



KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University)
(Established Under Section 3 of UGC Act 1956)
Coimbatore - 641021.
(For the candidates admitted from 2018 onwards)

DEPARTMENT OF COMPUTER SCIENCE, CA & IT

SUBJECT : Programming Fundamentals Using C / C++ Practical
SUBJECT CODE: 18CSU111

SEMESTER: I
CLASS : I B.Sc.CS

L T P C
0 0 4 2

LIST OF PRACTICAL

1. WAP to print the sum and product of digits of an integer.
2. WAP to reverse a number.
3. WAP to compute the sum of the first n terms of the following series $S = 1 + 1/2 + 1/3 + 1/4 + \dots$
4. WAP to compute the sum of the first n terms of the following series $S = 1 - 2 + 3 - 4 + 5 - \dots$
5. Write a function that checks whether a given string is Palindrome or not. Use this function to find whether the string entered by user is Palindrome or not.
6. Write a function to find whether a given no. is prime or not. Use the same to generate the prime numbers less than 100.
7. Write a macro that swaps two numbers. WAP to use it.
8. WAP to print a triangle of stars as follows (take number of lines from user):

```
*  
***  
*****  
*****  
*****
```
9. WAP to perform following actions on an array entered by the user:
 - i) Calculate and print the sum and average of the elements of array
 - ii) Print the maximum and minimum element of array

10. Write a program to find sum of n elements entered by the user. To write this program, allocate memory dynamically using malloc() / calloc() functions or new operator.
11. WAP to display Fibonacci series (i) using recursion
12. WAP to calculate Factorial of a number (i) using recursion
13. WAP to calculate GCD of two numbers (i) with recursion
14. Create a class Triangle. Include overloaded functions for calculating area. Overload assignment operator and equality operator.
15. Create a structure Student containing fields for Roll No., Name, Class, Year and Total Marks. Create 10 students and store them in a file.
16. Copy the contents of one text file to another file, after removing all whitespaces.
17. Given two ordered arrays of integers, write a program to merge the two-arrays to get an ordered array.
18. Write a menu driven program to perform following operations on strings:
 - a) Show address of each character in string
 - b) Concatenate two strings without using strcat function.
 - c) Concatenate two strings using strcat function.