**Software Testing(General)**

1. **What is Software Testing?**

**Ans.** Software testing is an activity to check whether the actual results match the expected results. The validation and verification of requirement is called software testing.



1. **Why does Software have defects.?**

Ans. There is many Region behind it in which some of them are following.

\* Incorrect requirements

\* Wrong design

\* Poor coding

\* Complex business logic

\* Complex technology

\* Work pressure

\* Frequently changing requirements

1. **What is verification?**

Ans. It is a process of verifying: Are we developing the right product or not. Known as static testing.

1. **What is validation?**

Ans. It is a process of validating: Does the developed product is right or not. Also called as dynamic testing.

1. **How many types of testing?**

Ans. There are mainly two types of testing .

1. Manual testing
2. Automation testing
3. **What is manual testing?**

Ans. Manual Testing is a process of finding out the defects or bugs in a software program/Application without using any tool.

1. **What are the pain points of manual testing?**

Ans. Below are the pain of manual testing.

1. Communication
2. Documentation
3. Frequently changing user requirement
4. Time consuming
5. Reporting
6. **What is automation Testing?**

Ans. Automation Testing is a process of finding out the defects or bugs in a software program/Application using any automation tool like Selenium/QTP .

1. **What are the difference between white box, black box and grey box testing?**
2. **What are the Essential Qualities Of An Experienced QA Or Test Lead?**

Answer. Every QA or Test Lead should have the following qualities.

* 1. Well-versed in Software testing processes.
  2. Ability to accelerate teamwork to increase productivity.
  3. Improve coordination between QA and Dev engineers.
  4. Provide ideas to refine the QA processes.
  5. Ability to conduct RCA meetings and draw conclusions.
  6. Excellent written and interpersonal communication skills.
  7. Quick learner and able to groom the team members.

1. **What is a Good tester?**

Ans. Is one who tries to break the developer’s software and in a position to venture the bugs .so that at least 805 bugs free software can deliver.

1. **Describe How To Perform Risk Analysis During Software Testing?**

Ans. Risk analysis is the process of identifying the hidden issues that may derail the successful delivery of the application. It also prioritizes the sequence of resolving the identified risks for testing purpose.

Following are some of the risks that are of concern to the QA.

1. New Hardware.
2. New Technology.
3. New Automation Tool.
4. The sequence of code delivery.
5. Availability of test resources for the application.

We prioritize them into three categories which are as follows.

1. High magnitude: Impact of the bug on the other functionality of the application.
2. Medium: it is tolerable in the application but not desirable.
3. Low: it is tolerable. This type of risk has no impact on the company business.
4. **How Do You Perform Automated Testing In Your Environment?**

Answer. Automation Testing is a process of executing tests automatically. It reduces the human intervention to a great extent. We use different test automation tools like QTP, Selenium, and WinRunner. These tools help in speeding up the testing tasks.

Using the above tools we can create test scripts to verify the application automatically. After completing the test execution, these tools also generate the test reports.

1. **What Are The Factors That You'll Consider To Choose Automated Testing Over Manual Testing?**

Answer.The choice of automated testing over manual testing depends on the following factors.

1. Tests require periodic execution.

2. Tests include repetitive steps.

3. Tests execute in a standard runtime environment.

1. Automation is expected to take less time.
2. Automation is increasing reusability.
3. Automation reports are available for every execution.
4. Tests require periodic execution.
5. Tests include repetitive steps.
6. Tests execute in a standard runtime environment.
7. Small releases like service packs which include a minor bug fix. In such cases, regression type of cases is sufficient for validation.
8. **What Are The Different Types Of Software Testing?**

Answer. Following is the list of various testing types used by manual testers.

1. Unit testing
2. Integration testing
3. Regression testing
4. Shakeout testing
5. Smoke testing
6. Functional testing
7. Performance testing
8. Load testing
9. stress testing
10. Endurance testing
11. White box and Black box testing
12. Alpha and Beta testing
13. System testing
14. **What Is A Test Case?**

Answer.A test case is a sequence of actions and observations that are used to verify the desired functionality. A good test case helps to identify problems in the requirements or design of an application.

1. **How Do You Test A Product If The Requirements Are Yet To Freeze?**

Answer. If the requirement spec is not available for a product, then a test plan can be created based on the assumptions made about the product. But we should get all assumptions well documented in the test plan.

1. **How Will You Tell If Enough Test Cases Have Been Created To Test A Product?**

Answer. First of all, we'll check if every requirement has at least one test case covered. If yes, then we can say that there are enough test cases to test the product.

1. **What Is The Difference Between Static Testing And Dynamic Testing?**

Answer.

Static Testing.

It is a white box testing technique which directs the developers to verify their code with the help of checklist to find errors in it.

Developers can start it done without actually finalizing the application or program.

Static testing is more cost effective than Dynamic testing.

It covers more areas than Dynamic testing in a shorter time.

Dynamic Testing.

Dynamic testing involves the execution of an actual application with valid inputs and checking of the expected output.

Examples of Dynamic testing are Unit Testing, Integration Testing, System Testing and Acceptance Testing.

Dynamic testing happens after the code deployment.

It starts during the validation stage.

1. **Why Is It Impossible To Test A Program Completely?**

Answer. Here are the two principal reasons that make it impossible to test a program entirely.

Software specifications can be subjective and can lead to different interpretations.

A software program may require too many inputs, too many outputs, and too many path combinations to test.

1. **What Is CMM?**

Answer. The Capability Maturity Model for Software (CMM or SW-CMM) is a model for assessing the maturity of the software processes of an organization and for identifying the key practices that increase the maturity of these processes.

1. **What group of teams can do the software testing?**

**Ans.** When it comes to testing everyone in the world can be involved right from the developer to the project manager to the customer. But below are the different type of team /group which can be present in a project

1. Isolated Test team.
2. outsource team.
3. Inside test team
4. Developer as testers
5. QA/QC Team.
6. **What is the functional and non-functional requirement ?**

**Ans.** The Functional requirement specifics how the system or applications Should do where in non-functional requirement it specifies how the system or application should be.

Some Of functional Requirement:-

1. Authentication
2. Business rules
3. Historical Data
4. Legal and regulatory requirement
5. External interface

Some of Non-functional requirement:-

1. Performance
2. Reliability
3. Security
4. Recovery
5. Data Integrity
6. Usability
7. **What is web application testing and their phases?**

Ans. Web application testing is done on a website to check its load performance ,security ,functionality, Interface ,compatibility , and other usability ,related issues .

Phases are :-

1. Web tier testing
2. Middle tier testing
3. Database tier testing
4. **How Does you test web application?**

Ans. Web application should have the following features Like.

1. Attractive User Interface
2. High Usability
3. Security features
4. Data backup
5. Performance
6. Able to work on different Browser.
7. **What is difference between web application and client server application?**

Ans: Client server application is designed typically to work in a local area network(LAN) environment using proprietary protoco between client and server.

Example: Database application developed in visual basic. Visual basic act as a client and Oracle or SQL server act as a server.

Web based application uses HTTP protocol to communicate between the client i.e web browser and the web server. It can be hosted on the internet so that it can be accessed from anywhere in the world. Typically, web application have minium 3 tiers namely client(Web browser), web serve and database server.

1. **What is difference between authentication and authorization? Give an example?**

Ans: Authentications is a process of ascertaining user identity through his/her credential like password. Authorization is s process of granting access to certain resources in the application to an authenticated user.

Example: Login to the system with password is an example of authentication and whereas having access to certain folder is authorization.

1. **What is cookie and session?**

Ans: Cookies is small file stored at the client machine which helps maintain the user session for HTTP protocol.

Session is identified as series of interaction a user with a web application from login to logout.

1. **How will you define the term software?**

Ans: Software is a collection of computer programs that provides intended functionality, performance Data structures used for data manipulations and documents that describe operational details and how to use these programs.

1. **What is system software? Give couple of examples.**

Ans: System software is a collection of programs designed to service other programs by interacting with the computer hardware. Basic input output system (BIOS), Compilers; Operating Systems are examples of system software.

1. **What is the difference between application software and system software?**

Ans: Application software is designed to solve a specific business problem on end user needs. Application software re-structures and manipulates the data to facilitate the business operation in an effective way. Microsoft Word, Tally Accounting software, SAP are examples of application software.

Application software uses system software as a service in its actual execution to interact with the hardware. For example, one needs operating system installed as a first step which is system software, so that MS Word can be installed for the user.

1. **What are the various CMM levels?**

Ans: CMM standard defines chaotic to matured processes through its 5 levels.

|  |  |
| --- | --- |
| **Level 1** | Initial. Almost like no process. Everything is ad hoc |
| **Level 2** | Repeatable. Software processes are defined, documented, practised. Teams are trained on processes. |
| **Level 3** | Defined. Software processes are consistent and are practised across the whole organization. |
| **Level 4** | Managed. Processes are monitored; results are measured quantitatively for evaluation purpose. |
| **Level 5** | Optimizing. Processes are monitored and better ways are experimented and adopted for continuous process improvement. |

1. **What is CMMi?**

Ans: CMM measures organizations maturity based on specific key performance areas (KPA). It does not focus if desired results are really achieved. CMMi supersedes CMM and takes a more result-oriented approach while defining and measuring key performance areas. CMMi integrates latest best practices followed by the industry and focuses on process architecture.

1. **What is ISO?**

Ans: ISO (International Organization for Standardization) is the worlds largest developer of standards. These are useful for industrial and business organizations of all types. They can be used by governments, regulatory bodies, from suppliers to customers of products and services in both public and private sectors. ISO has developed over 18000 standards and around 1100 new standards are published every year. Here are some of the examples.

ISO 14000 - Environmental Management Standards in production environments.

ISO 14915 – Software ergonomics for multimedia user interfaces.

1. **What is Six Sigma?**

Ans: Originally developed by Motorola Six Sigma methodology helps to improve the quality of process outputs by identifying and removing the causes of defects and minimizing the variability in the processes. Variability is generally denoted by a statistical measure called standard deviation (Sigma). Six Sigma experts, called as green belts and black belts, use a methodology that uses steps like define opportunities, measure performance, analyze opportunity, improve performance and then control performance to evaluate business processes and find out ways for improvements

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