**Q.** What is GUI Testing?  
**Ans.** GUI or Graphical user interface testing is the process of testing software user interface against the provided requirements/mockups/HTML designs.

**Q.** What is Positive Testing?  
**Ans.** Testing conducted on the application to determine if system works. Basically known as “test to pass” approach.

**Q.** What is Negative Testing?  
**Ans.** Testing Software with negative approach to check if system is not “showing error when not supposed to” and “not showing error when supposed to”.

**Q.** What is End-to-End Testing?  
**Ans.** Testing the overall functionality of the system  including the data integration among all the modules is called end to end testing.

**Q.** What is Exploratory Testing?  
**Ans.** Exploring the application, understanding the functionality, adding (or) modifying existing test cases for better testing is called exploratory testing.

**Q.** What is Non-functionality Testing?  
**Ans.** Validating various non functional aspects of the system such as user interfaces, user friendliness security, compatibility, Load, Stress and Performance etc is called non functional testing.

**Q.** What is Usability Testing?  
**Ans.** Checking how easily the end users are able to understand and operate the application is called Usability Testing.

**Q.** What is Testing Process / Life Cycle?  
**Ans.** Write Test  Plan  
Test Scenarios  
Test Cases  
Executing Test Cases  
Test Results  
Defect Reporting  
Defect Tracking  
Defect Closing  
Test Release

**Q.** What is Test Plan?  
**Ans.** A document describing the scope, approach, resources, and schedule  of testing activities.  It identifies test items, features to be tested, testing tasks, who will do each task, and any risks requiring contingency planning.

**Q.** What is a Defect?  
**Ans**.Any flaw imperfection in a software work product.  
(or)  
Expected result is not matching with the application actual result.

**Q.** What is Severity?  
**Ans.** It defines the important of defect with respect to functional point of view i.e. how critical is defect  with respective to the application.

**Q.** What is Priority?  
**Ans.** It indicates the importance or urgency of fixing a defect

**Q.** What is Re-Testing?  
**Ans.** Retesting the application to verify whether defects have been fixed or not.

**Q.** What is Regression Testing?  
**Ans.** Verifying existing functional and non functional area after making changes to the part of the software or addition of new features.

**Q**. What is Test Case?  
**Ans.** A Test case is a set of preconditions steps to be followed with input data and expected behavior to validate a functionality of a system.

**Q.** What is a Good Test Case?  
**Ans.**A Test case that have high priority of catching defects in called a good test case.

**Q.** What is Defect Age?  
**Ans.**The time gap between date of detection & date of closure of a defect.

**Q.** What is What is Entry Criteria and Exit Criteria Software Testing?  
**Ans**. The Entry Criteria is the process that must be present when a system begins, like,  
SRS – Software  
FRS  
Use Case  
Test Case  
Test Plan  
The Exit criteria ensures whether testing is completed and the application is ready for release, like,  
Test Summary Report,  
Metrics  
Defect Analysis Report.

**Q**. What is Web Application Testing?  
**Ans**. Web application testing is done on a website to check – load, performance, security, Functionality, Interface, Compatibility and other usability related issues.

**Q**. What is Unit Testing?  
**Ans**. Unit testing is done  to check whether the individual modules of the source code are working properly or not.

**Q**. What is Date Driven Testing?  
**Ans**. It is Automation testing process in which application is tested with multiple set of data with different preconditions as an input to the script.

**Q.Difference between Verification and Validation:**  
  
- Verification is Static Testing where as Validations is Dynamic Testing.  
- Verification takes place before validation.  
- Verification evaluates plans, document, requirements and specification, where as Validation evaluates product.  
- Verification inputs are checklist, issues list, walkthroughs and inspection ,where as in Validation testing of actual product.  
- Verification output is set of document, plans, specification and requirement documents where as in Validation actual product is output.

**Q.The differences between Retesting and Regression testing are below:**  
  
- Retesting is done to verify defect fix previous in now working correctly where as regression is perform to check if the defect fix have not impacted other functionality that was working fine before doing changes in the code.  
  
- Retesting is specific and is performed on the bug which is fixed where as in regression is not be always specific to any defect fix it is performed when any bug is fixed.  
  
- Retesting concern with executing those test cases that are failed earlier where as regression concern with executing test cases that was passed in earlier builds.  
  
- Retesting has higher priority over regression.

**Q.What is Agile Testing?**

Agile Testing means to quickly validation of the client requirements and make the application of good quality user interface. When the build is released to the testing team, testing of the application is started to find the bugs. As a Tester, we need to focus on the customer or end user requirements. We put the efforts to deliver the quality product in spite of short time frame which will further help in reducing the cost of development and test feedbacks will be implemented in the code which will avoid the defects coming from the end user.

## Q.Explain bug life cycle.

Bug Life Cycle:  
  
- When a tester finds a bug .The bug is assigned with NEW or OPEN status,  
  
- The bug is assigned to development project manager who will analyze the bug .He will check whether it is a valid defect. If not valid bug is rejected then status is REJECTED.  
  
- If not, next the defect is checked whether it is in scope. When bug is not part of the current release .Such defects are POSTPONED  
  
- Now, Tester checks whether a similar defect was raised earlier. If yes defect is assigned a status DUPLICATE  
  
- When bug is assigned to developer. During this stage bug is assigned a status IN-PROGRESS  
  
- Once code is fixed. Defect is assigned a status FIXED  
  
- Next the tester will re-test the code. In case the test case passes the defect is CLOSED  
  
- If the test case fails again the bug is RE-OPENED and assigned to the developer. That’s all to Bug Life Cycle.

## Q.What should be done after a bug is found?

After finding the bug the first step is bug to be locked in bug report. Then this bug needs to be communicated and assigned to developers that can fix it. After the bug is fixes by the developer, fixes should be re-tested, and determinations made regarding requirements for regression testing to check that fixes didn't create problems elsewhere.

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

The purpose of exit criteria is to define when a test level is completed.

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

 The likelihood of an adverse event and the impact of the event determine the level of risk.

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

Black box testing is the software testing method which is used to test the software without knowing the internal structure of code or program. This testing is usually done to check the functionality of an application. The different black box testing techniques are

1. Equivalence Partitioning
2. Boundary value analysis
3. Cause effect graphing

**Q.  What is the difference between UAT (User Acceptance Testing) and System testing?**

System Testing: System testing is finding defects when the system under goes testing as a whole, it is also known as end to end testing. In such type of testing, the application undergoes from beginning till the end.

UAT: User Acceptance Testing (UAT) involves running a product through a series of specific  tests  which determines whether the product will meet the needs of its users.

**Q.What is difference between Test matrix and Traceability matrix?**

**Test Matrix**:  Test matrix is used to capture actual quality, effort, the plan, resources and time required to capture all phases of software testing

**Traceability Matrix**:Mapping between test cases and customer requirements is known as Traceability Matrix

**Q.Explain how does a test coverage tool works?**

The code coverage testing tool runs parallel while performing testing on the actual product. The code coverage tool monitors the executed statements of the source code. When the final testing is done we get a complete report of the pending statements and also get the coverage percentage.

**Q. Mention what is the difference between a "defect" and a "failure" in software testing?**

In simple terms when a defect reaches the end customer it is called a failure while the defect is identified internally and resolved then it is referred as defect.

### Q.How do you handle a non-reproducible bug?

**Answer.** Following bugs lie under the non-reproducible category.

**1.** Defects observed due to low memory issue.   
**2.** Bugs raised due to address pointing to a memory location that does not exist.  
**3.** The race condition is an error scenario which occurs when the timing of one event impacts another executing in a sequence.

A tester can take the following actions to handle the non-reproducible bugs.

1. Execute test steps that are close to the error description.  
   **2.** Evaluate the test environment.  
   **3.** Examine and evaluate test execution results.  
   **4.** Keep the resources & time constraints under check.

### Q.What is Defect Leakage?

**Answer.**Defect leakage occurs at the Customer or the End-user side after the product delivery. If the end user sees any issue in the application, then such bugs lead to Defect leakage. And this process of finding bugs is also called as Bug Leakage.

### Q.What is the primary difference between Debugging & Testing?

**Answer.**

* Testing is to find out defects while using a product whereas debugging is to reach the part of the code causing failure.
* Debugging is isolating the problem area in the code done by a developer whereas Testing is identifying the bug in an application and done by a tester.

### Q.What is GAP analysis?

**Answer.** Gap analysis reveals any deviation between the features available for testing and how the customer perceives them to be.

Traceability matrix is a testing tool which testers can use to track down the gaps.

### Q.Is it possible to achieve 100% coverage of testing? How would you ensure it?

**Answer.** No, it’s not possible to perform 100% testing of any product. But you can follow the below steps to come closer.

* Set a hard limit on the following factors.
  + Percentage of test cases to be passed.
  + The no. of bug found.
* Set a red flag if,
  + Test budget depleted.
  + Deadlines breached.
* Set a green flag if,
  + The entire functionality gets covered in test cases.
  + All critical & high bugs must have a status of CLOSED.

**Q. What is a blocker?**  
Ans. A blocker is a bug of high priority and high severity. It prevents or blocks testing of some other major portion of the application as well.

**Q. What is a critical bug?**  
Ans. A critical bug is a bug that impacts a major functionality of the application and the application cannot be delivered without fixing the bug. It is different from blocker bug as it doesn't affect or blocks the testing of other part of the application.

**Q.What is boundary value analysis?**  
Ans. Boundary value analysis is a software testing technique for designing test cases wherein the boundary values of the classes of the equivalence class partitioning are taken as input to the test cases e.g. if the test data lies in the range of 0-100, the boundary value analysis will include test data - 0,1, 99, 100.

**Q.Whatare the different levels of the testing?**  
Ans. Testing can be performed at different levels during the development process. Performing testing activities at multiple levels help in early identification of bugs. The different levels of testing are -

1. Unit Testing
2. Integration Testing
3. System Testing
4. Acceptance Testing

**Q.What is the difference between blackbox and whitebox testing?**  
Ans. Blackbox testing is a type of testing in which internal architecture of the code is not required for testing. It is usaually applicable for system and acceptance testing.   
Whereas whitebox testing requires internal design and implementation knowledege of the application being tested. It is usually applicable for Unit and Integration testing.

**Q.What is the difference between smoke and sanity testing?**  
Ans. The difference between smoke and sanity testing is-

* Smoke testing is a type of testing in which the all major functionalities of the application are tested before carrying out exhaustive testing. Whereas sanity testing is subset of regression testing which is carried out when there is some minor fix in application in a new build.
* In smoke testing shallow-wide testing is carried out while in sanity narrow-deep testing (for a particular fucntionality) is done.
* The smoke tests are usually documented or are automated. Whereas the sanity tests are generally not documented or unscripted.

**Q.What is backend testing?**  
Ans. Backend testing is a type of testing that invloves testing the backend of the system which comprises of testing the databases and the APIs in the application.

**Q.Whatare some advantages of automation testing?**  
Ans. Some advantages of automation testing are-

1. Test execution using automation is fast and saves considerable amount of time.
2. Carefully written test scripts remove the chance of human error during testing.
3. Tests execution can be scheduled for nightly run using CI tools like Jenkins which can also be configured to provide daily test results to relevant stakeholders.
4. Automation testing is very less resource intensive. Once the tests are automated, test execution requires almost no time of QAs. Saving Qa bandwidth for other explratory tasks.

**Q.Whatare some disadvantages of automation testing?**  
Ans. Some advantages of automation testing are-

1. It requries skilled automation testing experts to write test scritps.
2. Additional effort to write scripts is required upfront.
3. Automation scripts are limited to verification of the tests that are coded. These tests may miss some error that is very glaring and easily identifiable to human(manual QA).
4. Even with some minor change in application, script updation and maintenance is required.

**Q.What is a scrum meeting?**  
Ans. A scrum meeting is daily held meeting in scrum process. This meeting is conducted by scrum master and update of previous day's work along with next day's task and context is defined in scrum.

**Q.Explain TDD (Test Driven Development).**  
Ans. Test Driven Development is a software development methodology in which the development of the software is driven by test cases created for the functionality to be implemented. In TDD first the test cases are created and then code to pass the tests is written. Later the code is refactored as per the standards.

# Q.Difference between Desktop, Client server and Web testing?

**Desktop application** runs on personal computers and work stations, so when you test the desktop application you are focusing on a specific environment. You will test complete application broadly in categories like GUI, functionality, Load, and backend i.e DB.

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In **client server application** you have two different components to test. Application is loaded on server machine while the application exe on every client machine. You will test broadly in categories like, GUI on both sides, functionality, Load, client-server interaction, backend. This environment is mostly used in Intranet networks. You are aware of number of clients and servers and their locations in the test scenario.

**Web application** is a bit different and complex to test as tester don’t have that much control over the application. Application is loaded on the server whose location may or may not be known and no exe is installed on the client machine, you have to test it on different web browsers. Web applications are supposed to be tested on different browsers and OS platforms so broadly Web application is tested mainly for browser compatibility and operating system compatibility, error handling, static pages, backend testing and load testing.

### Q.What is Exploratory Testing and when should it be performed?

**Answer**: The definition of Exploratory Testing is “simultaneous test design and execution” against an application. This means that the tester uses her domain knowledge and testing experience to predict where and under what conditions the system might behave unexpectedly. As the tester starts exploring the system, new test design ideas are thought of on the fly and executed against the software under test.

On an exploratory testing session, the tester executes a chain of actions against the system, each action depends on the result of the previous action, hence the outcome of the result of the actions could influence what the tester does next, therefore the test sessions are not identical.

This is in contrast to Scripted Testing where tests are designed beforehand using the requirements or design documents, usually before the system is ready and execute those exact same steps against the system in another time.

Exploratory Testing is usually performed as the product is evolving (agile) or as a final check before the software is released. It is a complimentary activity to automated regression testing

### Q.What Test Techniques are there and what is their purpose?

**Answer**: Test Techniques are primarily used for two purposes: a) To help identify defects, b) To reduce the number of test cases.

* [**Equivalence partitioning**](http://www.testingexcellence.com/equivalence-partitioning/) is mainly used to reduce number of test cases by identifying different sets of data that are not the same and only executing one test from each set of data
* [**Boundary Value Analysis**](http://www.testingexcellence.com/boundary-value-analysis/) is used to check the behaviour of the system at the boundaries of allowed data.
* [**State Transition Testing**](http://www.testingexcellence.com/state-transition-testing/) is used to validate allowed and disallowed states and transitions from one state to another by various input data
* Pair-wise or All Pairs Testing is a very powerful test technique and is mainly used to reduce the number of test cases while increasing the coverage of feature combinations.

**Q.How will you choose a tool for test automation?**

choosing of a tool depends on many things ...  
1. Application to be tested  
2. Test environment  
3. Scope and limitation of the tool.  
4. Feature of the tool.  
5. Cost of the tool.  
6. Whether the tool is compatible with your application which means tool should be able to interact with your application  
7. Ease of use

**Q.Describe common problems of test automation.**

The common problems are:  
1. Maintenance of the old script when there is a feature change or enhancement  
2. The change in technology of the application will affect the old scripts   
128. What types of scripting techniques for test automation do you know?   
5 types of scripting techniques:  
Linear  
Structured  
Shared  
Data Driven  
Key Driven

**Q.What are memory leaks and buffer overflows?**

Memory leaks means incomplete deallocation - are bugs that happen very often. Buffer overflow means data sent as input to the server that overflows the boundaries of the input area, thus causing the server to misbehave. Buffer overflows can be used.

**Q.How can it be known when to stop testing?**

This can be difficult to determine. Many modern software applications are so complex, and run in such an interdependent environment, that complete testing can never be done. Common factors in deciding when to stop are:   
  
\* Deadlines (release deadlines, testing deadlines, etc.)   
  
\* Test cases completed with certain percentage passed   
  
\* Test budget depleted   
  
\* Coverage of code/functionality/requirements reaches a specified point   
  
\* Bug rate falls below a certain level   
  
\* Beta or alpha testing period ends

**Q.What are the automation challenges that QA team faces while testing?**

**Answer:** Exploitation of automation tool

Frequency of use of test case

Reusability of Automation script

Adaptability of test case for automation

**Q. What are the five common solutions for software developments problems?**

**Answer:**Setting up the requirements criteria, the requirements of software should be complete, clear and agreed by all.The next thing is the realistic schedule like time for planning, designing, testing, fixing bugs and re-testingadequate testing, start the testing immediately after one or more modules development.Use rapid prototype during design phase so that it can be easy for customers to find what to expectUse of group communication tools