**What is software testing?**

-Software testing is a process to identify the correctness, completeness and quality of the developed computer software.

**What is Exploratory Testing?**

-Exploratory testing is a concurrent process where test design, execution, and logging happen simultaneously

**What is traceability matrix?**

-Traceability Matrix is a table which is used to trace the requirements during the software development life Cycle.

**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

**What is Equivalence partitioning testing?**

-In Equivalence partitioning testing is to treat groups of inputs as equivalent and to select one representative input to test them all

**What is Integration testing?**

-In integration testing software testing process where individual unit are combine and tested as a group.

**What determines the level of risk?**

**-**there are two level 1) project risk 2) product risk

**What is Alpha testing?**

**-**Alfa testing is always perform by developer at time of acceptance testing when developer test product ad project.

**What is beta testing?**

**-**Beta testing is performed by customers in real time environment.

**What is component testing?**

-component testing is the level of testing process where individual or component of software are tested and main purposed is to validate the each software performed as design

**What is functional system testing?**

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

**What is Non-Functional Testing?**

-Testing the attributes of a component or system that do not

Relate to functionality.

What is GUI TESTING?

**What is Adhoc testing?**

-Adhoc testing is an informal testing type main aim to break the system and find defect by random checking.

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

**-**White box testing is based on analysis of the internal structure of the component or system. It is structured based testing.

There are type of white box testing

1) Branch condition testing

2) Branch condition combination testing

3) Modified condition decision testing

4) Data flow testing

5) Branch condition testing

**What is black box testing? What are the different black box testing?**

-In black box testing functional and non-functional testing without reference to the internal structure of the component or system. Black box testing is also known as specification based testing

There are black-box technique:

-Equivalence partitioning

-Boundary value analysis

-Decision tables

-State transition testing

-Use-case Testing

-Other Black Box Testing

-Syntax or Pattern Testing

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

Unreachable code

-Undeclared variables

-Parameter type mismatches

-Uncalled functions and procedures

-Possible array bound violations

-Security Violations

-Inconsistent interface between modules and components

-Incorrect variable usage

-Syntax checking

-Violations of code standards

-Use of variables without first defining them

variables that are declared but never used

Use of variables after they have been “killed”

**Mention what big bang testing is**?

* In this testing all components and module are integrated simultaneously after everything is a tested as a whole.

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

-To check the test logs against the exit criteria specified in test planning.

-To assess if more test are needed or if the exit criteria specified should be changed.

-To write a test summary report for stakeholders.

-If the exit criteria has not been met

-Assess if more tests are needed

-Assess which test activities may need to be repeated

.

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

**-**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

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

**-**There are 7 key principle

1)testing shows presence of defect

-Testing reduces the probability of undiscovered defectsremaining 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

3) Early testing

-Testing activities 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.

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. Testing identifies bugs, and programmers respond to fix

Them. As bugs are eliminated by the programmers.

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 Error 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.

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

|  |  |  |
| --- | --- | --- |
| Quality Assurance | Quality control | testing |
| 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 (or not in some cases) requirements | Activities which ensure the identification of bugs/error/defects in the Software. |  |
| 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 |  |
| process oriented activates | product oriented activities | product oriented activities |  |
| preventive activities | it is a corrective process | it is a preventive process |  |
|  |  |  |  |

**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 |
| This testing is performed by the developers or testers | Sanity testing is usually performed by testers |
| Smoke testing is usually documented or scripted | Sanity testing is usually not documented and is unscripted |
| Smoke testing is a subset of Regression testing | Sanity testing is a subset of Acceptance testing |
| Smoke testing exercises the entire system from end to end | Sanity testing exercises only the particular component of the entire system |
| Smoke testing is like General Health Check Up | Sanity Testing is like specialized health check up |

**Difference between verification and Validation**

|  |  |  |
| --- | --- | --- |
| criteria | verification | validation |
| definition | 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. |
| 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 user’s 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. |
| evaluation item | Plans, Requirement Specs, Design Specs, Code, Test Cases | The actual product/software. |
| Activities | Reviews  Walkthroughs  Inspections | testing |
|  |  |  |

**Explain types of Performance testing.**

-there are six type of performance testing

1) 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.

2) Stress testing-stress testing is used to test the stability and reliability of the system. stress testing determine the limit and error handling under extremely heavy load condition

3) Endurance testing- stress testing is known as endurance testing.

4) Spike testing

5) Volume testing

6) Scalability testing

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

-Error: During development time developer make mistake in coding then show error at compile time it is called error.

-defect: During testing time error found by tester then it is called defect.

-bug: at testing time error found by tester and that error accepted by developer then it is called bug.

-failure: after development build does not match requirement then it is called failure.

**Difference between Priority and Severity**

**What is Bug Life Cycle?**

-Duration or time span between first time defect is found and the time that is closed successfully, rejected, postponed or deffered is called bug life cycle.

**Explain the difference between Functional testing and Non-functional**

|  |  |
| --- | --- |
| Functional testing | Non-functional testing |
| 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 |
| 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 |
| Manual testing or automation tools can be used for functional testing | Using tools will be effective for this testing |
| Types of Functional testing are Unit Testing Smoke Testing Sanity Testing Integration Testing | Types of Non-functional testing are Performance Testing  Volume Testing Stress Testing Security Testing |

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

|  |  |
| --- | --- |
| SDLC | STLC |
| -In this, all the requirements are gathered and analyzed for their feasibility. | -The requirements documents are analyzed and validated and the scope of testing is defined. |
| -there are 6 phases | -there are 7 phases |
| -actual coding is implemented | test cases are created in phase |

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

|  |  |  |
| --- | --- | --- |
| Test script | Test scenario | Test case |
| how to core core business function | What to be tested | How to be tested |
| script derive from code | The scenario are derive from use case | Test cases are derive from test scenario |
| Script perform on the system under test. | Test scenario represents series of action that are associated together | Test cases represent single action by user |

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

-test means document describing the scope, approach, resource and schedule of intended test activities.

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

There are methodologies of Agile

1) Scrum

2) Extreme programming

3) Dynamic system development method

4) Test driven development

5) Feature driven development

6) XBreed

7) Crystal

**Explain the difference between Authorization and Authentication in Web testing.**

|  |  |
| --- | --- |
| Authentication | Authorization |
| -In authentication verified the user. | -In authorization validate the user. |
| -Authentication process is done before athorization process | -Authorization process is done after authentictaion |
| -In this need user login detail | -In this need user security level |

**What are the common problems faced in Web testing**?

-integration

Interoperability

Security

Performance

Usability

Quality testing,

* **https://github.com/SonalLad28/TopsAssignment/blob/main/whatsaapp%20HLR.xlsx**