What is Software Testing?

Software Testing Ebook

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WHAT IS SOFTWARE TESTING?

The process of identifying the bugs in a software (project/product) is known as “Testing”.
The Test Engineer must cross-check (validate) whether the developed software is as per the client’s requirements or not. He is responsible to deliver quality software to the client.

WHY DO WE DO SOFTWARE TESTING?

Every software is developed to support the business if there is a bug in the software that affects the business. So, before connecting the software to business it should be tested and all the problems solved be recognized and solved. Apart from that,

- To improve the quality of the software
- To check whether the software meets the customer’s requirement specification

TYPES OF TESTING

1. Blackbox Testing
2. Whitebox Testing

Black box testing

Will be treated like a “Black box” by the test engineer.
It means whether the developed application is as per the client’s requirements or not.
The test engineer will perform black-box testing in a test environment and stage env (Pre-production Env)

White box testing:

If the resource is testing the structural part (programming) of the application, then he Will be treated as
“white box tester”.
Developers who develop the application are responsible for white box testing in the Development environment.

SOFTWARE TESTINGLIFE CYCLE

1

Softwaretest plan

2

Softwaretest design

3

Test execution

4

Result analysis

5

Delivery and maintenance

6

Test summary report/Build postmortem report

- **Software test plan:**

• Plan is a strategic document that describes how to perform a task in an effective and efficient way.

• Software test plan is also a strategic document that describes how to perform testing In an effective and efficient way. The test plan will be prepared by the test lead; once it is prepared it will be sent to the testing team for review.

• Based on the test plan we are responsible to perform testing.

• It contains the below activities or Index.

Test plan Index:

1. Objective: Scope of testing
2. Reference documents
3. Test Items
4. Features to be tested
5. Features not to be tested
6. Test strategy
7. Testing types

Functional testing types:

8. Test environment
9. Test pass/Fail criteria
10. Defect analysis and closure
11. Test Deliverables
12. Automation testing
13. Risks and contingencies
14. Hardware and software requirements
15. Resource plan
16. Test summary report/build postmortem report

1. Objective:

The main purpose of the test plan will be described here. It contains the scope of testing.

1.1 Scope of testing:

What kinds of testing the testing team is responsible to test on the application is Known as the scope of testing.
Ex: Testing team is responsible for manual testing and automation for the project.

2. Reference_Documents:

The list of documents that the test lead used to prepare the test plan will be described here.

3. Test Items:

3.1 Features to be tested:
The list of functionalities or modules which the team is responsible for will be described here and also the list of testing that the testing team is performing on the Modules will be described here.
Ex: Testing team is responsible for booking a flight, booking a hotel and managing my booking. For the above modules, they are responsible for manual testing and automation.

3.2 Features not to be tested:
The list of modules and testings for which the testing team is not responsible will be Described here.
Ex: Testing team is not responsible for payment modules and also they are not Responsible for performance testing, Load testing, Stress testing

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4. Test strategy:

- Strategy means the list of steps that we are going to take to accomplish the plan.
- The test strategy means the list of functional testing types. What the testing team is going to take to perform testing is known as a test strategy.
- We will perform all the functional testing types like regression, re-testing, etc... on the
- Application
- In short, plan means what to do. Strategy means how to achieve the plan.

5. Test Environment:

Environment means the system which we are going to use to deploy the build and to Test the application is known as the test environment.

Ex:

Machine type : Windows server enterprise
OS : Windows
Processor : Intel Xeon
CPU Memory : 4GB/2.13 GHZ
Hard disk : 150GB
Data base : Microsoft SQL server 2008 standard edition
Web server : IIS 7.0
Client : Microsoft internet explorer, Firefox, Google chrome

6. Testpassfail/criteria:

If any test case is deviating from the expected result then it will be treated as a failure or bug. Every bug is having the criteria or bug type.

It is of five types

- Blocker
- Very High
- High
- Medium
- Low

7. Defect Analysis Closure:

At the time of delivering the build if any bugs/defects are available it will be analyzed by the Testing team with project manager. If any bug is not necessary to be fixed then it will be closed.

8. Test Deliverables:

The list of modules which we are going to deliver to the client known as deliverables.
All the modules will be divided into multiple phases and also the lead will be providing the Targeted deadline (delivery date).

9. Automation testing:

The number of modules which the testing team is going to automate will be described here and
Also the automation tool and strategy which the test engineers are going to follow will be Described here.

10. Risks and contingencies:

The list of risks that the team is going to face while executing the project and also with the Related solution will be described here.

11. Hardware & Software requirements:

The number of machines like laptops, mobiles, printers etc... required for the testing with Related
software will be described here

12. Resource Plan

The numbers of resources required for manual testing, automation testing, database testing Will be described here.

13. Test summary report /Build postmortem report:

Once the testing is completed the test lead has to prepare the test summary report, it contains The summary of the testing

WHAT IS TEST CASE?

Test case is a document which covers all possible scenarios to test all the feature(s).

It is a set of input parameters for which the s/w will be tested. The SRS are numbered so that developers and testing team will not miss out on any feature.

What is Defect?

Design related faults are known as defect. Ex:GUI defects

What is Defect tracking?

Developer develops the product test engineer starts testing the product he finds a defect now the TE must send the defect to the development team.

He prepares a defect report and sends a mail to the Development lead saying bug open.

Development lead looks at the mail and at the bug and by looking at the bug he comes to know to which development engineer developed that feature which had a bug and sends the defect report to that particular developer and says bug assigned.

The development engineer fixes the bug and sends a mail to the test engineer saying bug fixed he also cc mail to the development lead.

Now the TE takes the new build in which the bug is fixed and if the bug is really fixed then sends a mail to the developer saying bug closed and also cc mail to the development lead.

Every bug will have an unique number.

If the defect is still there it will be sent back as bug reopen.

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