1. INTRODUCTION
Software quality is an important part of the software. That stands out, as having a broad impact on several vital components of each information technology is the software quality. Poor quality is much more difficult to manage. Predictability decreases as re-work grows, and the likelihood of a late, lower quality product increases. Productivity, reputation, Employee morale, Customer satisfaction, Bottom line are the major impacts of the software quality. Apart from them, software quality is an important part of the software. Some important stage of the software quality describes as follow. Firstly, what is the software quality and software strategy, Different ways to identify the software quality? Secondly, test script is important for the solid measurement of the software, and finally, describe the PCDA model and its four stages. Quality is the degree to that an element, system or method meets specified necessities and/or user/customer wants and expectations.

2. SOFTWARE QUALITY
Software quality is the totality of practicality and options of a software package that bear on its ability to satisfy expressed or silent wants. It is additionally associated with the database. So, in order to confirm package quality, we tend to undertake the package Quality Assurance and package internal control.

Abstract
Software quality downside is the leading issue for the software package business. The difficulty exists for forty years or fifty years long. The business is suffering and shutting for this issue. During this circumstance, it is necessary to address and take away its root cause. Otherwise, day-by-day business economic loss can increase. In this Paper, I would like to introduce some important challenges of software quality assurance and testing which are facing by the software package industries. The analysis centred on many little and medium software package firms of the globe.

Key Words: Software Quality, Test plan, Test derivable, Test script, Test strategies, Test process model
We can test the software quality through some ways.

2.1 Test plan
The test plan is set up for a scientific approach. It provides higher practical coverage. It additionally allows the managers to accurate estimate the specified effort and price to execute the testing method. It helps the manager to manage and track the progress exploitation, the take, a look at the setup.
For that, they must follow some test strategies.

![Steps to Develop a Test Plan](image)

Figure 2.2: Steps to develop a test plan

2.2 Test strategy
A look at sets up in computer code testing is that the document that outlines the what, when how, who, and additional of a testing project. In general, it includes the target and scope of the tests to run.
Test Plan is a very important task of the Test Management Process. Follow the following step to make the test plan successful.

2.2.1 Design the test strategy
Test strategy is an overview that describes the testing approach of the computer development cycle, in which it describes the merchandise risks of the stakeholders quenched at the test-level, that sorts of testing are to performed, and that entry and exit criteria apply.

2.2.2 Test objectives
- It is the goal and achievement of the test execution. The software we are using in the test plan must be bug-free.
- Target and goal must be clear on the base of features resources.
- The employee must be aware of software features like its functionality, performance and graphical user interface.
- You can follow a Top-down approach to break the application into the various module.

2.2.3 Define test criteria
The test criteria must defined in various stages like entry, exit and suspend.
1. The entry test includes some basic level functionality, which is common for all software.
2. Exit criteria reflect a completion or termination of the test.
3. In any case, if the test is going to fail and needs a longer time than regular one then it keeps this test as suspend.

2.2.4 Resource planning
It includes all types of details summary that can help to complete the project task. The resource concerning material, equipment, and human. It can help the task manager to make a schedule and a timeline for the project.

For example, system resources or testing, a web application, you should plan the resources as below:

 ✓ Server: Install the web application under test. Which helps you to create a separate web server, database server, and application server if applicable?
 ✓ Test tool: Use testing tools like automate the testing, simulate the user operation, and generate the test results. Few test tools you can use for this project such as Selenium, QTP.
 ✓ Network: You need a Network that includes the LAN and Internet to simulate the real business and user environment.
 ✓ Computer: Users connect to the webservice using a personal computer.

2.2.5 Plan test environment
A testing environment is an arrangement of programming and equipment on which the testing group will execute experiments. The test condition comprises genuine business and client conditions, just as physical situations, for example, server, and front-end running condition.

Two major actions can performed into a testing environment are:

1. Step by step instructions to the arrangement the test environment.
2. How would you set up test conditions for this financial site?

To complete this undertaking, you need solid participation between Test Team and development Team you ought to pose the designer a few inquiries to comprehend the web application under test plainly. Here are some prescribed inquiries. Obviously, you can pose different inquiries on the off chance that you need.

 ✓ What is the greatest client association that this site can deal with simultaneously?
 ✓ What is the basic software or hardware necessities to introduce this site?
 ✓ Does the client's PC need a specific setting to peruse the site?

2.2.6 Schedule & Estimation
Presently you ought to incorporate that estimation just as the calendar to the Test Planning in the Test Estimation stage, assume you break out the entire undertaking into little errands and include the estimation for each assignment as beneath.
Making a calendar is a typical term in the venture of the executives. By making a strong timetable in the Test Planning, the Test Manager can utilize it as a device for checking the task progress, control the cost invades.

To make the business plan, the Test Manager needs a few kinds of contributions as beneath .Representative and venture cut off time: The working days, the undertaking cut off time, asset accessibility are the variables that influenced the calendar.

- Venture estimation: Base on the estimation, the Test Manager realizes to what extent it takes to finish the undertaking. Therefore, he can make the proper undertaking plan.
- Task Risk: Understanding the hazard helps the Test Manager add enough additional opportunity to the undertaking timetable to manage the dangers.

2.2.7 Determine test deliverables

Test Deliverables is a list of all the official papers, tools and other modules that must be developed and maintained in support of the testing effort. There are very different test deliverables at each part of the package development life cycle.

- Test plans document.
- Test cases documents
- Test Design specifications.
- Test deliverables are provided during the testing.
- Test Scripts
- Simulators.
- Test Data
- Test Traceability Matrix
- Error logs and execution logs.
- We can get Test deliverables after the testing cycles are finished.
- Test Results/reports
- Defect Report
- Installation/Test procedures guidelines
- Release notes

3. TEST SCRIPT

A check SCRIPT may be a set of directions written by an employee in a scripting/programming language that performed on a system beneath check to verify that the system performs of course. Check scripts square measure employed in machine-driven testing.
Figure 3.1: Test script
Sometimes manual testing referred to as a check Script however, a more robust term for that will be an action at law.

Some scripting languages employed in machine-driven testing are:
- JavaScript
- Perl
- Python
- Ruby
- Tcl
- Unix Shell Script
- VBScript

There also are several checks Automation Tools or Frameworks that generate the check scripts for you; while not the necessity for actual writing. Several of those tools have their own scripting languages (some of them supported a core scripting language.). For instance, Sikuli, a graphical user interface tool, uses Sikuli Script that predicated on Python. A check script may be as easy because of the one below:

A check execution engine and a repository of check scripts square measure conjointly referred to as a check Harness.

4. TEST PROCESS IMPROVEMENT USING PDCA MODEL
It follows “Always try to do them better.” The professional organization wants to be completed the project with the highest quality, the lowest cost, the shortest delivery time. Test process improvement helps you reach these targets.
process.

(1) Plan
✓ Identify the problem
✓ Focus on the target
✓ Define the improvements action

(2) Check
✓ Check the measurement.
✓ Evaluate the efficiency of the test improvement actions.
✓ Measure how effective the solution was.
✓ Analyse of whether it may improve in any means.

(3) Do
✓ Which improvement points must be implemented?
✓ When to finish this plan?
✓ What steps ought to be done to realize the plan?

(4) Act
✓ Review the development activities and act on lessons learned
✓ Standardize the improvement point in the management process.
✓ Update the policy documents and set up similarly because of the customary method documents
✓ Determine once and wherever to use these changes within the next project.

5. REFERENCES
[1] https://dev.to/wenso_smith/the-importance-of-testing-in-software-development-1aag

6. BIOGRAPHIES
Ms. Manishaben Jaiswal is an author, researcher as well as an IT consultant. She had published the book about “Software Engineering” with ISBN, 978-93-5163-192-7. She had published paper in state and national level seminar. She has helped guide on several Industrial Projects and Dissertation for graduate level students and staff. She acted as an Internal Guide as well as the External Examiner, and Supervisor of Gujarat Technological University, India. In abroad she has completed her Master of Science in Software Engineering, Stratford University, VA, USA. She is giving her knowledge and contribution to East-West University, Chicago, Illinois, USA.
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