

## Module-2(Manual Testing)




### Q. What is Exploratory Testing ?

Ans : Exploratory testing is a concurrent process where test design, execution and logging happen simultaneously, where testers explore the software without relying heavily on pre-defined test cases. This testing is often not recorded. Exploratory testing is type of experience based testing.

### Q. What is traceability matrix ?

Ans : It is graph of requirement vs component that one should link back and trace back from system component to original requirement.

- There are three types of traceability matrix :

-  Forward Traceability
-  Backward Traceability
-  Bi-Directional Traceability

### Q. What is Boundary value testing ?

Ans : Boundary value testing is a methodology for designing test cases that concentrates software testing effort on cases near the limits of valid ranges.



### Q. What is Equivalence partitioning testing ?

Ans : Aim is to treat groups of inputs as equivalent and to select one representative input to test them all.

### Q. What is Integration testing ?

Ans : Integration testing is conducted to ensure that all the components of the system are working properly as a group.

- There are two types of integration testing :

-  Component Integration Testing
-  System Integration Testing

### Q. What determines the level of risk ?

Ans : A factor that could result in future negative consequences, usually expressed as impact and likelihood.

- There are two types of Risk :

-  Project Risk
-  Product Risk

**Q. What is Alpha testing ?**

Ans : Alpha testing is the initial phase of validating whether a new product will perform as expected. It always occurs after the completion of the development process and before the software is released to the market for end users. It is always performed by the developers and independent testing team at the software development site. It is not open to the market and public. It is always performed in virtual environment. It comes under the category of both white box and black box testing.

**Q. What is beta testing ?**

Ans : Beta testing is the second phase of software testing. It is the final test before deliver the product to customer. It is always performed by the real users or customers at their own site. It is always open to the market and public. It is always performed in real time environment. It is only a kind of black box testing

**Q. What is component testing ?**

Ans : In component testing the testing process conducted by the developers only. Here the white box kind of testing is conducted. Sometimes its known as Unit testing, Module testing or Program testing. Unit testing is the first level of testing and is performed prior to integration testing. Frameworks, drivers, stubs and mock or fake objects are used for testing purpose.

**Q. What is functional system testing ?**

Ans : Functional system testing is where a requirement that specifies a function that a system or system component must perform.

**Q. What is Non-Functional Testing ?**

Ans : Testing the attributes of a component or system that do not relate to functionality, e.g. reliability, efficiency, usability, interoperability, maintainability and portability. It is the testing of how the system works.

**Q. What is GUI Testing ?**

Ans : GUI is the graphical user interface testing is the process of testing the system's GUI of the system under test. It involves the testing of different controls like menu, buttons, icons, dialog boxes, warning msgs displayed properly.

**Q. What is Adhoc testing ?**

Ans : Adhoc testing is an informal testing type with an aim to break the system. It does not follow any test design techniques to creat test cases. Main aim of this testing is to find defects by random checking. Adhoc testing can be achieved with the testing technique called error guessing.

**Q. What is load testing ?**

Ans : Load testing is a kind of performance testing which determines a system's performance under real life load conditions.




**Q. What is stress Testing ?**

Ans : Stress testing is done to test that the system can work on extreme situations or extreme conditions. System is stressed beyond its capacity to check how & when does it fail. It is also known as endurance testing.

**Q. What is white box testing and list the types of white box testing ?**

Ans : White box testing is based on an analysis of the internal structure of the component or system. In white box testing, testers should know the inside source code of the system and how the system is implemented or how it works. Developers can do white box testing.






• Techniques of white box testing :

-  Statement coverage
-  Decision coverage
-  Condition coverage

**Q. What is black box testing? What are the different black box testing techniques ?**






Ans : Black box testing is either functional or non-functional, without reference to the internal structure of the component or system. The testers have no knowledge of how the system or component is structured inside the box.

• Techniques of black box testing :

-  Equivalence partitioning
-  Boundary value analysis
-  Decision tables
-  State transition testing
-  Use-case testing

**Q. Mention what are the categories of defects ?**

Ans : Here are the categories of defects :

-  Data Quality/Database Defects
-  Critical Functionality Defects
-  Functionality Defects
-  Security Defects
-  User Interface Defects

**Q. Mention what big bang testing is ?**

Ans : In big bang testing, all components or modules are integrated simultaneously, after which everything is tested as a whole. Big bang testing has the advantage that everything is finished before integration testing starts. The major disadvantage is that in general it is time consuming and difficult to trace the cause of failures because of this late integration. Here all components are integrated together at once, and then tested.

**Q. What is the purpose of exit criteria ?**

Ans : The purpose of exit criteria is to define when we STOP testing either at the :

- End of all testing – i.e. product go live
- End of phase of testing (e.g. hand over from system test to UAT)

**Q. When should "Regression Testing" be performed ?**

Ans : • When the system is stable and the system or the environment changes.

- When testing bug-fix releases as part of the maintenance phase.
- It should be applied at all test levels.
- It should be considered complete when agreed completion criteria for regression testing have been met.
- Regression test suites evolve over time and given that they are run frequently are ideal candidates for automation.

**Q. What is 7 key principles? Explain in detail ?**

Ans : Here are the 7 key principles :

1. Testing shows presence of defects : Testing can show that defects are present, but cannot prove that there are no defects. Testing reduces the portability of undiscovered defects remaining in the software but even if no defects are found, it is not a proof of correctness.
2. Exhaustive testing is impossible : Testing everything including all combinations of inputs and preconditions is not possible. So instead of doing the exhaustive testing we can use risks and priorities to focus testing efforts. We must prioritise our testing effort using a risk based approach.
3. Early testing : Testing activities should start as early as possible in the software or system development life cycle, and should be focused on defined objectives.
4. Defect clustering : A small number of modules contain most of the defects discovered during pre-release testing, or are responsible for the most operational failures. Defects are not evenly spread in a system. They are 'clustered'.
5. Pesticide paradox : If the same tests are repeated over and over again, eventually the same set of test cases will no longer find any new defects. To overcome this pesticide paradox the test cases need to be regularly reviewed and revised, and new and different tests need to be written to exercise different parts of the software or system to potentially find more defects.
6. Testing is context dependent : Testing is basically context dependent. Testing is done differently in different contexts. Different kinds of sites are tested differently.
7. Absence of errors fallacy : If the system built is unusable and does not fulfill the user's needs and expectations then finding and fixing defects does not help. Even after defects have been resolved it may still be unusable and does not fulfil the user's needs and expectations.

**Q. Difference between QA v/s QC v/s Tester.**

Ans :                      **Quality Assurance**                      **Quality Control**                      **Tester**

1.	Activities which ensure the implementation of processes, procedures and standards in context to verification of developed software and intended requirements.	Activities which ensure the verification of developed software with respect to documented requirements.	Activities which ensure the identification of bugs / errors / defects in the software.
2.	Focuses on processes and procedures rather than conducting actual testing on the system.	Focuses on actual testing by executing software with intend to identify bug/defect through implementation of procedures and process.	Focuses on actual testing.
3.	Process oriented activities.	Product oriented activities.	Product oriented activities.
4.	Preventive activities.	It is a corrective process.	Preventive process.
5.	It is a subset of Software Test Life Cycle (STLC).	It is a subset of Quality Assurance.	Testing is the subset of Quality Control.

**Q. Difference between Smoke and Sanity?**

Ans :                      **Smoke Testing**                      **Sanity Testing**

1.	Smoke testing is performed to ascertain that the critical functionalities of the program is working fine.	Sanity testing is done to check the new functionality / bugs have been fixed.
2.	The objective of this testing is to verify "stability" of the system in order to proceed with more rigorous testing.	The objective of this testing is to verify the "rationality" of the system in order to proceed with more rigorous testing.
3.	This testing is performed by the developers and testers.	Sanity testing is usually performed by testers.
4.	Smoke testing is usually documented or scripted.	Sanity testing is usually not documented and unscripted.
5.	Smoke testing is a subset of Regression testing.	Sanity testing is a subset of Acceptance testing.
6.	Smoke testing is exercises the entire system from end to end.	Sanity testing is exercises only the particular component of the entire system.
7.	Smoke testing is like general health check up.	Sanity testing is like specialized health check up.

**Q. Difference between verification and Validation.**

Ans :

Criteria	Verification	Validation
Definition	The process of evaluating work-products of a development phase to determine whether they meet the specified requirements for that phase.	The process of evaluating software during or at the end of the development process to determine whether it satisfies specified business requirements.
Objective	To ensure that the product is being built according to the requirements and design specifications. In other words, to ensure that work products meet their specified requirements.	To ensure that the product actually meets the users needs, and that the specifications were correct in the first place. In other words, to demonstrate that the product fulfils its intended use when placed in its intended environment.
Question	Are we building the product right?	Are we building the right product?
Evaluation Items	Plans, Requirements specs, Design spec, Code, Test cases.	The actual product or software.
Activities	Reviews, Walkthroughs, Inspections.	Testing.

**Q. Explain types of Performance testing.**

Ans :

**Load Testing :** Load testing is a kind of performance testing which determines a system's performance under real life load conditions. This testing helps determine how the application behaves when multiple users access it simultaneously.

**Stress Testing :** System is stressed beyond its specifications to check how and when it fails.

Performed under heavy load like putting large number beyond storage capacity, complex database queries, continuous input to system or database load. Stress testing is done to make sure that the system would not crash under crunch situations.

**Q. What is Error, Defect, Bug and failure ?**

Ans : A mistake in coding is called Error, error found by tester is called Defect, defect accepted by development team then it is called Bug, build does not meet the requirements then it is Failure.

**Q. Difference between Priority and Severity.**

Ans :

**Priority**

**Severity**

Priority is relative and business focused.	Severity is absolute and customer focused.
Priority defines the order in which we should resolve a defects.	Severity is the extent to which the defect can affect the software.
Priority focuses on business needs, customer requirements, and project timelines.	Severity is focused on the technical impact on the system's functionality or usability.
Ex : If an application or web page crashes when a remote link is clicked the remote link by an user is rare but the impact of application crashing is severe. So the severity is high but priority is low.	Ex : If the company name is misspelled in the home page of the website, then the priority is high but severity is low to fix it because it it not crashing the application.
Types : Low, Medium, High, Critical	Types : Critical, High, Medium, Low, Cosmetic

### Q. What is Bug Life Cycle ?

Ans : The duration or time span between the first time defects is found and the time that it is closed successfully, rejected, postponed or deferred is called as Bug(Defect) Life Cycle.

**Q. Explain the difference between Functional testing and Non Functional testing.**

Ans :

## Functional

## Non-Functional

Functional testing is performed using the functional specification provided by the client and verifies the system against the functional requirements.	Non-functional testing checks the performance, reliability, scalability and other non-functional aspects of the software system.
Functional testing is executed first.	Non-functional testing should be performed after functional testing.
Manual testing or automation tools can be used for functional testing.	Using tools will be effective for this testing.
Business requirements are the inputs to functional testing.	Performance parameters like speed, scalability are inputs to non-functional testing.
Functional testing describes what the product does.	Non-functional testing describes how good the product works.
Easy to do manual testing.	Tough to do manual testing.
Types : Unit testing, Smoke testing, Sanity testing, Integration testing, White box testing, Black box testing, User acceptance testing, Regression testing.	Types : Performance testing, Load testing, Volume testing, Stress testing, Security testing, Installation testing, Penetration testing, Compatibility testing, Migration testing.

- To create HLR & TestCase of 1)(Instagram , Facebook) only first page

Ans : Mentioned in Project folder in GitHub.

**Q. What is the difference between the STLC (Software Testing Life Cycle) and SDLC (Software Development Life Cycle) ?**

Ans :

## STLC

## SDLC

It's a process that defines how to conduct the testing process.	It's a process that defines how to develop a software.
Primarily focuses on testing activities.	Covers the entire software development process.
Purpose of STLC is to validate and verify the software product.	Purpose of SDLC is to plan, design, develop, test and deliver the software.
Phases : Requirement Analysis, Test planning, Test case development, Test environment setup, Test execution, Test cycle closure.	Phases : Requirements gathering, Analysis, Design, Implementation, Testing, Maintenance.
Ensure the quality of the software product and identify defects.	Deliver a functional, reliable and high quality software product.

**Q. What is the difference between test scenarios, test cases, and test script ?**

Ans : Test scenarios : A scenario is any functionality that can be tested. It is also called test conditions, or test possibility. Test scenario is what to be tested. Scenario is thread of operations.

Test Case : Test cases involved the set of steps, conditions, and inputs which can be used while performing the testing tasks. Test case is how to be tested. Test cases are set of input and output given to the system.

Test Script : A set of sequential instruction that detail how to execute a core business function. One script is written to explain how to simulate each business scenario. Script can be manual and automated.

**Q. Explain what Test Plan is? What is the information that should be covered.**

Ans : A document describing the scope, approach, resources and schedule of intended test activities. It should covered approach of testing, including the definition of the test levels and entry and exit criteria, Integrating and coordinating the testing activities into the software life cycle activities, making decision about what to test, who do testing, when and how the test activities should be done and when they should be stopped, Test ware and process.

**Q. What is priority ?**

Ans : Priority is relative and business-focused. Priority defines the order in which we should resolve a defect. Priority status is set by the testers.

**Q. What is severity ?**

Ans : Severity is absolute and customer-focused. It is the extent to which the defect can affect the software. In other words it defines the impact that a given defect has on the system.

**Q. Bug categories are...**

Ans : There are 5 categories of bugs (Defects) :

Database Defects : Deals with improper handling of data in the database.

Critical Functionality Defects : The occurrence of these bugs hampers the crucial functionality of the application.

Functionality Defects : These defects affect the functionality of the application.

Security Defects : Application security defects generally involve improper handling of data sent from the user to the application. These defects are the most severe and given highest priority for a fix.

User Interface Defects : As the name suggests the bugs deal with problems related to UI are usually considered less severe.


**Q. Advantage of Bugzilla .**

Ans : Bugzilla is a defect tracking tool. This open bug-tracker enables users to stay connected with their clients or employees. Key features of bugzilla includes advanced search capabilities, email notifications, modify/file bugs by e-mail, time tracking, strong security, customization, localization.



**Q. What are the different Methodologies in Agile Development Model ?**

Ans : There are two different methodologies in agile development model.

 Scrum

 Kanban

**Q. Explain the difference between Authorization and Authentication in Web testing. What are the common problems faced in Web testing ?**

Ans : Authentication : Accepting an invalid username/password.

Authorization : Accessibility to pages though permission not given.

There are common problems faced in web testing :

Performance testing, Security testing, GUI testing, Responsive testing, Compatibility testing,  
Database testing.