**MANUAL TESTING**

**1. What is Software Testing?**

According to ANSI/IEEE 1059 standard – A process of analyzing a software item to detect the differences between existing and required conditions (i.e., defects) and to evaluate the features of the software item

**2. What are the best practices for writing test cases?**

* Write test cases with end-users perspective
* Write test steps in a simple way that anyone can follow them easily
* Make the test cases reusable
* Set the priority
* Provide a test case description, test data, expected result, precondition, postcondition.
* Write invalid test cases along with valid test cases
* Follow proper naming conventions
* Review the test cases regularly and update them if necessary.

**3. What is configuration management?**

Configuration management (CM) is a process of systems engineering to maintain system resources, computer systems, servers, software, and product’s performance in a consistent state. It helps to record all the changes made in the system and ensures that the system performs as expected even though changes are made over time.

**4. Name some popular configuration management tools?**

Some of the popular configuration management tools are Ansible, Chef, Puppet, Terraform, Saltstack, etc.

**5. What if the software is so buggy it can’t really be tested at all?**

If the software is so buggy, the first thing we need to do is to report the bugs and categories them based on Severity. If the bugs are critical bugs then it severely affects schedules and indicates deeper problems in the software development process. So you need to let the manager know about the bugs with proper documentation as evidence.

#### ****6. What are Quality Assurance and Quality Control?****

**Quality Assurance:**Quality Assurance involves in process-oriented activities. It ensures the prevention of defects in the process used to make Software Applications. So the defects don’t arise when the Software Application is being developed.

**Quality Control:**Quality Control involves in product-oriented activities. It executes the program or code to identify the defects in the Software Application.

#### ****7. What is Verification in software testing?****

Verification is the process, to ensure that whether we are building the product right i.e., to verify the requirements which we have and to verify whether we are developing the product accordingly or not. Activities involved here are Inspections, Reviews, Walk-throughs.

**8. What is Validation in software testing?**

Validation is the process, whether we are building the right product i.e., to validate the product which we have developed is right or not. Activities involved in this is Testing the software application.

#### ****9. What is Static Testing?****

Static Testing involves in reviewing the documents to identify the defects in the early stages of SDLC.

#### ****6. What is Dynamic Testing?****

Dynamic testing involves in the execution of code. It validates the output with the expected outcome.

#### ****7. What is White Box Testing?****

White Box Testing is also called as Glass Box, Clear Box, and Structural Testing. It is based on applications internal code structure. In white-box testing, an internal perspective of the system, as well as programming skills, are used to design test cases. This testing usually was done at the unit level.

Various white-box testing techniques are:

1. Statement Coverage
2. Decision Coverage
3. Condition Coverage
4. Multiple Condition Coverage

**8. What is Black Box Testing?**

Black Box Testing is a [software testing](https://www.softwaretestingmaterial.com/software-testing/) method in which testers evaluate the functionality of the software under test without looking at the internal code structure. This can be applied to every level of software testing such as Unit, Integration, System and Acceptance Testing.

**9. What is Grey Box Testing?**

Grey box is the combination of both White Box and Black Box Testing. The tester who works on this type of testing needs to have access to design documents. This helps to create better test cases in this process.

**10. What is Positive and Negative Testing?**

**Positive Testing:** It is to determine what system supposed to do. It helps to check whether the application is justifying the requirements or not.

**Negative Testing:** It is to determine what system not supposed to do. It helps to find the defects from the software.

### ****1. What is a Database?****

A database is a collection of information in an organized form for faster and better access, storage, and manipulation. It can also be defined as a collection of tables, schema, views, and other database objects.

### ****2. What is Data warehouse?****

Data warehouse refers to a central repository of data from multiple sources of information. Those data are consolidated, transformed and made available for the mining as well as online processing.

### ****3. What is a Table in a Database?****

A table is a database object used to store records in a field in the form of columns and rows that holds data.

### ****4. What is a Field in a Database?****

A field in a Database table is a space allocated to store a particular record within a table.

### ****5. What is a Record in a Database?****

A record (also called a row of data) is an ordered set of related data in a table.

### ****6. What is a column in a Table?****

A column is a vertical entity in a table that contains all information associated with a specific field in a table.

### ****7. What is DBMS?****

Database Management System is a collection of programs that enables a user to store, retrieve, update and delete information from a database.

### ****8. What are the types of DBMS?****

There are two types of DBMS  
1. Relational Database Management System (RDBMS)  
2. Non-Relational Database Management System

### ****9. What is RDBMS?****

RDBMS stands for **R**elational **D**atabase **M**anagement **S**ystem. RDBMS is a database management system (DBMS) that is based on the relational model. Data from a relational database can be accessed using Structured Query Language (SQL)

### ****10. What are the popular Database Management Systems in the IT Industry?****

Oracle, MySQL, Microsoft SQL Server, PostgreSQL, Sybase, MongoDB, DB2, and Microsoft Access etc.,

**1. What is Agile Testing?**

Agile testing is a software testing practice that follows the principles of agile software development. It is an iterative software development methodology where requirements keep changing as per the customer needs.  Testing is done in parallel to the development of an iterative model. Test team receives frequent code changes from the development team for testing an application.

**2. What is Agile Manifesto?**

Agile manifesto defines 4 key points:

i. Individuals and interactions over process and tools  
ii. Working software over comprehensive documentation  
iii. Customer collaboration over contract negotiation  
iv. Responding to change over following a plan

**3. What are the principles of Agile Software Development?**

1. Highest priority is to satisfy the customer through early and continuous delivery of business valuable software  
2. Welcome changing requirements, even late in development  
3. Deliver working software frequently  
4. Business people and developers must work together with transparency on daily basis throughout the project  
5. Build projects around motivated individuals  
6. The best form of communication is to do face-to-face conversation  
7. Working software is the primary measure of progress  
8. Able to maintain a constant pace  
9. Continuous attention to technical excellence  
10. Simplicity – the art of maximizing the amount of work not done – is essential  
11. Self-organizing teams  
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly

**4. What are the main roles in Scrum?**

Scrum consists of three main roles:

**Product Owner:** Product Owner usually represents the Client and acts as a point of contact from the Client side. The one who prioritizes the list of Product Backlogs which Scrum Team should finish and release.

**Scrum Master:** Scrum Master acts as a facilitator to the Scrum Development Team. Clarifies the queries and organizes the team from distractions and teach the team how to use scrum and also concentrates on Return on Investment (ROI). Responsible for managing the sprint.

**Scrum Development Team:**Developer’s, QA’s. Who develops the product. Scrum development team decides the effort estimation to complete a Product Backlog Item.

**Scrum Team:**A cross-functional, self-organizing group of dedicated people (Group of Product Owner, Business Analyst, Developer’s and QA’s). Recommended size of a scrum team is 7 plus or minus 2 (i.e, between 5 to 9 members in a team).

**5. What approach do you follow when requirements change continuously?**

In Agile methodology, change in requirement is possible. It’s not like other traditional methodologies where the requirements are locked down at the requirement phase. Every team member should be ready to handle the changes in the project.

The team should work closely with the Product Owner to understand the scope of requirement change and to negotiate to keep the requirement changes to a minimum or to adopt those changes in the next sprint. Based on the requirement changes Test Team could update the Test Plan and Test Cases to achieve the deadlines. The team should understand the risk in the requirement change and prepare a contingency plan. It is a best practice not to go for the automation process until requirements are finalized.

**6. How is Agile Testing different from other traditional Software Development Models?**

It is one of the common Agile Testing Interview Questions.

In Agile Methodology, testing is not a phase like other traditional models. It is an activity parallel to development in the Agile. The time slot for the testing is less in the Agile compared to the traditional models. The testing team works on small features in Agile whereas the test team works on a complete application after development in the traditional models.

**7. In what way does agile development methodology differ from other development methodologies?**

In Agile methodology, the code is broken down into small branches and only one branch is developed and tested at a time. At one particular time, only one particular branch is developed and tested. Agile teams follow several processes in the agile methodology like continuous communication with the team, frequent changes to get the optimal results etc. This makes the agile process more flexible and focused. This is not the case with other development methodologies.

**8. When do we use Agile Scrum Methodology?**

i. When the client is not so clear on requirements  
ii. When the client expects quick releases  
iii. When the client doesn’t give all the requirements at a time

**9. What is a Sprint?**

In Scrum, the project is divided into Sprints. Each Sprint has a specified timeline (2 weeks to 1 month). This timeline will be agreed by a Scrum Team during the Sprint Planning Meeting. Here, User Stories are split into different modules. The end result of every Sprint should be a potentially shippable product.

**10. What are Product Backlog and Sprint Backlog?**

**Product Backlog:**Product Backlog is a repository where the list of Product Backlog Items stored and maintained by the Product Owner. The list of Product Backlog Items are prioritized by the Product Owner as high and low and also could re-prioritize the product backlog constantly.

**Sprint Backlog:**Group of user stories which scrum development team agreed to do during the current sprint (Committed Product Backlog items). It is a subset of the product backlog.

### ****1. What is Automation Testing?****

Automation testing is the process of testing a software or application using an automation testing tool to find the defects. In this process, executing the test scripts and generating the results are performed automatically by automation tools. It is required when we have huge amount of [regression test cases](https://www.softwaretestingmaterial.com/regression-testing/). Some most popular tools to do automation testing are HP QTP/UFT, [Selenium WebDriver](https://www.softwaretestingmaterial.com/install-selenium-webdriver/), etc.,

### ****2. What are the benefits of Automation Testing?****

This is one of the common interview questions in any Automation testing job.

1. Saves time and money. Automation testing is faster in execution.
2. Reusability of code. Create one time and execute multiple times with less or no maintenance.
3. Easy reporting. It generates automatic reports after test execution.
4. Easy for compatibility testing. It enables parallel execution in the combination of different OS and browser environments.
5. Low-cost maintenance. It is cheaper compared to manual testing in a long run.
6. Automated testing is more reliable.
7. Automated testing is more powerful and versatile. Automation tools allow us to integrate with [Cross Browser Testing](https://www.softwaretestingmaterial.com/run-selenium-tests-on-browserstack/) Tools, [Jenkins](https://www.softwaretestingmaterial.com/setup-integration-jenkins-ci-tools/), [Github](https://www.softwaretestingmaterial.com/selenium-continuous-integration/) etc.,
8. It is mostly used for regression testing. Supports execution of repeated test cases.
9. Minimal manual intervention. Test scripts can be run unattended.
10. Maximum coverage. It helps to increase the test coverage.

### ****3. What are the challenges and limitations of Selenium WebDriver?****

As we all know Selenium WebDriver is a tool that automates the browser to mimic real user actions on the web. Selenium is a free open source testing tool. Some of the challenges with Selenium WebDriver are as follows

1. We cannot test windows application
2. We cannot test mobile apps
3. Limited reporting
4. Handling dynamic Elements
5. Handling page load
6. Handling pop up windows
7. Handling captcha

Read the detailed explanation on the [challenges and limitations of Selenium WebDriver](https://www.softwaretestingmaterial.com/challenges-and-limitations-of-selenium-webdriver/)

### ****4. What type of tests have you automated?****

Our main focus is to automate test cases to do [*Regression testing*](https://www.softwaretestingmaterial.com/regression-testing/), [*Smoke & Sanity testing*](https://www.softwaretestingmaterial.com/smoke-testing-vs-sanity-testing/). Sometimes based on the project and the test time estimation, we do focus on End to End testing.

### ****5. How many test cases you have automated per day?****

It is one of the Selenium Tricky Interview Questions.

Actually it depends on Test case scenario complexity and length. I did automate 2-5 test scenarios per day when the complexity is limited. Sometimes just 1 or fewer test scenarios in a day when the complexity is high.

### ****6. What is a Framework*?*****

A framework defines a set of rules or best practices which we can follow in a systematic way to achieve the desired results. There are different types of automation frameworks and the most common ones are:

* [Data Driven Testing Framework](https://www.softwaretestingmaterial.com/data-driven-framework-selenium-webdriver/)
* Keyword Driven Testing Framework
* Hybrid Testing Framework
* Behavioural Driven Framework

[Detailed Explanation: Types of Framework](https://www.softwaretestingmaterial.com/types-test-automation-frameworks/)

### ****7. What type of test cases to be automated?****

Types of Test Cases To Automate are

* Data-driven test cases
* Test cases with higher complexity
* Test case with many database updates
* The test execution rate is high
* Smoke/Critical tests
* Tests with several combinations
* Graph test cases
* Higher manual execution time

Read in detail explanation on [types of test cases to be automated](https://www.softwaretestingmaterial.com/test-cases-to-be-automated/) here

### ****8. What type of test cases not to be automated?****

Types of Test Cases Not To Be Automated are

* Subjective Validation
* New Functionalities
* Strategic Development
* User Experience
* Complex Functionality
* Quality Control
* Low return on investment
* Installation and setup testing

Read in detail explanation on [types of test cases not to be automated](https://www.softwaretestingmaterial.com/test-cases-not-to-be-automated/) here

### ****9. What are the advantages of the Test Automation Framework?****

1. Reusability of code.
2. Easy reporting.
3. Low-cost maintenance.
4. Maximum Coverage
5. Minimal manual intervention

### ****10. Have you created any Framework?****

**If you are a beginner:**You can say “No, I didn’t get a chance to create framework from the scratch. I have used the framework which is already available. My contribution is mostly in creating test cases by using the existing framework.”

**If you are a beginner but have good knowledge on creating framework:** You can say “Yes, I have involved in developing framework along with other automation tester in my company.”

**If you are an experienced tester:**You can say “I have contributed in developing framework.” or You can say “Yes, I have created framework from the scratch. There was no automation process in my previous company. I designed the framework from the scratch.”