***Software Testing Assignment Module–2(Manual Testing)***

1. **What is Exploratory Testing**?

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

1. **What is traceability matrix**?

* **traceability matrix** -To protect against changes, you should be able to trace back from every System component to the original requirement that caused its presence.

1. **What is Boundary value testing**?

* **Boundary value analysis**- is a methodology for designing test cases that concentrates software testing effort on cases near the limits of valid ranges Boundary value analysis is a method which refines equivalence partitioning.

1. **What is Equivalence partitioning testing**?

* **Equivalence partitioning**- is to treat groups of inputs as equivalent and to select one representative input to test them all EP can be used for all Levels of Testing.

1. **What is Integration testing**?

* **Integration Testing**- is a level of the software testing process where individual units are combined and tested as a group.

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

* Product Risk
* Project Risk

1. **What is Alpha testing**?

* **Alpha Testing**- is definitely performed and carried out at the developing organization’s location with the involvement of developers.

1. **What is beta testing**?

* **Beta Testing**- is always performed at the time when software product and project are marketed.

It is always performed at the user’s premises in the absence of the development team.

1. **What is component testing**?

* **Component Testing/ Unit Testing**- is a level of the software testing process where individual units/components of a software/system are tested.

1. **What is functional system testing**?

* **functional system testing** - A requirement that specifies a function that a system or system component must perform.

1. **What is Non-Functional Testing**?

* **Non-Functional Testing**- Testing the attributes of a component or system that do not relate to functionality.

1. **What is GUI Testing**?

* **GUI Testing-** is the process of the testing the system GUI of the system under test. GUI testing in involves checking the screens with the controls like menus, buttons, icons, and all type of bars.

1. error message are display correctly.

2. font used in applications is readable.

3. image is good clarity.

4. image are proper aligned.

1. **What is Adhoc testing?**

* **Adhoc testing-** is an informal testing type with an aim to break the system. This testing is primarily performed if the knowledge of testers in the system under test is very high.

1. **What is load testing?**

* **load testing-** is a kind of performance testing which determines a system’s performance under real-life load conditions. This testing helps determine how the application behaves when multiple users access it simultaneously.

1. **What is stress Testing?**

* **stress Testing-** is done in order to check when the application fails by reducing the system resources such as RAM, HDD etc. and keeping the number of users as constant.

1. **What is white box testing and list the types of white box testing?**

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

**types of white box testing –**

1. statement coverage
2. decision coverage
3. **What is black box testing? What are the different black box testing techniques?**

* **black box testing-** Testing, either functional or non-functional, without reference to the internal structure of the component or system.

**different black box testing techniques -** There are four specification-based or black-box 1) Equivalence partitioning

2) Boundary value analysis

3) Decision tables

4) State transition testing

1. **Mention what are the categories of defects?**

1. Data base defect

2. Critical functionality defect

3. Functionality defect

4. Security defect

5. user interface defect

1. **Mention what big bang testing is?**

* **Big Bang Testing -** all components or modules is integrated simultaneously, after which everything is tested as a whole.

1. **What is the purpose of exit criteria?**
2. Successful testing of integrated application
3. Executed test cases are documented.
4. All high prioritized bug fixed and closed.
5. Technical documents to be submitted followed by release notes.
6. **When should "Regression Testing" be performed?**

* regression testing means testing your software application when it undergoes a code change to ensure that the new code has not affected other part of the software.

1. **What is 7 key principles? Explain in detail?**

1. Testing show presence of defect 2. exhaustive testing is impossible.

3. early testing

4. defect clustering.

5. the pesticide paradox.

6. testing is context dependent.

7. Absence of errors fallacy.

1. **Testing show presence of defect-** testing can show that defects are present, but cannot prove that there is no defect.
2. **Exhaustive testing is impossible –** testing everting including all combination of input and preconditions Is not possible
3. **Early testing-** testing activities should start a early as possible in the software or system development life cycle, and should be focused on defined objectives.
4. **Defect clustering** - most defects found during testing are usually confined to small number modules
5. **The pesticide paradox-** testing identifies bugs, and programmers respond to fix them.
6. **Testing is context dependent-** Testing is done differently in different contexts.
7. **Absence of error fallacy.** If the system built is unusable and does not full fill the user need and expectations the finding and fixing defects does not help.
8. **Difference between QA v/s QC v/s Tester?**

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| **QA** | **QC** | **Tester** |
| It is a subset of software test life cycle. | Qc can be considered as the subset of quality assurance. | Testing is a subset of a Quality control. |
| Preventive activities. | It is corrective activists. | It is preventive process. |
| Process oriented activities. | Product oriented activities. | Product oriented activities. |
| Focuses on processes and procedures rather than conducting actual testing on the system. | Focuses on actual testing by executing software with intend to identify bug/ defect through implementation of procedures and process | Focuses on actual testing |

1. **Difference between verification and Validation?**

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| **Verification** | **Validation** |
| Verification face is done by a developer | Validation face done by tester |
| Static testing can be used | Dynamic testing can used |
| Verification face done by before coding | Validation face done by after coding |

1. **Difference between Smoke and Sanity?**

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| **Smoke testing** | **Sanity testing** |
| Smoke testing is performed to ascertain that the critical functionalities of the program is working fine. | Sanity testing is done to check the new functionality bug have been fixed. |
| The objective of this testing is to verify stability of the system. | The objective of the testing is to verify the rationality of the system |
| The testing is performed by the developers and testers. | Sanity testing is performed by tester |
| Smoke testing is usually documented or scripted. | Sanity testing is usually not documented and is unscripted. |
| Smoke testing is a subset of regression testing | Sanity testing is a subset of acceptance testing |
| Smoke testing is a general health check up | Sanity testing is a specialized health check up |

1. **Explain types of Performance testing?**

* performance testing is Two types

**1. Load testing -** load testing is a system under workload and not break the system.

**2. Stress testing -** stress testing is an extreme work load condition and then tries to the break the system software.

1. **What is Error, Defect, Bug and failure?**

* **Error -** A mistake in coding is called error.
* **Defect -** Error found by tester is called defect.
* **Bug -** defect accepted by development team then it is called bug.
* **Failure-** Build does not meet to requirements then it is failures.

1. **Difference between Priority and Severity?**

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| **Priority** | **Severity** |
| Severity is an absolute. | Priority is a relative. |
| Severity is customer focused | Priority is a business focused. |
| Severity is extent to which the defect can affect the software. | Priority is defining the order in which we should resolve a defect. |
| Severity type: critical, High, Medium, Low, Cosmetic | Priority is set by the tester and developer side |
|  | Priority type: Critical, High, Medium, Low. |

1. **What is Bug Life Cycle?**

* **Bug Life Cycle -** a computer bug is an error, flow, mistake, failure, or fault in a computer program that prevents it from working correctly or produces an incorrect result. Bug arise from mistakes and error.

1. **Explain the difference between Functional testing and Non-Functional testing?**

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| **Functional testing** | **Non-functional testing** |
| Functional testing is performed using the functional specification provided by the client and verify the system against the functional requirements | Testing checks the performance, scalability, and other non-functional aspects of the software system. |
| Functional testing is executed first. | Non-functional testing should be performed after functional testing. |
| Manual testing or automation tools can be used for functional testing. | Effective tools will be using this testing |
| Business requirements are the inputs the functional testing. | Performance, scalability are inputs to non-functional. |
| Easy to do manual testing | Tough to do manual testing |

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

* **Test Plan –** A Document describing the scope, approach, resources, and schedule of intended test activities.

1. **What is priority?**

* Priority defines the order in which we should resolve a defect. Should we fix if now, or can it wait? This priority status is set by the tester to the tester to the developer mentioning the time frame to fix the defect.

1. **What is severity?**

* **Severity -** it is the extent to which the defect can affect the software.

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

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| **STLC** | **SDLC** |
| STLC is mainly related to software testing. | SDLC is a mainly related to software development. |
| It focuses only on testing. | SDLC phases are completed before the STLC. |
| STLC involves only five phases or steps. | Help in developing good quality software. |
| In STLC less of member (tester) are needed. | Goal of SDLC is to complete successful development of software. |
| Goal of the STLC is to completed successful testing of software. | SDLC more number of members are required for the whole process. |
| It helps in making the software defect free. | SDLC involves total six phases or steps. |
| STLC phases are performed after SDLC phases. | Besides development other phases like testing is also. |

1. **What are the different Methodologies in Agile Development Model?**
2. Scrum
3. kanban
4. **What is the difference between test scenarios, test cases, and test script?**

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| **Test Scenarios** | **Test Cases** | **Test Script** |
| A scenario is any functionality that can be tested. it is also called test condition, or test possibility. | Test case involve the set of steps, conditions and inputs data which can be used performing the testing tasks. | A set of sequential instruction that detail how to execute a core business function. |

1. **Advantage of Bugzilla?**
2. Key features of Bugzilla include.
3. Advanced search capabilities.
4. E- mail notifications.
5. Modify/file bug by e-mail.
6. Time tracking.
7. Strong security.
8. Customization.
9. Localization.
10. **Explain the difference between Authorization and Authentication in Web testing. What are the common problems faced in Web testing?**

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| **Authentication** | **Authorization** |
| In the authentication process, users or persons are verified. | This process is same as user or persons are verified. |
| It’s done before the authorization | While the process is done after the authentication process. |
| It needs usually the user’s login details | While its need the user’s privilege or security levels |
| Authentication determines whether the person is user or not | While it determines what permission does the user have? |