**Module-2(Manual Testing)**

1. **What is Exploratory Testing?**

Exploratory testing is an approach to software testing that is often described as simultaneous learning, test design, and execution

1. **What is traceability matrix?**

To protect against changes you should be able to trace back from every system component to the original requirement that caused its presence

1. **What is Boundary value testing?**

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

1. **What is Equivalence partitioning testing?**

The numbers fall into a partition where each would have the same, or equivalent, result i.e. an Equivalence Partition (EP) or Equivalence Class

1. **What is Integration testing?**

Integration Testing is a level of the software testing process where individual units are combined and tested as a group

1. **What determines the level of risk?**
2. Product risk
3. Project risk
4. **What is Alpha testing?**

Alpha testing is the first end-to-end testing of a product to ensure it meets the business requirements and functions correctly

1. **What is beta testing?**

Beta testing is the process of testing a software product or service in a real-world environment before its official release

1. **What is component testing?**

Component Testing is a level of the software testing process where individual units/components of a software/system are tested

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

A requirement that specifies a function that a system or system component must perform

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

Testing based on an analysis of the specification of the functionality of a component or system

1. **What is GUI Testing?**

Graphical User Interface (GUI) testing is the process of testing the system’s GUI of the System under Test

1. **What is Adhoc testing?**

Adhoc testing is an informal testing type with an aim to break the system

1. **What is load testing?**

Load testing is a kind of performance testing which determines a system’s performance under real-life load conditions

1. **What is stress Testing?**

Stress Testing is done to make sure that the system would not crash under crunch situations

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

Testing based on an analysis of the internal structure of the component or system

**Types of white box testing:**

1. Statement Coverage
2. Decision Coverage
3. Condition coverage
4. **What is black box testing? What are the different black box testing techniques?**

Testing, either functional or non-functional, without reference to the internal structure of the component or system.

**Technique of black box testing:**

1. Equivalence partitioning
2. Boundary value analysis
3. Decision tables
4. State transition testing
5. Use-case Testing
6. **Mention what are the categories of defects?**
7. Critical
8. Moderate
9. High
10. Medium
11. **Mention what big bang testing is?**

Big-bang integration testing is a type of integration testing that combines all the modules or components of a system into a single unit and tests them as a whole

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

* Exit criterion is used to determine whether a given test activity has been completed or NOT.
* Exit criteria can be defined for all of the test activities right from planning, specification and execution.
* Exit criterion should be part of test plan and decided in the planning stage

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

* Regression testing is performed before each new instance of the product is deployed, guaranteeing that the program works perfectly in each setting.
* For instance, we need to make sure the product continues to perform properly in a production environment before we release it

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

|  |  |
| --- | --- |
| **Smoke Testing** | **Sanity Testing** |
| 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 |
| The objective of this testing is to verify "stability" of the system in order to with more rigorous testing | The objective of the testing is to verify the "rationality" of the system in order proceed to proceed with more rigorous testing |
| testing is performed by the developers or testers | Sanity testing is usually performed by testers |
| Smoke testing is usually documented | Sanity testing is usually not documented |
| Smoke testing is a subset of Regression testing | Sanity testing is a subset of Acceptance testing |

1. **Difference between verification and Validation**

|  |  |
| --- | --- |
| **Verification** | **Validation** |
| The process of evaluating work-products (not the actual final product) 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 |
| Are we building the product right? | Are we building the right product? |
| Plans, Requirement Specs, Design Specs, Code, Test Cases | The actual product/software |

1. **Explain types of Performance testing.**

* Load testing
* Stress testing
* Endurance testing
* Spike testing
* Volume testing
* Scalability testing

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

**Error:** A mistake in coding is called error

**Defect:** error found by tester is called defect

**Bug:** defect accepted by development team then it is called bug

**Failure:** build does not meet the requirements then it is failure

1. **Difference between Priority and Severity**

**Severity:** Severity is basically a parameter that denotes the total impact of a given defect on any software

**Priority**: Priority is basically a parameter that decides the order in which we should fix the defects.

1. **What is Bug Life Cycle?**

Bugs arise from mistakes and errors, made by people, in either a program’s source code or its design

1. **Explain the difference between Functional testing and Non-Functional testing**

|  |  |
| --- | --- |
| **Functional Testing** | **Non-Functional Testing** |
| Testing based on an analysis of the specification of the functionality of a component or system | Testing the attributes of a component or system that do not relate to functionality |
| 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 |
| 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 of Functional testing are  ∙ Unit Testing  ∙ Smoke Testing  ∙ Sanity Testing  ∙ Integration Testing  ∙ White box testing  ∙ Black Box testing  ∙ User Acceptance testing  Regression Testing | Types of Non-functional testing are  ∙ Performance Testing  ∙ Load Testing  ∙ Volume Testing  ∙ Stress Testing  ∙ Security Testing  ∙ Installation Testing  ∙ Penetration Testing  ∙ Compatibility Testing  ∙ Migration Testing |

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

|  |  |
| --- | --- |
| **STLC** | **SDLC** |
| STLC focus on testing phase of the software development process | SDLC focus on entire software development process |
| STLC objective of ensure software quality through testing | SDLC objectives of develop high-quality software system |
| Activities of STLC: test planning, test execution, defect tracking and so on | Activities of SDLC: requirement gathering, coding, deployment and so on |
| STLC tested software with identified defects | SDLC outcomes software product |

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

|  |  |  |
| --- | --- | --- |
| **Test Scenario** | **Test Case** | **Test Script** |
| Any functionality that can be tested | A set of actions executed to verify particular features or functionality | A set of instruction to test an app automatically |
| Derived from test artifacts like BRS and SRS | Mostly derived from test scenario | Mostly derived from test cases |
| More focus on what to test | More focus on what to test and how to test | Focus on the expected results |
| Include end to end functionality tested | Includes test steps, test data, expected result for testing | Includes different command to develop a script |

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

Test plan is a detailed document which describes software testing areas and activities

Test plan covered test objectives, test approach, test tools, test environment, test schedules and team responsibilities and composition

1. **What is priority?**

Bugs that require immediate attention and resolution because they impact critical functionality or pose significant risks fall under this category.

**For example,** if an online ticket booking system fails to generate tickets after successful payment, it would be assigned a HIGH priority

1. **What is severity?**

Severity is basically a parameter that denotes the impact of any defect and its implication on a software’s functionality.

1. **Advantage of Bugzila**

* It improves the quality of the product.
* It enhances the communication between the developing team and the testing team.
* It has the capability to adapt to multiple situations.

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

* Scrum
* Extreme programming (XP)
* Adaptive software development
* Dynamic software development method
* Feature driven development
* Kanban
* Behavior driven development