Requirement Analysis Document in Google Drive for Green and Sustainable Software Engineering Approach

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Abstract: ***This study shows how a requirement analysis can help to organizations become more environmentally sustainable in a structured and efficient manner, for this we have analyzed the Google Drive document as a requirement analysis document with the help of that document we try to cover the software requirement specification from the customer, then we try to observe the if that document located in desktop pc what is the cumulative processor energy, IA energy and GT energy, if that document shared with cloud environment minimum and maximum communication of resource sharing details are analyzed for user base and data center of various regions, finally the load event details are observed for the requirement document shared in the Google drive , This result show that the technologies delivers specific suggestions for improvement both on reducing the environmental foot print of ICT and on using ICT as a green solution for software requirement analysis process.***

Keywords: Green ICT, IA Energy, GT Energy, Google Drive, Software Requirement Specification

I. INTRODUCTION

Requirement elicitation (RE) has much attention in research and practice due to its importance to software project success. Requirements directly contribute to appropriateness and cost effectiveness in the development of a system. Where by RE is determinant of productivity and product quality. Improper RE makes the implementation of the entire requirement not feasible. Thus a proper decision has to be made on the Requirement engineering process for the project to be successful. Requirement elicitation is the beginning stages in the software development life cycle. If the project failure is due to poor communication with analyst and user, so the objective of RE process is required to solve problems. Now days much technology has introduced for Requirement Elicitation technique and provided with various possible technologies. So requirement Engineering can use these options for adopting green methodologies for developing software RE should focus on green environment how to achieve this green environment on earth. In the literature, found that the different elicitation technique depends on time and resources and green software engineering. In the modern requirements elicitation technique how it is helpful for green software system for reducing the environmental impacts during the requirement analysis or gathering the extent of requirement elicitation process. Therefore we have two research questions

1. How the modern technologies used for requirement engineering process?
2. If any one of the modern technologies reduces the processer power consumption while collecting the requirement for software development process?

II. RELATED WORK

A continuous research methodology are being proposed from recent years to find the best suitable technique for observe the requirement analysis in green based software development life cycle approach ruzanna chitchya et al[1](sustainability design in RE)were among the first to find out and suggested the sustainability education and rethink about professional norms and practices about software development life cycle phases, they also observer the individual findings about sustainability in requirement engineering process in professional environment and norms in professional practice, mendez Fernandez et.al[2] tried to demonstrate practical difficulty related to Requirement engineering problems which constitutes a qualitative analysis of data that being obtained from 228 companies working out in ten different countries in various domain and reveal the problems faced by the practitioners they finding more than ten problems that is related to requirement engineering that is incomplete and /or hidden requirements, flaws in communication between requirement engineer and customer, certain changes in business processes and goals, un specified requirement, time boxing, misunderstanding about the requirement project team, not giving proper support by customer while gathering the requirement, and weak access about customer requirement. Swati et al[3] recommended a software requirement prioritization technique using fuzzy logic, they studied and finding out the influence factors in requirement prioritization almost 14 technique and factors they stated like consistency, traceability, priority basis etc. they created a framework methodology in three phases that in training phase, fuzzy

Revised Version Manuscript Received on 25 November, 2018.

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