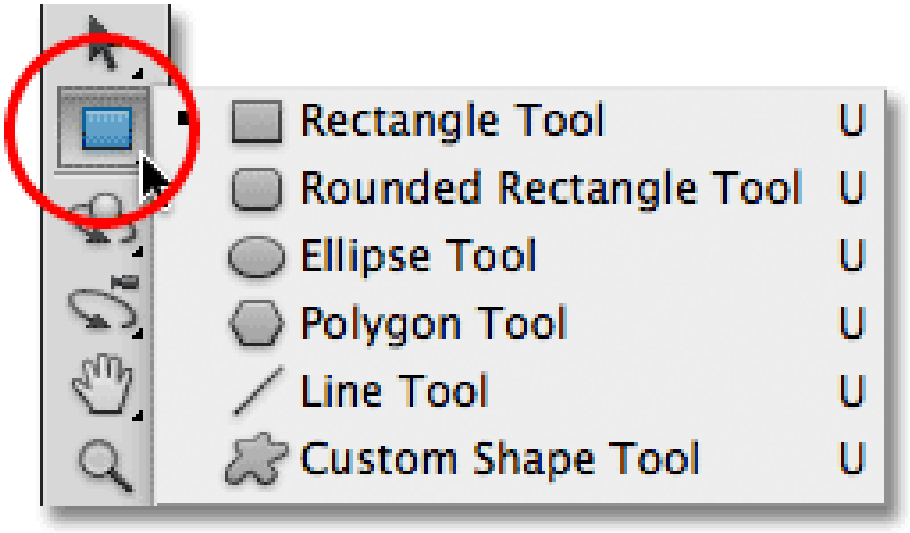
SLICE TOOL
Used to cut images into slices, which can be exported to a web page.

PATH SELECTION TOOL You use this tool when working with paths. Since this is all about the basics, I won't go into details. It's related to the Pen Tool (see below) though.

SLICE TOOL This is used mostly for building websites, or splitting up one image into smaller ones when saving out. It's kind of an advanced tool, and since you're in here for the basics, we'll kind of skip over it. Kind a makes you mad I made you read all that for nothing, huh?

THE SHAPE TOOLS

Photoshop gives us six Shape tools to choose from – the Rectangle Tool, the Rounded Rectangle Tool, the Ellipse Tool, the Polygon Tool, the Line Tool, and the Custom Shape Tool, and they're all nested together in the same spot in the Tools panel. By default, the Rectangle Tool is the one that's visible in the Tools panel, but if we click on the tool's icon and hold our mouse button down for a second or two, a fly-out menu appears showing us the other Shape tools we can choose from:



Healing Brush

- ❑ Corrects small blemishes in scanned photos.
- ❑ Select the tool, hold down the **ALT** key and left-click on the base color you need to heal. Then left-click over the blemish.

Brush Tool

- Draws lines of different thicknesses and colors.

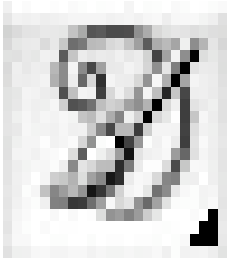
- Select the tool. Then click on the selected area, drag to draw lines. Use the **Options** bar to change the **Brush**, Mode, Opacity, and Flow.

Clone Stamp

- ❑ Takes a sample of an image and applies over another image, or a part of the same image.
- ❑ Select the tool. Hold down the **ALT** key and left-click on a certain point of the document where you want to start your copy point.
- ❑ Then, put your mouse over whatever part of the new document you want the picture to go to. Hold down the left mouse button and drag the mouse across the page to copy the picture.

Art History Brush

- ❑ Paints over an image using the source data from a specified history state or snapshot.
- ❑ Select the tool, specify the **Brush**, **Blending Mode**,**Opacity**, **Style**, **Area**, and **Tolerance**.



Erase Tool

- Removes part of an existing path or stroke. You can use the Erase tool on paths, but not on text.
- Select the tool, click on the part of the image you wish to erase. Drag to erase pixels.

Paint Bucket Tool

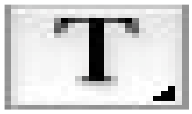
- Fills and entire area with a specific color of your choice.
- Select the tool. Choose a foreground color in the **Color Box**.
- Select an area you wish to apply the color to. Click the tool button, then click on the selected area.

Gradient Tool

Applies a gradient fill to a selected part of the image or to an entire layer

Type Tool

- Types text on a page. Every time you click the **Type Tool** on a new portion of the page a new layer will be created.
- Select the tool, click on the page and begin to type. You can specify the font and size in the **Options** bar. You can also resize and transform the text box by dragging the squares at the sides and corners. Use **the Move Tool** to move the text on the page.



Rectangle Tool

- Draws a rectangle shape. Other shapes that are hidden in this tool are: **Rounded Rectangle Tool**, **Ellipse Tool** ,**Polygon Tool**, **Line Tool**, and **Custom Shape Tool**.
- Select the tool, click and drag on the page to draw a shape. The shape will be automatically filled with the current foreground color.

ANNOTATION

The following list details the Annotation, Measuring, and Navigation tools:

Notes (N): Click and drag with this tool to create a virtual sticky note for the image When you're finished typing the text of the annotation, click the close button on the note. Drag the note around by clicking and dragging the note's icon. Open the note by double-clicking it. Change the note's color in the Options bar. Notes are nonprinting elements.

Register Number: _____

[15CSU504]

KARPAGAM ACADEMY OF HIGHER EDUCATION
KARPAGAM UNIVERSITY
(Under Section 3 of UGC Act 1956)
Eachanari, Coimbatore - 641021.
(For the candidates admitted from 2015 onwards)

B.Sc. COMPUTER SCIENCE
FIFTH SEMESTER
SECOND INTERNAL TEST – AUGUST 2017
Multimedia Systems

Class: III B.Sc CS (A & B) **Duration: 2 Hours**
Date & Session: **Marks : 50**

PART-A (20*1=20 Marks)
(Answer All The Questions)

1. The Letter used as shortcuts for Marquee Tool
   a. Q b. L c. A d. **M**

2. Which among the following is not the selection tool
   a. Marquee b. Move c. lasso d. **Eraser**

3. The file menu has a _____
   a. **Open recent command** b. images c. windows d. palettes

4. The _____ smudges data in an image.
   a. Sponge tool b. **Smudge tool** c. Sharpen tool d. Dodge tool

5. The hue value is changes from _____
   a.0 to 80 b. **0 to 360** c. 0 to 30 d. 0 to 100

6. _____ tool creates hard-edged lines
   a. Airbrush b. paintbrush c. eraser d. **Pencil**

7. The _____tool paints a copy of the selected state or snapshot into the current image window.
   a.Paint Bucket b. Art History brush c. **History Brush** d. gradient

8. _____tool is used to create straight edged selection borders.
   a.lasso tool b. elliptical tool c. **polygonal tool** d. slice tool

9. The brush palette is attached to the _____ bar
   a. menu b. status c. tool d. **option**

10. _____has various tools for editing the image
a.Palettes b. **toolbox** c. menubar d. interface

11. _____ tool sprays paint or pixel on the canvas
a.**Airbrush** b. paintbrush c. eraser d. Pencil

12. The _____ sharpens soft edges in an image.
a.Sponge tool b. Smudge tool c. **Sharpen tool** d. Dodge tool

13. _____palettes displays the names of its colors
a. **Swatches** b. info c. layers d. history

14. The ratio of the height and width of the actual document
a.**aspect ratio** b.matrix ratio c. reference ratio d. max_ratio

15. If 0 is entered in the saturation box, the color will be_____
a.**Gray** b. red c. white d.black

16. _____ lets you select a specific color in an image for use another part of your image
a. Slice b. crop c. **eyedropper** d.magic wand

17. The Letter ___used as shortcuts for Lasso Tool
a. Q b.**L** c. A d. M

18. The____tool erases solid-colored areas to transparency with a single click.
a.Eraser b.Background Eraser c. **Magic Eraser** d. Light Eraser

19____ is a two or three pixel border around an edge that blends into the adjacent color to create a small transistion zone.
a. feather b**. anti-alias** c. marquee d. stripes.

20. _____ are horizontal or vertical lines that can be positioned anywhere on the image surface.
a. **guides** b. grids c. rules d. lines

PART – B (3 * 10 = 30 Marks)
(Answer ALL the Questions)

21. a) Discuss the various ways to save files in Photo shop.

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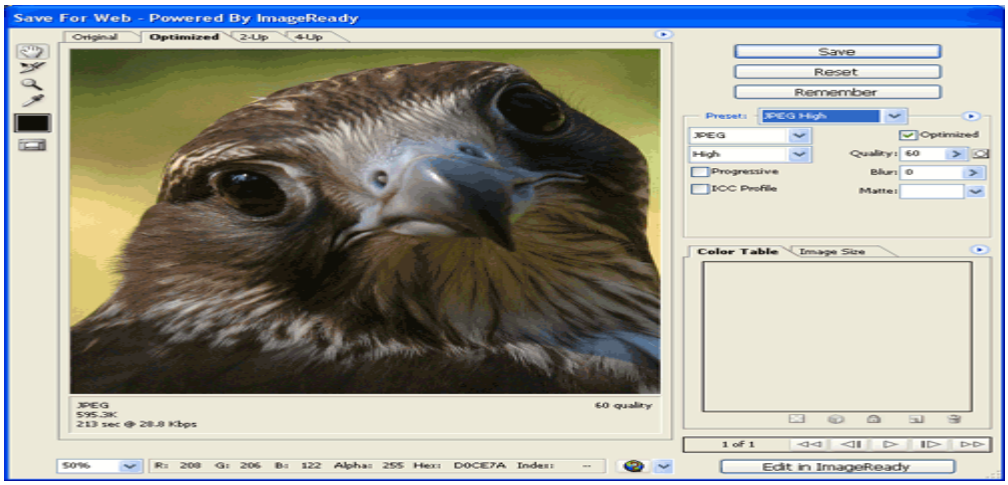

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(OR)

b) How do you create a document in Photo shop? Explain.

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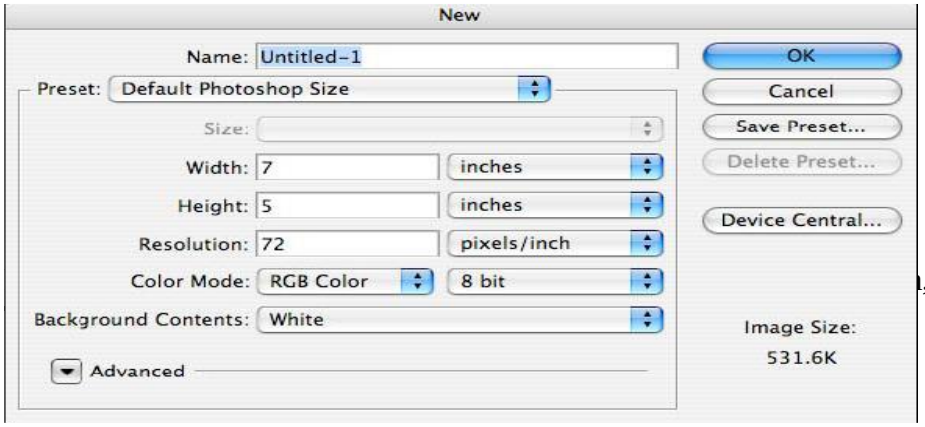

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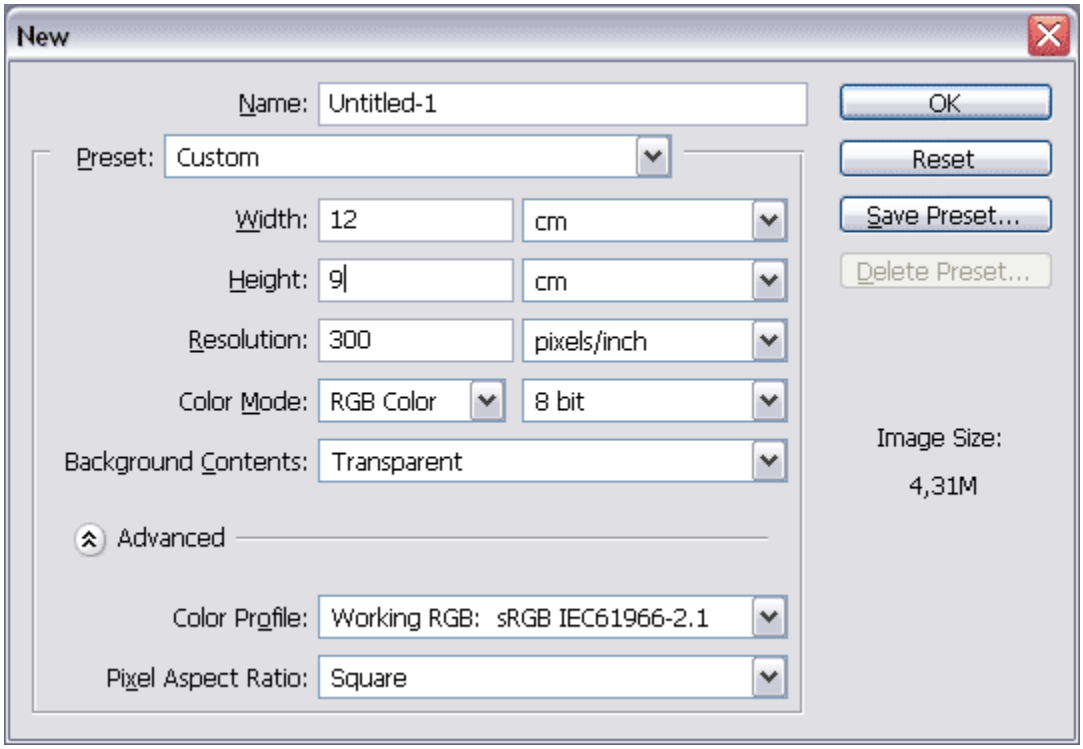

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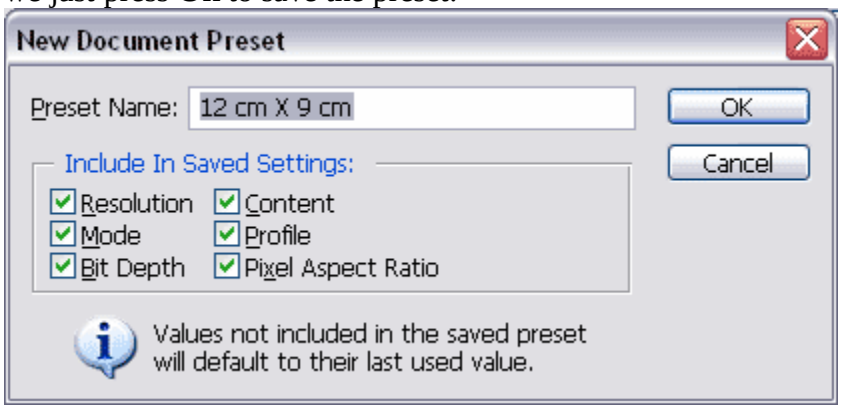

Step 4. Next time you need the document of this size, just call the command **File => New** and in the **Preset** fall-out menu in the New Document dialog box select the **"12 cm x 9 cm"** preset.

. Click **File** on the menu bar

- Click **New**
- Enter the required width in the Width text box
- Enter the required height in the Height text box
- Click **OK**

22. a) Describe about Displaying Images in Photo shop.

DISPLAYING THE IMAGE

i) The Zoom Tool

Choose the Zoom tool from Tool palette. Place your cursor on the area of the image. you will see the Zoom tool cursor with a plus sign indicate the Zoom tool with enlarge the view .The image appear larger to maximum view size of 1600 percent.

ii) Scrolling in Photoshop

The Hand Tool: choose the Hand tool .click the image and drag to move the image.

Scroll Bar: Click and Drag scroll Handle or click an arrow at end of the scroll bar.

Keyboard : you can use the keyboard to scroll the image up ,down, left, or right.

Keyboard commands for scrolling

Scroll Action	**Mac KB**	**Mac Extended KB**	**Windows KB**
Up	Control+K	PgUp	PgUp
Up Slightly	Shift+Control+K	Shift+PgUp	Shift+PgUp
Down	Control+L	PgDn	PgDn
Down Slightly	Shift+Control+L	Shift+PgDn	Shift+PgDn
Left	Cmd+Control+K	Cmd+Control+PgUp	Ctrl+PgUp
Left Slightly	Shift+Cmd+Ctrl+K Shift+Ctrl+PgUp	Shift+Cmd+Ctrl+PgUp	
Right	Cmd+Control+K	Cmd+Control+PgDn	Ctrl+PgDn
Right Slightly	Shift+Cmd+Control+L Shift+Ctrl+PgDn	Shift+Cmd+Control+PgDn	

iii) Navigation shortcuts

Centering the image: This technique centers and zoom and area of image on the screen.

Restoring the display to a 100 % view: Double click the Zoom tool icon in the tool palette

Toggling to the Zoom tool:

- Hold down the command or ctrl key and space bar and click the mouse to zoom in.
- Hold down the option or alt key and space bar and click the mouse to zoom out.

Toggling to the Hand tool:

The hand tool lets you scroll around the image when it exceeds the size of the image window.

iv) The Navigator

The navigator is map of the image displayed as thumbnails showing the exact location of what appears in the image window relative to the entire image. Navigational features are,

View box:

The red rectangle on the thumbnail indicates what is currently displayed in the image window .you can choose a color from pull down menu or click the swatch to choose a color from the color picker.

Zoom slider:

You can Zoom in on the image by moving the slider to the right , or zoom out by moving the slider to the left.

Zoom in & Zoom out buttons:

The button with the small mountains on the left of the slider zooms out, and the button with the large mountain to the right of the slider zooms in. The buttons use the same predefined increments as the Zoom tool.

Magnification Box

At the bottom-left of the Navigator palette, you can enter a specific percentage at which to view your image.

Sizing the Navigate Palette

You drag the lower-right corner of the Navigator box to increase or decrease the size of the Navigator palette and its image thumbnail.

v) The View Menu

For example, the View→Zoom In command achieves the same result as the keyboard shortcut Command /Ctrl + plus sign; The Zoom Out command is the same as typing Command/ctrl+minus sign. These techniques are identical to the Zoom tool and ,of course, all of these commands are similar to the function of the Navigator and the magnification box, slide variations.

The other options in the View menu are

Fit on screen displays the image at the maximum horizontal or vertical size the monitor screen will accommodate.

Actual Pixels displays the image in a 1:1 ratio with the monitor's screen resolution.

Print Size accurately displays the height and width dimensions of the image.

New View the View→New View command displays multiple windows of the same document. Multiple windows give you the ability to observe two or more views of your image simultaneously, so that you can see the close-up detail in which you are working and the global effect on the entire image. When you edit the image, you will see the changes on both views.

vi) Display Modes

Three icons on the Tool palette determine how the image is seen on screen. These modes act like electronic mats. There are three options:

Standard Background The default view displays the image up against the operating system's desktop.

Full Screen with Menu bar The image takes up almost the entire surface of the monitor screen and displays menu bars across the top. When you zoom to a smaller display size, the image appears centered against a great background.

Full Screen The image takes up the entire surface of the monitor screen. When you zoom to the smaller display size, the image appears centered against a black background.

(OR)

b) Illustrate about choosing colors and creating own colors in photoshop.

CHOOSING COLORS

Picking a color in Photoshop 6 is as simple as squeezing paint from a tube. It is a matter of choosing a color from one of Photoshop's three color interfaces. In addition you can sample color directly from an image.

There are two color swatches near the bottom of the tool palette, representing the current foreground and back ground colors. The swatch on the left is this foreground color, a which is applied by any of the painting tools. The default foreground color is black. The background color on the right is applied with this eraser tool or if you cut a selected portion of an image on the background. The default background is white.

You can reverse the fore ground and background colors by clicking the curved arrow to the upper _right of the swatches.

i)The color picker

`To choose the fore ground or back ground color, click its swatch; the color picker appears. The color picker lets you choose from four methods of defining your colors:

HSB, RGB, Lab, and CMYK. Your main tool in the color picker is a vertical slider and a large colors field.

Hue: This is the position of the color on a color wheel. When the H radio button it's selected in the color picker, the vertical slider is displays in the spectrum of all of the available hues, and the color fields presents that hue's saturation and brightness variation. Notice that the top and bottom of the spectrum slider or both red. If you drag the slider to the top or bottom of the color bar, the values in the hue box are the same: 0 degrees. No, we are not taking the hue's temperature; we're determining its position on a color wheel. The vertical bar is actually a color wheel that has been cut and straightened at the 0 degree, or red, position drag the slider anywhere on the bar, notice that the hue values change the to a number between 0 and 360 degrees. As you move the slider, the field to the left changes color.

Saturation: The color field on the left determines the saturation and brightness of the hue. Saturation is the intensity of a particular hue. There are two ways to determine the saturation of color in the color picker: Enter the value in the saturation box, or click or drag within the coloe field. If the value in the saturation box is 100%, or if the circle on the color fields is to the far right, the color will be as intense as it can possibly be. If a 0 is entered in the saturation box, or if the circle is the placed at the far left of the field, the color will be gray

Brightness: The value of the color is controlled in a simalar manner. Brightness is the lightness or darkness of a color.Lower values produce darker color,with 0% equaling black.Higher values produce lighter colors,with 100%equaling white when there is no colors saturation or the lightest possible combination of hue and saturation. Click toward the bottom of the color field to darken the color or toward the top to lighten it.

ii) Active parameters of colors

By default, the color picker opens in HSB mode with hue as the active parameter. The slider represents the colors (hues) on the color wheel, and the field represents the saturation and brightness of the selected hue. The color picker can be changed to display several different configurations: the color section of this book includes a side by side comparison of the color picker's appearance when using each of the value fields.

The color picker can be configured for HSB, RGB, Lab, and CMYK active parameters by clicking a radio button next to the desired model. Then vertical bar then represents the selected characteristic in the selected model When the S radio is active, for

instance, active parameter of the color picker shifts to saturation mode and the vertical bar becomes a saturation slider. The color field now displays hue and brightness variations. If you click or drag in the field to the left or right, you affect the hue: if you click or drag up or down, you affect the brightness.

When the B radio button is checked, the active parameter of the color picker shifts to brightness, on the vertical bar becomes a brightness slider the color field now displays hue and saturation variation: clicking in field or dragging the circle to the left or right affect the hue and dragging it up or down affect the saturation.

In the case of RGB and Lab (lightness, a, b) when a color channel's radio button is selected the vertical slider displays the variation of the color within that channel, and the color field becomes the other two color is channels, one represented the horizontally and the other represented vertically.

The color swatch at the top of the color picker has two parts. The bottom of the swatch shows the current color setting: the top shows the color you have selected in the color picker

Specifying CMYK Colors

Let's say a client walks into your office and wants you to add a logo to an image with specific CMYK color values to correspond to the official corporate colors of her business. Once you have scanned to logo, you can define the colors in the color picker and fill the logo with the exact tint values of cyan, magenta, yellow, black needed to produce the corporate color.

To define and apply CMYK colors:

1. Click the foreground swatch to display the color picker.
2. Enter the CMYK %value in the boxes.
3. Click OK. The color appears as the foreground color.
4. Select the area to be filled.
5. Press option + delete (Mac) or Alt + Backspace (Win) to fill the selected area.

The CMYK Gamut Warning

You would think that because CMYK is represented by 4 color channels instead of three would be more colors available in this color mode. But in fact, a high percentage of black plus any combination of cyan, yellow and magenta usually yields black. This greatly limits the possibilities of CMYK. In fact, the CMYK gamut is so small that some

colors can't be produce at all especially highly saturated one's the color section includes a schematic comparison of the gamut of visible, RGB, and CMYK Colors.

If you choose a color in HSB or RGB that is outside the printable range or gamut of CMYK, you will see the percentage values in the CMYK boxes. However, you will also see a CMKY Gamut Warning next to the swatch in the Color Picker. The small swatch blow the warning is a representation of how the color will print. Some CMYK colors, especially highly saturated colors, can vary significantly from their RGB counter part. If you get a warning, you may want to specify a different color for a close match, or be prepared to accept considerable variation of the color on the printed piece.

Specifying Web Colors

In HTML code, colors are coded with a combination of six hexadecimal digits so that WWW browsers can read and display them. Not all browses can display all colors you can use the Color Picker to assure that the colors you use are browser-safe.

To Specify a Web color, check the Only Web Color box at the bottom of the Color Picker. The color bar and color field then unique themselves to 216 Web-Compatible colors.

Like CMYK colors, Web colors have a very limited gamut compared to RGB. When the Only Web Colors box is unchecked, the Color Picker displays a Web Color Gamut Warning next to the large swatch in the Color Picker. The small swatch below the warning shows how the color will be seen on Web browser.

Specifying Custom Colors

The PANTONE Matching System is a group of inks used to print spot colors. where CMYK mixes only 4 colors to produce a full color a spectrum, PANTONE inks are solid colors used to print rich solid or tinted areas.

To specify a custom color:

1. Click a color swatch to display the Color Picker.
2. Click the Custom button to display the Custom Color dialog box.
3. From the Book pop-up list, choose the desire matching system.
4. Enter the color's number using the keypad. you can, instead, scroll through the color list using

the slider; when you find the color you want, click it.

5. Click OK.

iii) Using color palettes

While the color picker displays all of the color characteristics and models in one integrated fields, it is sometimes cumbersome to use because it is not context-sensitive. A context-sensitive palette's will response immediately to your commands without having to click an OK button. But the color picker must be displayed by clicking the foreground or background swatch. You must then choose a color model and a color. Finally you must click OK. This process can be time-consuming because of the many steps involved. Instead, you may want to use the context-sensitive color and swatch palettes that conveniently float on the desktop.

The Swatches Palette

To display individual swatches of color, choose the Swatches palette from the palette cluster. Predefined color can be chosen, or new colors can be added and saved.

Swatches Technique	**How To Do It**
To Select a Foreground Color	Click it; the color will appear as the foreground swatch on the Tool palette
To Select a Background Color	Press the Option(Mac)or Alt(Win) key while clicking the color
Add Color	Place your cursor in the blank space below the color swatches. The cursor changes to paint can. Click your mouse, name the color and the foreground color will appear in the palette as a new swatch.
To Delete a Color	Press the Command (Mac) or Ctrl(Win) key and click the swatch. Or, control-click (Mac)or right-click(Win) and select Delete Swatch from the shortcut menu.
To Save a Swatch Palette	Once you have added colors to the swatches, you may want to save the palette for use in

	other documents. From the Swatches palette menu, choose Save Swatches. Designate a folder in which to store your palette
To Load Swatches	To access a saved palette, choose Load Swatches from the Swatches palette menu. You can then access the Swatch from folder in which you saved it, or choose a specific palette like PANTONE, Focoltone , ANPA, or Web Save Colors from the list.
To Reset Swatches	The Reset Swatches command on the palette menu restores the swatches to the Photoshop default palette.
To Name a Swatch	Color Swatches can be named for identification. To name a swatch, double-click it and enter the name in the Swatch Name dialog box. Or Control-click (Mac) or right-click (Win) and select Name Swatch.

iv) Sampling Colors

Foreground and background colors can be specified by sampling directly from the image.

To sample a color, choose the Eyedropper from the Tool palette and click or drag across the image. As you drag, notice that the foreground swatch changes to the color the eyedropper is touching. To sample a background color, hold down the Option or Alt key as you click.

23. a) Explain the role of Painting & Editing Tools.

The painting and editing tools are used to manually apply color or to modify an area of the image. You can access the painting and editing tool by clicking them in the tool palette or by pressing the appropriate letter key on the keyboard.

i) The Painting Tools

The painting tools include the Airbrush, paintbrush and pencil; these tools are designed to simulate real studio painting techniques.

Airbrush (Shortcut Key-J)

Use the airbrush to spray color. By placing your cursor on the image, clicking your mouse, and dragging, you can spray a pattern of color. If you drag slowly or stop dragging the color will build just like a real airbrush. You can adjust the pressure of the airbrush in the options bar, which controls amount of color that is deposited.

Paintbrush (B)

You apply color to the image with the paint brush by clicking your mouse Button and dragging. By default, the stroke is a solid color. You can adjust the characteristics of the tool to alter quality of the paint stroke.

Opacity The transparency of the stroke is controlled with the opacity slider from 0% to100%.When painted on a colored surface, the transparent of translucent stroke will reveal the pixels underneath it.

Wet Edges this adjustment provides a water color stroke that looks as though the color is concentrated along its edges and translucent in its center.

Pencil (B)

The pencil is the only tool that produces an aliased or hard-edged stroke. Use the pencil to draw crisp horizontal or vertical lines or stair-stepped diagonals.

Like the paint brush, you can adjust the opacity or assign a color mode to the stroke.

You can use the pencil as an eraser by checking the auto eraser box. If you start painting an a area containing the foreground color, the auto erase function replaces it with background color. If you start painting on an area containing any color other than the foreground color, the pencil paints with the foreground color.

ii) The Editing Tools

The editing tools include the clone stamp, pattern stamp, history brush, Art history brush, eraser, background eraser, magic eraser, blur, sharpen, smudge, dodge, burn, and saturate tools. While the editing tools don't apply the color directly to the image, they are essential for manipulating small regions with in the image and modifying existing colors.

Clone Stamp (S)

To clone an area,you must 1st sample it:

1. Choose the Colne Stamp from the Tool paletee.

2. Choose an appropriate brush from the Bush menu on the Options bar.
3. Press the Option(Mac) or Alt(Win) key and click your mouse on the point that you want to copy.
4. Release your mouse and reposition the cursor were you want sample to be painter.
5. Click your mouse and begin painting. As you paint, that tool will begin coping the point of the image that was sampled.A small cross will indicate the area that is begin copied as you drag the brush across the image.

Pattern Stamp(S)

Use the pattern stamp to paint an area with a repeating pattern that you choose from the pattern pull-down menu on the options bar.

Check the aligned option to maintain the alignment of the brush with the pattern. Each time release the mouse, move the brush, and resume painting, the alignment of the pattern continues. If aligned is unchecked, the image time you click, the center of the pattern till will again the source of the new image.

History Brush(Y)

The History Brush restores a portion of the image to a formal state. Choose the History Brush and target a state in the History palette, choose a brush size, press the mouse and drag across the image.

Art History Brush(Y)

This tools is quite handy for creating instant Impressionists effects. When you paint with the Art History Brush,color is deposited rapidly in several directions. Choose from a list of characteristics in the Options bar that affect the style of the stroke and the rapidity in which it is deposited.

***Style** Determines the size and shape of the strokes that art deposited. Choose from a list that includes Tight,Loose,Short,Long,Dabs,and Curls.

***Fidelity** Is a percentage(from 0% to 100%) that affects the color of the stroke and how close it will be to the color on which your painting. Higher values produce more monochromatic affects,and lower values produce more color variation.

***Area** Determines how wide a region the strokes will be deposited over, from 0 to 500 px. Higher –resolution files need higher values.

***Spacing** Control the freequency(from 0% to 100%) at which the stroke is deposited as you drag. Dragging faster produces wider gaps between stroke clusters.

Eraser(E)

The Eraser performs differently depending on whether you're working on the Background or a layer.when working on the Background,the Eraser replace the area with the background color in the Tool palette.When erasing to a layer,it replaces the layer content with transparency.if the transparency option on the layer is locked,then the pixels are replaced with the background color.

The Eraser offers 4 modes in which to work:Airbrus,Paintbrush,Pencil,or Block. The characteristics of each tool are inherent in the erasure. For eg,if you choose the Wet Edges option in paintbrush mode, the Eraser erases to a watercolor effect.

You can erase the image back to a history state by clicking the 1st column in the history palette to set a source and choosing the Erase To history option from the options bar.

Background Eraser(E)

The Background Eraser tool is a combination of the Magic Wand tool and the eraser,in that it lets you sample and set a tolerance to determine what range of color will be erased. You can also determine the sharpness of the remaining edges. The Background Eraser erases to transparency of a layer,or automatically converts the Background into a layer when applied there.

1. **Erasing Modes** Control what pixels will be erased. Choose:

@ **Discontiguous** To erase all of the pixels within the tolerance range on the entire layer.

@ **Contiguous** To erase pixels of the sampled color that are adjacent to each other.

@ **Find Edges** To erase pixels of the sampled color that are adjacent to each other but better preserve the sharpness of the edge pixels of the remaining iamge.

2. **Tolerance** Controls the range of colors to be erased. Low tolerance erases colors that are similar to the sampled colors : High tolerance erases to colors that are more diverse in range.

3. **Sampling Option** Determines the method in which the colors will be chosen

@ **Continues** Sample color continuously as you drag, erasing area's of different colors.

@ **Once** Samples a color when you 1st click and then continues to erase only that color. Use this option to erase areas of solid color.

@ **Background Swatch** Erases areas that are the current background color.

Magic Eraser(E)

The Magic Eraser erases all px of similar color within the Tolerance range when you click the color you want to erase . It allows you isolate the erasure 2 specific colors.

1. **Tolerance** In the options bar controls the range of colors to be erased. Low tolerance erases color that are similar to the sampled colors ; High tolerance erases to colors that are more diverse In range.

2. **Opacity** Determines the strength of the erasure.

3. **Contiguous** Determines what px will be erased. When checked, you erase only adjacent px of the color. With Contiguous unchecked,the magic eraser erases all px of the color on the layer.
4. **Use All Layers** Determines where the information will be erased. With this option checked,the magic eraser erases through all of the visible layers ; without this option, it erases only the px on the target layer.

Blur(R)

The blur tool soften the region us you apply it by decreasing the relative contrast of adjacent pixels. Use it to blend colors and soften edges,or to reduce focus of a background. Increase the pressure setting in the options bar to strengthen the effect.

Sharpen(R)

The sharpen tool increases the relative the contrast values of adjacent pixels. As you drag over an area, the px randomly change color. Sharpening fools your eyes into thinking and image is in focus. This tool can be used to enhance portions of an image that you want to emphasize,or as a quick fix for photographs that are slightly out of focus.

Smudge(R)

Use the smudge tool to simulate charcoal or pastel effects . As you drag with the smudge tool,you move one area of color into another while blending and mixing the colors as you move them.

Dodge(O)

Dodging is a technique used by photographer in the darkroom to overexpose or lighten specific areas of an image. In photoshop,the dodge tool performs a similar function by increasing the brightness values of pixels you paint with it. The effect on the specific range of tonality by choosing Highlights,Midtones, or Shadows from the range pull-down menu.

Burn(O)

Photoshop's burn tool darkens by lowering the brightness values of pixels as you move it over the image .As with dodge tool, the options bar lets you pick a range of px to effect by choosing Highlights, Midtones, or Shadows from the menu.

Sponge(O)

The sponge tool changes the intensity as it touches pixels. From the Option bar, choose either Saturate to enhance a color or desaturate to diminish the color and push it toward gray.

iii)Brush Dynamics

The behavior of all of the painting tools can be controlled from the brush dynamics menu on the right side of the options bar. This control lets you fade ,taper, or changed the color of a stroke over a specified distance.

Choose from the following characteristics:

Size Specify a number of steps to gradually taper the thickness of the brush stroke until it disappears.

Opacity Set a number of steps to gradually fade the brush until it completely disappears.

Color Enter a number of steps gradually fade the foreground color into the background color.

iv)Color Blending Modes

Blending modes control the relation of the color that is begin apply to the existing colors on the image. The normal blending mode, at 100% opacity, applies in a color as if it were painted straight out of a tube.

v)Painting Tools Shortcuts

Here are a couple of shortcuts that will increase your dexterity in handling the painting tools and performing tasks the would be otherwise impossible. For horizontal and vertical lines, press the Shift key as you drag up or down, left or right. for straight line in any other direction, click and release your mouse, then move the cursor to a new location as shift-click

(OR)

b) Elucidate about different selection tools and its techniques with examples.

Photoshop's selection tools are similar in principle, but quite difference in application to the traditional mask. Masking techniques in Photoshop 6 afford even more control and are even more user friendly than in previous version. The selection tools range from purely manual, like the Lasso, to semi manual, likely marquee, to semi automatic, likely magnetic Lasso, to fully automatic, like the magic wand. Each selection tool is designed to hasten the masking process, developing on the characteristics of the image.

There are many situations were one selection tool is insufficient and several must be combined to surround the target area. Often, other selection techniques will be employed in combination with tools for grated accuracy or to isolate a tricky area.

Using Selection Tools

When you make a selection in Photoshop, an animated marquee defines the boundaries of the selected area. This moving dash lined border is sometimes referred to as the "Marching ants" because of its resemblance to a column of tiny insects on the move.

There are Photoshop's selection tool are located at the top of the tool palette. When you press and hold the mouse on the rectangular marquee tool, the palette expanse to reveal three additional tools. When you expand the Lasso tool, two more tools are revealed, for a total of eight different selection tools.

i) The Selection Tool Options Bar

Photoshop 6's Options bar replaces the tool options palettes of prior versions. Choosing a tool displays its options automatically in the Options bar. Each tools has specific options, but some options are universal to all of the selection tools.

When you choose a selection tool, the icon that represents it appears on the left end of the options bar. The next four icons represent selection option that in format version were performed only by key commands.

*__New Selection__ Click this button to create a new selection with the chosen selection tool.

*__Add To Selection__ Click this button to add to an existing selection with the chosen selection tool. You can perform the same function by holding down the shift key as you drag with the selection tool.

*__Subtract From Selection__ Click this button to omit from an existing selection with the chosen selection tool. You can perform the same function by holding down the option or alt key as you drag with the selection tool.

*__Intersect Selection__ After the first selection is made, you draw another selection that overlaps it. Photoshop makes the selection from only the overlapping area of the two selections. You can perform the same operation by pressing shift+options or shift + alt as you use the second selection tool.

*__Feather__ Prior to drawing a selection, you can program a tool to produce a soft edged selection by specifying a numerical value in the feather field in the tools Option's bar

Feathering creates a gradual transition between in inside and the outside of the border. When u apply an effect tool a feathered selection, it diminishes and becomes more transparent, producing a softening of blurring effect.

When you choose select→Feather, a dialog box appears; Enter the value for a feather Radius, The Feather Radius extends the specified number of pixels into the selection outline and outside the selection border.

A feather differs from anti-alias in that you can determine the size of the soft edge in pixels that the marquee will affect. The width of an anti-alias is determined by the resolution of the image; you have no control over its size.

When you apply a feather to an existing selection border, sometimes you will see it decrease in size or slightly change shape.

***Anti-Aliased** An anti-alias is a two-or three-pixel border around an edge that blends into the adjacent color to create a small transition zone. It is intended to simulate depth of field in a photograph. Without the anti-alias, an image would look "aliased" stair-stepped, without smooth transitions between colors

ii) Shapes Selection Tools

The Rectangular Marquee tool and its fly-out, the Elliptical Marquee tool, are useful when you need to select a fairly standard shape within your image-a rectangle, square, circle, or ellipse.

From the Tool palette (but for some reason not included in the Shift+M key short-but when you cycle through them), you have more options for these"predefined" selections: the Single Column Marquee and the Single Row Marquee.

Rectangular Marquee

The Rectangular Marquee tool is used to select rectangular or square portion of the image. Click the image and dragging any direction to select rectangular area of the image.

The Style menu in the Marquee tools' Options bar enables you to choose from three methods for sizing the Rectangular and Elliptical Marquees.

*__Normal__ By choosing Normal, you determine the size and proportion of the marquee by dragging.

*__Constrained Aspect Ratio__ Enter numerical values for the proportion of the marquee in the Height and Width fields.

*__Fixed Size__ The size of the marquee is determined by the values in pixels, that to enter in the Height and Width fields. The marquee size is defined by pixels because it can't select anything smaller.

Elliptical Marquee

Use this tool to create ellipses or circle. Its performance is identical to the Rectangular Marquee: Click and drag in any direction to produce and elliptical or circle selection

Single Column Marquee

The Single Column Marquee tool selects a single vertical column or pixels. Click any-where in the image, and a selection marquee appears around single column of adjacent pixels that runs vertically across the entire image.

One way you can use this feature used to create stripes that can later the colorizes to produce wood-grain effects. Here's how:

1. Open an RGB document with a white background.
2. Select a single column of pixels.
3. Choose Filter→Noise→Add Noise→400, and click OK,
4. Choose Edit→Transform→Scale. Drag the center handle of the left or right edge to the left or right.
5. Press the Return/Enter key to initiate the transformation (or the Esc key to cancel).

Single Row Marquee

The Single Row Marquee tools select a single horizontal row of pixels. Click enters on the image, and a selection marquee appears around single, continuous row of adjacent pixels that runs horizontally across the entire image.

iii) Free-Form Selection Tools

Photoshop offers three main ways to make irregular-shaped selections. The Lasso tool (and its fly-outs, the Polygonal Lasso and Magnetic Lasso)draw selection based on your mouse movements, in varying degrees of freedom. Cycle through these tools by pressing Shift+L.

The Magic Wand tool (shortcut key Shift +W) allows you to select without regard for position, instead based on the brightness of the pixels in your image.

Lasso

The Lasso tool draws free-form selections. Click the edge of the area you want select and drag the tool surround the area with the selection border. Close the marquee by placing the cursor on the starting point are release the mouse to close the selection with a straight line.

Polygonal Lasso

The Polygonal Lasso tool is used to create straight –edged selection borders. Click and release mouse. Reposition the mouse to the next corner of the polygon, and click and release again. Repeat the process until the area is surrounded. Close the marquee by clicking the starting point again.

Magnetic Lasso

The Magnetic Lasso tool intuitively makes selections based on the contrast values of pixels. As you click and drag, the Magnetic Lasso deposits a path that is attracted to areas of the most contrast. When the mouse is released, the path becomes a selection.

The tool as 3 settings in the Options bar that affect is behavior:

*__Width__ (in pixels)This setting determine the distance from the path of mouse within which pixels will be evaluated for contrast by the Magnetic Lasso.

*__Edge Contrast__ This is the minimum percentage of pixel contrast that the Magnetic Lasso will be attracted to. The higher the number, the smaller the range of contrast, hence the more selective the tool will be.

*__Frequency__ Enter the value for the frequency with which points are automatically deposited. The points create segments along the path that fix the previous segments and better control its behavior.

Magic Wand

The Magic Wand tools select the areas of an image that are similar in brightness. To use the Magic Wand, place your cursor on the area to be selected and click your mouse. Adjacent pixels of similar color will be included in the selection.

You can affect the range of pixels that are selected by adjusting the Tolerance in the tool's Options bar. Higher Tolerance values include in the selection more pixel of grater color and brightness range. Lower values include fewer pixels in the selection.

Other values in the Options bar enhance your ability to control the operation of the Magic **Wand tool:**

*__Contiguous__ By default, the Contiguous box is checked, which limits the selection to adjacent pixels. Uncheck this box to select all the pixels in the image with in the same Tolerance range.

*__Use All Layers__ If this box is unchecked, you will limit the selection to only pixels within the same Tolerance range on the same layer.

Applying Selection Techniques

There are several ways to modify a selection outline; among them, you can conceal it, transform it, add to it, subtract from it, soften its edges, and eliminate it. These commands are important because they facilitate the process of masking.

i) The Select Menu

Some selection adjustment can be automatically applied by accessing them from the Select menu or applying a shortcut key command.

*__Select All__ (Cmd + A on Macintosh, Ctrl+A in Windows) This command selects the entire content of an image or a targeted layer.

*__Deselect__(Cmd/Ctrl+D) Use Select→Deselect to deactivate the selection. Another method is to click off the selection, anywhere on the image.

*__Reselect__(Shift + Cmd/Ctrl+D) Choose this command to reactivate the last deselected selection border.

*__Inverse__(Shift+Cmd/Ctrl+I) To deselect the selected portion of the image and select the masked portion, choose Select →Inverse. This technique can save time when an image has been photographed on a single color background. The background can be selected quickly with the Magic Wand and inverted to select desired content.

*__Hide Edges__ (Cmd /Ctrl+H) Use Select→Hide Edge to conceal and reveal the marching ants from view whiled selection remains active. This command is useful to be able to see changes to the image without the distracting selection border.

*__Feather__ After you've made a selection, you can soften its edges by applying a feather radius to it.

*__Modify__ Once a selection has been made, you can alter its dimensions by choosing one of the Select→Modify sub commands. Each command changes the selection marquee and alters its dimensions:

` ➔ **Border** frames a selection and deselects the inside area of the outline, producing a selected "border" of specific thickness. When you choose Select→Modify→Border, you are presented with a window. To determine the thickness of the border by entering a value in pixels into the Width field.

➔**Smooth** round sharp corners of a selection, eliminating protrusions and stair-stepped areas of the selection border. When you choose Select→Modify→Smooth, you are asked to put in a Sample Radius value. Enter the large values to increase the effect.

➔**Expand and Contract** both perform in the same way to enlarge are reduce the size of the selection by a specified number of pixels. This command is quite useful for trimming off stubborn, unwanted edge pixels**.** Choose Select→Modify→Expand or Contract. And enter the value between 1 &16 pixels. Click OK to implement the operation.

*__Grow__ The value entered in the Tolerance field of the Magic Wand's Options bar determines how much selection will grow. When you choose Select→Grow, the select marquee expands to include adjacent pixel that are lighter or darker by no more then the Tolerance range.

* **Similar** In order to use this operation, a selection must be activated. When you choose Select→Similar, Photoshop select all pixels within the image that are the same colors as the pixels within the selected area.

ii) Transforming a Selection

Once you have made a selection, you may want to alert it safe before applying one of Photoshop's many powerful operations to its content. Photoshop gives you the ability to scale, rotate, or move a selection border. To transform a selection, choose Select→Transform Selection. The Rectangular transformation box appears around the selection border. You can then transform the size, angle, or position of the selection border with the following procedures:

*__Move__ To move the selection, place your cursor within the rectangular transformation box; the Move cursor appears. Press your mouse button and drag the selection into position, then release the mouse.

*__Scale__ To scale a selection border, place your cursor on one of the square handles on the corners or sides are the box. The Scale cursor appears. Press your mouse

button and drag. To constraint the selection border to its current position, press your Shift key while dragging.

*__Rotate__ To rotate a selection, place your cursor outside the box. The Rotate cursor appears. Press your mouse button and drag to rotate the selection.

After you have chosen Select→Transform Selection and the transformation box is displayed, you can also apply many more transformation to the selection by choosing Edit→Transform. A list of options appears, including Skew, Distort, Perspective, and various precise Rotate commands. The Flip Horizontal or Flip Vertical commands will mirror the marquee across a horizontal or vertical axis passing through its point of origin icon

iii) Other Selection Techniques

Once selection has been made, you can reposition the marquee with or without its contents using the following techniques:

Move Selection Outline

While in any selection tool, click inside the marquee and drag. When you've relocated the outline, release the mouse.

Nudge Selection Outline

While in any selection tool, press the right, left, up, or down arrow keys to move the selection name increments of one pixel. Press the shift key plus any of the arrow key to move the selection outline ten pixels at a time.

Move Selection Content

Choose the move tool; click inside the marquee and drag. When you have relocated the marquee, release the mouse. You can also move the contents while in any selection tool: Cmd_click or Ctrl_click inside the marquee and drag. When you've relocated the selection, Release the mouse and then the key.

Nudge Selection Contents

You can nudge the selection content in one pixel increment: With the move to active press the right, left, up, or down arrow keys press the shift key plus any of the arrow key to move the selection outline ten pixels at a time.

Duplicate Selection Contents

Position the cursor inside the marquee, hold down the option+command (Mac)or alt+ctrl(Win) while you click and drag.(Or get the move tool and hold down option or alt while you drag.)When you have relocated the copy to the desired position, release the

mouse.