Software Testing Assignment

Module-2(Manual Testing)

1. What is Traceability matrix?

* To protect against changes, you should be able to trace back from every system component to their original requirements that caused its presence.

1. What is Exploratory testing?

* Exploratory testing is a concurrent process where test design, execution and logging happen simultaneously.

1. What is Boundary Value Testing?

* Boundary Value Testing is a methodology for designing test cases that concentrates software testing efforts on cases near the limits of valid ranges.

1. What is Integration testing?

* Integration Testing is a level of software testing process in which individual units are combined and tested as a group.

1. What is Component Testing?

* Components (Unit) is the smallest testable part of software.

1. What is Functional System Testing?

* A Requirement that specifies a function that a system or component must perform.

1. What is Non Functional Testing?

* Testing attributes of component or system, that do not relate to functionality.

1. What is Adhoc Testing?

* Adhoc testing is an informal testing type with an aim to break the system.

1. What is Black Box Testing? What are the different black box testing techniques?

* Testing either functional or non-functional without reference to the internal structure of component or system is called black box testing. There are four types of black box testing techniques.

(1) Equivalence partitioning

(2) Boundary value analysis

(3) State transition Testing

(4) Decision table

1. What is White Box Testing and list the types of white box testing?

* Testing based on an analysis of internal structure of component or system is white box testing.

1. What is error, defect, bug and failure?

* A mistake in coding is called Error. Error found by tester, it is called defect. Defect accepted by development team is called bug. Build does not meet requirement it is called failure.

1. What is the difference between QA v/s QC v/s Tester?

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| QA  QA is the subset of software testing life cycle  QA’s full form is Quality Assurance  Process Oriented activities.  It is Preventive Activity.  Focuses on process and procedures rather than conducting actual testing on the system | QC  QC is the subset of QA  QC’s full form is Quality Control  Product Oriented activity.  It is Corrective process.  Focuses on actual testing by identifying bugs/ defects through implementation of process/ procedures | Testing  Testing is the subset of QC  -  Product Oriented Activity.  It is Preventive process.  Focuses on actual testing. |

1. Explain difference between Functional Testing and Non Functional testing.

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| SL. No. | Functional Testing | Non Functional Testing |
| 1. | Testing based on an analysis of specification of functionality of component or system. | Testing the attributes of a component or system that do not relate to functionality. |
| 2. | Easy to do Manual Testing. | Tough to do manual testing. |
| 3. | Both manual and automation tools are used for functional testing. | Using tools will be effective for non-functional testing. |
| 4. | Functional testing is executed first. | Non-functional testing is executed after functional testing. |
| 5. | Functional testing describes what the product does | Non-functional testing describes how good the product works. |
| 6. | Types of Functional Testing:   * Smoke testing * Sanity testing * Black Box testing * White Box testing * Unit testing * Regression testing * User Acceptance testing * Integration testing | Types of Non-Functional Testing:   * Installation testing * Performance testing * Volume testing * Load testing * Stress testing * Penetration testing * Migration testing * Compatibility testing * Security testing |

1. Difference between Smoke and Sanity Testing.

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| SL. No. | Smoke Testing | Sanity Testing |
| 1 | Smoke testing is a subset of regression testing | Sanity testing is a subset of acceptance testing |
| 2 | Smoke testing is done by developer or tester | Sanity testing is performed by testers |
| 3 | Smoke testing is scripted / documented | Sanity testing is not scripted or documented |
| 4 | Smoke testing is performed after software build to ascertain that critical functionality of software is working fine | After receiving software build, with minor changes in code or functionality, Sanity testing is performed to ascertain that all the bug have been fixed and no further issues are introduced due to these changes. |
| 5 | Smoke testing is like General Health Check-up | Sanity testing is like Specialized health check-up |

1. What is 7 key principles?

* 1.Testing shows presence of defect.

2. Exhaustive testing is impossible.

3. Early Testing.

4. Defect clustering.

5. Pesticide paradox

6. Testing is context dependent.

7. Absence of error fallacy.

1. Difference between Verification & Validation.

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| SL. No. | Verification | Validation |
| 1 | Verification is performed before coding | Validation is performed after coding |
| 2 | Verification is a static testing | Validation is a dynamic testing |
| 3 | Verification is a black box testing | Validation is a white box testing |
| 4 | Verification is carried out by software developer/ tester | Validation is carried out by testers. |
| 5 | Are we building the product right? | Are we building the right product? |

1. What is the difference between the STLC (Software Testing Life Cycle) and SDLC (Software Development Life Cycle)?

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| SL. No. | SDLC  (Software Development Life Cycle) | STLC  (Software Testing Life Cycle) |
| Definition | SDLC is a structure imposed of a development of software product that defines the process for planning, implementation, design, deployment, testing and ongoing maintenance & support | STLC is a set of steps used to test software products |
| Phases | 1. Requirement Gathering 2. Analysis 3. Design 4. Implementation 5. Testing 6. Maintenance | 1. Requirement Analysis 2. Test Planning 3. Test Case Development 4. Test Environment Set Up 5. Test Execution 6. Test Cycle Closure |
| By Whom | SDLC phase is carried out by Software Development Team | STLC Phases are carried out by software testing team |
| Goal | Goal of SDLC is to complete successful development of software | Goal of STLC is to complete successful testing of software |
| Relation | SDLC is mainly related to software development | STLC is mainly related to software testing |

1. What is Load Testing?

* It’s a Performance testing to check behaviour of system under load.

1. What is Equivalence partitioning testing?

* Aim is to treat group of inputs as equivalent and to select one representative input as equivalent to test them all.

1. What is GUI Testing?

* Graphical User Interphase testing is a process to test system’s GUI of the system under test.

1. Mention what big bang testing is?

* In Big Bang Integration Testing all component or module is integrated simultaneously after which everything is tested as a whole.

1. What determines the level of risk?
2. What is Alpha testing?

* Alpha Testing is performed before product release to identify error or bug with an aim to ensure software quality before it goes into production.

1. What is beta testing?

* Beta Testing is the final stage, where selected group of users tries out the application with an aim to measure customer satisfaction, ensuring the app is ready for the end user.

1. What is stress Testing?

* System is stressed beyond its specification to check when and how it fails. Performed under heavy load like putting large number beyond its storage capacity, complex database queries and continuous input to system or database lead

1. Mention what are the categories of defects?

* Categories of defects are Functionality, UI, Security.

1. What is the purpose of exit criteria?

* The purpose of Eiit criteria is to define when we STOP testing either at the END of all testing / END of phase of testing.

1. When should "Regression Testing" be performed?

* Regression Testing is performed to test your software application when it under goes a code change to ensure that a new code has not affected the other parts of the software.

1. Explain types of Performance testing.

* Load Testing
* Spike Testing
* Endurance Testing
* Volume Testing
* Scalability Testing
* Stress Testing

1. Difference between Priority and Severity

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| SL. No. | Priority | Severity |
| 1 | Category decided by developers or product owners. | Category decided by testers |
| 2 | Priority deals with the timeframe or order to fix the defects**.** | Severity Deals with the technical aspects of the application**.** |
| 3 | The priority value is subjective and may change after comparing with other defects. | The value does not change with time, it’s fixed. |
| 4 | Priority is Relative & Business-focused | Severity is Absolute & customer-focused |
| 5 | Priority has 4 types: Critical, High, Medium, Low | Severity has 5 types: Critical, High, Medium, Low, Cosmetic |

1. What is Bug Life Cycle?

* The duration or time span between the first time defect was found and the time that it is closed successfully, rejected, deferred or Postponed is called Bug Life Cycle.

1. What is the difference between test scenarios, test cases, and test script?

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|  | Test Scenario | Test Cases | Test Script |
| 1 | Test scenario is any functionality that can be tested | Test cases involves set of steps, condition & input which can be used to derive test information | Test script is a set of sequential instruction that detail how to execute a core business function. |
| 2 | Test scenarios ensure that the business processes and flows are as per the functional requirements. | Test cases are powerful artifacts that are beneficial for future teammates, as well as a good source of knowing how a system and particular feature works. |  |
| 3 | Test Scenario is developed in form of document. | Test case is developed in form of templates. | Test script is developed in form of scripting. |
| 4 | Requires less time | Requires more resources and time. | Requires less time for testing scripts. |
| 5 |  | Test Case is a manual approach of software testing. | Test Script is an automatic approach of software testing. |

1. Explain what Test Plan is? What is the information that should be covered?

* Test plan is the document describing scope, approach, resources & schedule of an intended test activity.

1. What is priority?

* Priority refers to how quickly the fault should be rectified and how much it affects the business aspects of the software.

1. What is severity?

* Severity refers to how important the flow is to the product’s functionality and how much it affects the technical aspects of the software.

1. Bug categories are…

* Security, Database, Functionality(Critical/General), UI

1. Advantage of Bugzilla.

* It is easy to use & maintain
* Bugzilla can track our bugs that are generated during development
* Bug search criteria Is very efficient

1. What are the different Methodologies in Agile Development Model?

* Scrum, Kanban, Lean & Extreme Programming (XP)

1. Explain the difference between Authorization and Authentication in Web testing. What are the common problems faced in Web testing?

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| SL. No. | Authentication | Authorization |
| 1 | Authentication is the process of identifying a user to provide access to a system | Authorization is the process of giving permission to access the resources. |
| 2 | It is usually performed before the authorization | It is usually done once the user is successfully authenticated |
| 3 | Ex. Entering login details is necessary for the employees to authenticate themselves to access the organizational emails or software | Ex. After employees successfully authenticate themselves, they can access and work on certain functions only as per their work & profiles. |
| 4 | Data is provided through Token IDs | Data is provided through access token |
| 5 | It requires login details of the user, such as user name & password etc… | It requires the user’s privilege or security level. |

1. When to use Usability Testing?

* Usability Testing identifies usability errors in the development cycle and can save a product from failure.
* Which icon or jargon represents what?
* Which page needs to be navigated
* Error message are not consistent or effectively displayed Session time not sufficient.

1. What is the procedure for GUI Testing?

* GUI testing involves checking the screens with the conrols like menus, buttons, icons and all types of bars-Tool bar, menu bar, dialogue boxes and windows etc..

1. Write a scenario of only WhatsApp chat messages
2. Write a Scenario of Pen
3. Write a Scenario of Pen Stand
4. Write a Scenario of Door
5. Write a Scenario of ATM
6. Write a scenario of Microwave Owen
7. Write a scenario of Coffee Vending Machine
8. Write a scenario of chair
9. To Create Scenario (Positive & Negative)

1. Gmail (Receiving Mail)

2.Online shopping to buy product (flipkart)

1. Write a Scenario of Wrist Watch
2. Write a Scenario of Lift(Elevator)
3. Write a Scenario of WhatsApp Group (generate group)
4. Write a Scenario of WhatsApp payment.

ANS: Qns.: 42 to 54



1. To create HLR and TestCase on this Link. <https://artoftesting.com/>
2. To create HLR & TestCase of WebBased (WhatsApp web , Instagram) 1. WhatsApp Web : <https://web.whatsapp.com/> 2.Instagram Web : [Instagram](https://www.instagram.com/?hl=en)
3. To create HLR & TestCase of 1)(Instagram , Facebook) only first page.

2) Facebook Login Page : <https://www.facebook.com/>

