

**Analysis of software quality testing and human factor in software engineering**

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1. **INTRODUCTION:**

Software quality testing and human factor is one of the essential parts of software engineering. In software field the most thoughtful matter is about software quality, how to measure and enhance the software quality. Again, human factor is most important term of this software development sector. Human factor form development team which improved to create quality product and help in software quality testing. Software superiority, correctness, item quality, absence of bugs and proper testing makes software product proper quality full. In this all things involve correct human work and formation of proper development team. Based on software quality it will be method for measuring how the software is designed and how well human factor perform on it. Analyze the important topic both software quality and human factor are co-related for software development. [1]Analysed software metrics which were used to measure the software product and process. Analysis this things software quality and human factor both are co-related for software development.

* 1. **PROBLEM STATEMENT:**

One of the major problems is proper maintain human factor in software quality and testing. Though both software quality testing and human factor are strictly connected for creating good quality product. Final quality testing and ensure reliable product need to maintain human factor for development strictly.

* 1. **RESEARCH QUESTION:**

In order to address the problem statement as mentioned it is split into the following specific research questions

* Why quality testing is used?
* Why it is used for human factor and values?
* How it can be used in real life?
* What are the limitations of quality testing?
* What are the major tasks of human factor that can be solved

through software quality testing?

* 1. **RESEARCH OBJECTIVES:**

Based on the research problems as mentioned over, the following aims have been set for the present research

* To discover many types of quality testing process
* To show necessity of software quality in human factor
* To learn how the quality testing is measured.
* To analyze the benefits of software quality testing in

human factor.

* 1. **SCOPE OF THE RESEARCH:**

The purpose of the present research proposal is to analyses software quality testing and human factor as well as the interaction of this both things.

There are some following scopes:

* Proper use of human factor.
* Software quality planning.
* Process improvement.
* Human behavior observe quality.
  1. **LIMITATION OF THE STUDY:**

Actually, software quality testing and human factor is most important in software engineering. To build a quality full software both things is essential. But there are some limitations:

* Maintaining human factor.
* Measuring human capability properly.
* Testing can never guarantee the absence of bugs.
* Not possible to test every line of code.
* Unrealistic expectations from software tools.

1. **BACKGROUND:**

Software testing is highly desirable to assure the quality of the software product. Software testing is a key process which ensures a reliable quality product. [2]To identify the human factors, present in the test process and to define the influence of these factors during their execution. Thus, the article presents a study with quantitative methods and techniques. The results were presented that can be used as reference for the development of actions capable of improving the human factor within the software testing process. [3]Therefore, it is concluded that human factors must be observed understood and be the focus of a software factory and should be enough qualified. Software practice includes a wide body of knowledge on how to properly handle technical values and business value but is lacking guidelines for how to deal with the broader set of human values. for example, the supply and demand pricing system that unexpectedly led to price gouging on airline tickets for Hurricane Irma evacuees. [4]The New York Times reported at the time, “There are no ethics valves built into the system that prevent an airline from overcharging during a hurricane.” any software process, if values are to be handled properly, they must be considered in software specification, design and implementation, validation, and evolution.

1. **METHODOLOGY:**

Quality testing is an integral part of any development methodology. The research methodology is measured for how well it will perform for human factor. Here the term methodology is used for testing the qualities of the software serially. The method quality testing is used to determine how software quality testing will play a vital role in human factor and values and how it will do a lot of benefits for our day to life and in many fields.   The major research activities have been discussed to in several sections to provide accurate data and information. The quality testing is measured for representing proper uses of software engineering in human factor.

There are 6 key phase of software testing lifecycle:

**Requirement analysis:**

Requirement Analysis, also known as Requirement Engineering, is the process of defining user expectations for a new software being built or modified. In software engineering, it is sometimes referred to loosely by names such as requirements gathering or requirements capturing. In software quality testing requirement analysis is essential.

**Test planning:**

A Test Plan refers to a detailed document that catalogs the test strategy, objectives, schedule, estimations, deadlines, and the resources required for completing that particular project.

**Test case development:**

A test case is a document, which includes test data, preconditions, expected results and post conditions, developed for a particular test scenario in order to verify compliance against a specific requirement. Test Case acts as the starting point for test execution.

**Test environment setup:**

The goal is to create a testing environment as efficiently as possible, while ensuring that the environment accurately mirrors how users will interact with the application. In this stage of the software testing, the professionals should identify where the tests will run.

**Test execution:**

The engineers will have to access to the testing environment and associated code. By following this way, the entire team has access to the code, understands how it runs and sees the results.

**Test reporting:**

Without reports, tests aren't entirely helpful. In this business-centric phase, management will review how the software performs and, from there, decide how to move forward.

**Requirements**

**analysis**

**Test environment**

**setup**

**Test case**

**development**

**Test execution**

**Test reporting**

**Test**

**Planning**

1. **EXPECTED RESULT:**

From this proposal report we analyses two important things that is quality testing and human factor. There are some expected results below:

* To create a new form by quality testing.
* Development of measurable qualities on human factor.
* Decrease the faults during analysing human values.
* Proper management of quality testing on human factor and values.

1. **WORK SCHEDULE:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Week | Week  (1-4) | Week  (5-8) | Week  (9-12) | Week  (13-16) | Week  (17-20) | Week  (21-24) | Week  (25-28) | Week  (29-32) |
| Topic  Selection | \_ |  |  |  |  |  |  |  |
| Dividing of work | \_ |  |  |  |  |  |  |  |
| Paper  Read |  | \_ |  |  |  |  |  |  |
| Data  Collection |  | \_ | \_ |  |  |  |  |  |
| Analysis  Project  Proposal |  |  | \_ | \_ |  |  |  |  |
| Data  Analysis |  |  | \_ | \_ | \_ | \_ |  |  |
| Report Final |  |  |  |  | \_ | \_ | \_ |  |
| Presentation |  |  |  |  |  |  |  | \_ |

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