Module-2

* What is exploratory testing?
* Exploratory testing is a type of software testing where Test cases are not created in advance but testers check system on the fly. They may note down ideas about what to test before test execution. The focus of exploratory testing is more on testing as a thinking activity.
* What is traceability matrix
* A traceability matrix is a document that details the technical requirements for a given test scenario and Its current state.it helps the testing team understand the level of testing that is done for a given product. The traceability process itself is used to review the test cases that were defined for any requirement.
* What is boundary value testing ?
* Boundary value is based on testing the boundary values of valid and invalid partitions. The behavior at the edge of the equivalence partition is more likely to be incorrect than the behavior within the partition, so boundaries are an area where testing is likely to yield defects.It checks for the input values near the boundary that have a higher chance of error. Every partition has its maximum and minimum values and these maximum and minimum values are the boundary values of a partition.
* What is equivalence partitioning testing?
* Equivalence Partitioning also called as equivalence class partitioning. It is abbreviated as ECP. It is a software testing technique that divides the input test data of the application under test into each partition at least once of equivalent data from which test cases can be derived.An advantage of this approach is it reduces the time required for performing testing of a software due to less number of test cases.

* What is integration testing?
* Integration testing is defined as a type of testing where software modules are integrated logically and tested as a group. A typical software project consists of multiple software modules, coded by different programmers. The purpose of this level of testing is to expose defects in the interaction between these software modules when they are integrated .

* What determines the level of risk?
* The probability of any unwanted incident is defined as Risk. Insoftware testing, risk analysis is the process of identifying the risks in applications or software that you built and prioritizing them to test. After that, the process of assigning the level of risk is done. The categorization of the risks takes place, hence, the impact of the risk is calculated.

* What is alpha testing?
* Alpha testing is the initial phase of validating whether a new product will perform as expected. Alpha tests are carried out early in the development process by internal staff and are followed up with beta tests, in which a sampling of the intended audience actually tries the product out.

* What is beta testing?
* Beta testing can be considered ‘pre release testing.’ Beta testing is also sometimes referred to as user acceptance testing (UAT) or end user testing. In this phase of software development, applications are subjected to real world testing by the intended audience for the software.

* What is component testing?
* Component testing is defined as a software testing type, in which the testing is performed on each individual component separately without integrating with other components. It’s also referred to as Module Testing when it is viewed from an architecture perspective. Component Testing is also referred to as Unit Testing, Program Testing or Module Testing.
* What is functional system testing?
* Functional testing is a type of testing that seeks to establish whether each application features works as per the software requirements. Each function is compared to the corresponding requirement to ascertain whether its output is consistent with the end user's expectations.
* What is non-functional testing?
* Non-functional testing is defined as a type of Software testing to check non-functional aspects (performance, usability, reliability, etc) of a software application. It is designed to test the readiness of a system as per nonfunctional parameters which are never addressed by functional testing.
* What is gui testing?
* Gui testing is a software testing type that checks the Graphical User Interface of the Software. The purpose of Graphical User Interface (GUI) Testing is to ensure the functionalities of software application work as per specifications by checking screens and controls like menus, buttons, icons, etc.
* What is adhoc testing?
* Adhoc testing is an informal or unstructured software testing type that aims to break the testing process in order to find possible defects or errors at an early possible stage. Ad hoc testing is done randomly and it is usually an unplanned activity which does not follow any documentation and test design techniques to create test cases
* What is load testing?
* Load testing is a non-functional software testing process in which the performance of software application is tested under a specific expected load. It determines how the software application behaves while being accessed by multiple users simultaneously. The goal of Load Testing is to improve performance bottlenecks and to ensure stability and smooth functioning of software application before deployment.
* What is stress testing?
* Stress testing is a type of software testing that verifies stability & reliability of software application. The goal of Stress testing is measuring software on its robustness and error handling capabilities under extremely heavy load conditions and ensuring that software doesn’t crash under crunch situations. It even tests beyond normal operating points and evaluates how software works under extreme conditions.
* What is white box testing and list the types of white box testing?
* White box testing is a testing technique in which software’s internal structure, design, and coding are tested to verify input-output flow and improve design, usability, and security. In white box testing, code is visible to testers, so it is also called Clear box testing, Open box testing, Transparent box testing, Code-based testing, and Glass box testing.
* What is black box testing?what are the different black box testing techniques?
* Black box testing is a software testing method in which the functionalities of software applications are tested without having knowledge of internal code structure, implementation details and internal paths. Black Box Testing mainly focuses on input and output of software applications and it is entirely based on software requirements and specifications. It is also known as Behavioral Testing.
* Mention what are the categories of defects?

1.Arithmetic Defects.

2.Logical Defects.

3.Syntax Defects.

4.Multithreading Defects.

5.Interface Defects.

6.Performance Defects

* Mention what bigbang testing is?
* Big Bang Integration Testing is an integration testing strategy wherein all units are linked at once, resulting in a complete system. When this type of testing strategy is adopted, it is difficult to isolate any errors found, because attention is not paid to verifying the interfaces across individual units.
* 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.
* When should ‘regression testing’ be performed?
* Regression testing should be done whenever changes are made to the system,including new features,bug fixes,and performance improvements. It is an important part of the software development process and can help to ensure that changes made to a system do not introduce new bugs.
* What is 7 key principle?explain in details?

[ 1] Testing shows presence of defects

testing principle states that – Testing talks about the presence of defects and don’t talk about the absence of defects. i.e. Software Testing reduces the probability 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 not possible

Exhaustive testing is not possible. Instead, we need the optimal amount of testing based on the risk assessment of the application.

[3]Early testing

Testing should start as early as possible in the Software Development Life Cycle. So that any defects in the requirements or design phase are captured in early stages.

[4]Defect clustering

Defect Clustering which states that a small number of modules contain most of the defects detected.

[5]Pesticide paradox

Repetitive use of the same pesticide mix to eradicate insects during farming will over time lead to the insects developing resistance to the pesticide Thereby ineffective of pesticides on insects.

[6]Testing is context dependent

Testing is context dependent which basically means that the way you test an e-commerce site will be different from the way you test a commercial off the shelf application

[7]Absence of errors fallacy

It is possible that software which is 99% bug-free is still unusable. This can be the case if the system is tested thoroughly for the wrong requirement. Software testing is not mere finding defects, but also to check that software addresses the business needs

* Difference between qa v/s qc v/s tester
* Today, almost every organization has a QA department that is responsible for ‘testing’ software applications to discover and eliminate bugs. However, there is a fundamental flaw in this definition of the role of QA in an organization. Most executives that I have talked to, fail to understand the difference between quality assurance and testing and oftentimes use these terms alternatively.

So, what is the difference between QA and testing, or rather QA and Quality Control (QC)? Before we talk about QA vs testing, let’s try to understand what exactly quality control is and why I brought it up!Quality control is a set of “activities” that need to be performed in order to detect problems during production and before the product goes live. These activities ensure that final deliverable meets the specifications and quality standards set by the organization. QC often includes peer reviews, “testing”, code reviews etc.

* Difference between smoke and sanity
* Smoke Testing is performed to ascertain that the critical functionalities of the program are working fine. Sanity testing is done at random to verify that each functionality is working as expected.
* Difference between verification and validation
* Verification is a process of determining if the software is designed and developed as per the specified requirements. Validation is the process of checking if the software (end product) has met the client's true needs and expectations.
* Explain types of performance testing.

### 1]Load Testing

### 2]Stress Testing

### 3]Scalability Testing

### 4]Spike Testing

### 5]Soak Testing

### 6]Configuration Testing

### 7]Availability & Resilience Testing

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* What is error,defect,bug and failure?
* We can say that a mistake made by a programmer during coding is called an error, an error found during the unit testing in the development phase is called a defect, an error found during the testing phase is called a bug and when an error is found at an end user's end is called as the failure.
* Difference between priority and severity
* severity:
* Severity is defined as the extent to which a particular defect can create an impact on the software. Severity is a parameter to denote the implication and the impact of the defect on the functionality of the software.
* priority:
* Priority is defined as para meter that decides the order in which a defect should be fixed. Defect having the higher priority should be fixed first
* What is bug life cycle?
* The Defect Life Cycle, also known as the Bug Life cycle,is a cycle of defects from which it goes through covering the different states in its entire life. This starts as soon as any new defect is found by a tester and comes to an end when a tester closes that defect assuring that it won't get reproduced again.
* Explain the difference between functional testing and non functional testing
* Functional testing ensures that the functions and features of the application work properly. Non-functional testing examines other aspects of how well the application works. Functional testing tests the functionality of an app. Non-functional testing tests the performance of these functions.
* What is different between stlc and sdlc
* STLC and SDLC are both interrelated in some way, or you could say that one is the predecessor to the other. SDLC refers to a sequence of activities during the software development process, whereas STLC refers to a sequence of activities during software testing. The SDLC is primarily concerned with software development.
* What is the difference between test scenario,test cases,and test script?
* Test Case is a step by step procedure to test any functionality of the software application/product. Test Script is set of instructions or a short program to test any functionality of software application/product. Test Case is a manual approach of software testing.
* Explain what test plan is? what is the information that should be covered.
* A test plan is a document detailing the objectives, resources, and processes for a specific test for a software or hardware product. The plan typically contains a detailed understanding of the eventual workflow.
* What is priority?
* Priority is defined as the order in which the defects should be resolved. The priority status is usually set by the testing team while raising the defect against the dev team mentioning the timeframe to fix the defect. The Priority status is set based on end users requirement.

* What is severity?
* Severity means the seriousness of the defect in the product functionality. Priority means how soon the bug should be fixed. The test engineer determines the severity level of the defect. Priority of defects is decided in discussion with the manager/client. It is driven by functionality.
* Bug categories are…..
* 1] Performance Bugs
* 2]Security Bugs
* 3]Unit Level Bugs
* 4]Functional Bugs
* 5]Usability Bugs
* 6]Syntax Errors
* 7]Compatibility Errors
* 8]Logic Bugs

* Advantage of bugzila.
* **The Advantages of Bugzilla are:**
* it is an open-source widely used bug tracker;
* it is easy in usage and its user interface is understandable for people without technical knowledge;
* it easily integrates withtest management instruments;
* it integrates with an e-mailing system;
* it automates documentation.

* Difference between priority and severity
* Severity is basically a parameter that denotes the total impact of a given defect on any software. Priority is basically a parameter that decides the order in which we should fix the defects. Severity relates to the standards of quality. Priority relates to the scheduling of defects to resolve them in software.
* What are the different methodologies in agile development model?
* Agile refers to the methods and best practices for organizing projects based on the values and principles documented in the agile manifesto. However, there’s no one right way to implement Agile and many different types of methodologies from which to choose. Here are some of the most common Agile frameworks.
* Explain the difference between authorization and authentication in web testing.what are the common problems faced in web testing?
* authentication is the process of verifying who someone is, whereas authorization is the process of verifying what specific applications, files, and data a user has access to. The situation is like that of an airline that needs to determine which people can come on board.

* When to used usability testing?
* If possible, usability testing can and should be conducted on the current iteration of a product before beginning any new design work, after you've begun the strategy work around a brand new site or app.
* What is the procedure for gui testing?
* 1]Testing the size, position, height, width of the visual elements.
* 2]Verifying and testing the error messages are displayed or not.
* 3]Testing different sections of the display screen.
* 4]Verifying the usability of carousel arrows.
* 5]Checking the navigation elements at the top of the page.