**Assignment-6**

**Testing Type(Part-1)**

**Q1. What is Functional Testing?**

**Ans.** Functional testing is a type of testing which verifies each function of the software application. This testing mainly involves black box testing. Each and every functionality of the system is tested by providing appropriate input, verifying the output and comparing the actual results with the expected results. This testing involves checking of User Interface, APIs, Database, security, client/ server applications and functionality of the Application Under Test.

**Q2. List various types of Functional Testing?**

**Ans.**

1. Smoke testing
2. Sanity testing
3. Regression testing

**Q3. What is the difference between Re-testing and Regression Testing?**

**Ans.**

|  |  |  |
| --- | --- | --- |
|  | **Re-testing** | **Regression** |
| 1. | Re-testing is carried out to confirm the test cases that failed in the final execution are passing after the defects are fixed | Regression testing is carried out to confirm whether a recent program or code change has not adversely affected existing features |
| 2. | Re-testing is done on the basis of the defect fixes | The purpose of regression testing is that new code changes should not have any side effects to existing functionalities |
| 3. | Defect verification is the part of re-testing | Defect verification is not the part of regression testing |

**Q4. What is Smoke Testing?**

**Ans.** Smoke Testing is a kind of Software Testing performed after software build to ascertain that the critical functionalities of the program is working fine. It is executed "before" any detailed functional or regression tests are executed on the software build. The purpose is to reject a badly broken application, so that the QA team does not waste time installing and testing the software application.

In Smoke Testing, the test cases chosen cover the most important functionality or component of the system. The objective is not to perform exhaustive testing, but to verify that the critical functionalities of the system is working fine.  
For Example a typical smoke test would be - Verify that the application launches successfully.

**Q5. What is Sanity Testing?**

**Ans.** Sanity testing is a kind of Software Testing performed after receiving a software build, with minor changes in code, or functionality, to ascertain that the bugs have been fixed and no further issues are introduced due to these changes. The goal is to determine that the proposed functionality works roughly as expected. If sanity test fails, the build is rejected to save the time and costs involved in a more rigorous testing.

The objective is "not" to verify thoroughly the new functionality, but to determine that the developer has applied some rationality (sanity) while producing the software. For instance, if your scientific calculator gives the result of 2 + 2 =5! Then, there is no point testing the advanced functionalities like sin 30 + cos 50.

**Q6. What is Scenarios Based Testing?**

**Ans.** A Test Scenario is any functionality that can be tested. It is also called Test Condition or Test Possibility. As a tester, you may put yourself in the end user’s shoes and figure out the real-world scenarios and use cases of the Application Under Test.

Scenario Testing is a variant of Software Testing where Scenarios are Used for Testing. Scenarios help in an Easier Way of Testing of the more complicated Systems

**Q7. What is the difference between Ad-hoc and Monkey Testing?**

**Ans.**

|  |  |  |
| --- | --- | --- |
|  | **Ad-hoc Testing** | **Monkey Testing** |
| 1. | Ad-hoc is informal testing where u know abt the application well in hand. You are doing random testing before you actually begin with the intensive testing. | Monkey is random testing, u dont know abt the application you  are learn in it. |
| 2. | A testing phase where the tester tries to 'break' the system by randomly trying the system's  Functionality. Can include negative testing as well. | Testing a system or an Application on the fly, i.e just few tests here and there to ensure the system or an application does not crash out. |

**Q8. What is Forward Compatibility and Backward Compatibility?**

**Ans. Forward compatibility** is the ability of a design to gracefully accept input intended for later versions of itself. The concept can be applied to entire systems, electrical interfaces, telecommunication signals, data communication protocols, file formats, and computer programming languages.

**Backward compatible** refers to a hardware or software system that can use the interface of an older version of the same product. A new standard product or model is considered backward compatible when it is able to read, write or view older formats.

**Q9. What is the difference between Load Testing and Performance Testing?**

**Ans.** In the computer industry, software performance testing is used to determine the speed or effectiveness of a computer, network, software program or device. This process can involve quantitative tests done in a lab, such as measuring the response time or the number of MIPS (millions of instructions per second) at which a system functions. Qualitative attributes such as reliability, scalability and interoperability may also be evaluated. Performance testing is often done in conjunction

“Load testing is the process of putting demand on a system or device and measuring its response. There is little agreement on what the specific goals of load testing are. The term is often used synonymously with software performance testing, reliability testing, and volume testing.”

**Q10. What is the difference between Load Testing and Stress Testing?**

**Ans.** Load testing as the process of subjecting a computer, network, or server to a normal or expected workload. Essentially, the tester wants to know how the system is going to function in the real world when it is faced with routine use. The test does this by including pauses between its requests, much like a human user would do.

Some examples of load testing include:

* Downloading a heavy volume of files at once
* Running multiple applications simultaneously

**Stress testing** is similar to load testing in that the kinds of tests that are run are essentially the same. What makes it different is that instead of subjecting a system to normal or expected usage, the tester puts the system under an extreme amount of strain, such as send a high volume of server requests with no pauses between, in order to see how the system performs under these unusual conditions.

**Q11. Explain the concept of recovery testing with help of example.**

**Ans.** It is a type of non-functional testing. Recovery testing is done in order to check how fast and better the application can recover after it has gone through any type of crash or hardware failure etc.

Recovery testing is the forced failure of the software in a variety of ways to verify that recovery is properly performed.

For example: When an application is receiving data from a network, unplug the connecting cable. After some time, plug the cable back in and analyze the application’s ability to continue receiving data from the point at which the network connection was broken.

Example: Restart the system while a browser has a definite number of sessions and check whether the browser is able to recover all of them or not.

**Q12. What do you mean by Average Time between failure in Recovery Testing ?**

**Ans.** Mean time between failure (MTBF) refers to the average amount of time that a device or product functions before failing. This unit of measurement includes only operational time between failures and does not include repair times, assuming the item is repaired and begins functioning again. MTBF figures are often used to project how likely a single unit is to fail within a certain period of time.

**Q13. A regression test:**  
a. Will always be automated  
b. Will help ensure unchanged areas of the software have not been affected  
c. Will help ensure changed areas of the software have not been affected  
d. Can only be run during user acceptance testing

**Q14. Which of the following statements about component testing is not true?**a. Component testing should be performed by development  
b. Component testing is also know as isolation or module testing  
c. Component testing should have completion criteria planned  
d. Component testing does not involve regression testing

**Q15. Software testing accounts to what percent of software development costs?**a.10-20  
b.40-50  
c.70-80  
d.5-10

**Q16. What is Comparison Testing?**

**Ans.** Comparison testing comprises of comparing the contents of files, databases, against actual results. They are capable of highlighting the differences between expected and actual results. Comparison test tools often have functions that allow specified sections of the files be ignored or masked out.