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

**Q-1** What is Error, Defect, Bug and failure ?

**Ans** Error :- A mistake of developer in coding.

Defect :- Error found by tester is called defect.

Bug :- Defect accepted by development team.

Failure :- Failure is when build doesn’t meet the requirements.

**Q-2** What is the difference between test scenarios, test cases, and test script ?

|  |  |  |
| --- | --- | --- |
| Test scenarios | Test cases | Test script |
| -> A scenario is any functionality that can be tested and derived from use cases. Also called condition or possibility. | -> Test cases involve the set of steps, inputs which can be used while performing the testing task & derived from test scenarios. | -> A set of instructions that will be perform on the system under test to identify the system functions are as expected or not. |
| -> It gives idea of What to be tested. | -> It gives idea of How to be tested. | -> It is Test procedure specification. |

**Q-3** Explain what Test Plan is ? What is the information that should be covered ?

**Ans** Test plan is a document that describing the scope, approach, resources & schedule of intended test activities.

UAT test

Test strategy

Test policy

System test

Functional test

-> Affecting factors :- Test policy, testing objectives, project risk and availability of resources.

-> Activities :- Integrating and co-ordinating test activity in STLC, how result evaluate and test ware.

-> Exit criteria :- Related to requirement fulfill, project constraint like time and budget and number of defects remain.

**Q-4** Difference between QA/QC/Tester.

|  |  |  |
| --- | --- | --- |
| Quality Assurance  (QA) | Quality Assurance  (QC) | Tester |
| -> Focus on processes and procedures of test. | -> Focus on actual testing of software. | -> Focus on actual testing of software. |
| -> Process oriented activities. | -> Product oriented activities. | -> Product oriented activities. |
| -> Preventive activities. | -> Corrective process. | -> Preventive process. |
| -> Subset of STLC. | -> Subset of QA. | -> Subset of QC. |

**Q-5** What is Component testing ?

**Ans** A minimal software item that can be tested in isolation. Also called Unit or module or program testing. A unit is the smallest individual testable part.

-> This test is performed by using White-Box testing method and usually done by developers.

-> Unit test framework, drivers, stubs are used to assist in component testing.

**Q-6** What is Integration testing ?

**Ans** Individual units are combined and test as a group to verify the software modules are work in unity.

-> This test is performed to expose defects in the interfaces and the interactions between integrated components.

-> Levels of Integration testing:- (1) Component (2) System

-> There are two techniques in component level define as; Functional testing and Non-Functional testing.

-> Methods of Integration testing :- (1) BigBang (2) Incremental

-> There are Top-down approach and Bottom-up approach in incremental method.

-> If any condition that not specified for the test is usually not tested is the limitation of this testing.

**Q-7** What is Functional system testing ?

**Ans**  Testing of requirement that specifies a function that system or system component must perform. This test describes what the product does.

-> Functionality to be tested like accuracy, interoperability, compliance, auditability and suitablility.

-> Approach :-

(1) Requirement base testing

(2) Business process base testing

-> This testing involves checking UI, APIs, database, client’s functionality of the application under test.

-> Ex. Web, Desktop, Mobile, Game based testing.

**Q-8** What is Non Functional system testing ?

**Ans**  Testing the attributes of a component or system that does not related to functionality like reliability, efficiency, usability, maintainability, portability etc..

-> This testing describes how good the product work.

-> Load test, stress test, performance test and others are type of this testing.

-> Ex. Web, Desktop, Mobile, Game based testing.

**Q-9** What is Traceability matrix ?

**Ans**  Traceability matrix is use to trace the system component. Matrix contains data like number of requirements related to different components.

-> Types :-

(1) Forward (mapping of requirement to test case)

(2) Backward (mapping of test case to requirement)

(3) Bi-directional (mapping in both ways)

Test case ID

Requirement ID

**Q-10** Explain the difference between Functional and Non Functional testing.

|  |  |
| --- | --- |
| Functional Testing | Non-Functional Testing |
| -> Functional testing is performed using the functional specification provided by the client and verifies the system against the functional requirements. | -> Non-Functional testing checks the Performance, reliability, scalability and other non-functional aspects of the software system. |
| -> Functional testing is executed first | -> Performed after functional testing |
| -> Easy to do manual testing | -> Tough to do manual testing |
| -> Business requirements are the inputs to functional testing | -> parameters like speed , scalability are inputs to non-functional testing. |
| -> Types :- unit, smoke, sanity, integration, black-box, white-box, UAT, regression testing | -> Types :- performance, load, volume, stress, security, installation, migration, penetration, compatibility testing |

**Q-11** Mention what big bang testing is ?

**Ans** In Big Bang integration testing all components or modules is integrated simultaneously, after which everything is tested as a whole.

-> Here all component are integrated together at once and then tested.

-> Advantage :- Everything is finished before integration testing starts.

-> Disadvantage :- Time consuming, Difficult to trace the cause, Can miss out testing of high risk critical module.

**Q-12** What is black box testing ? What are the different black box testing techniques ?

**Ans** Testing without reference to the internal structure of the component or system is called black box testing. Also called specification based testing.

-> No source code available, only interact with system UI and mainly focus on what a system does.

-> Techniques :-

(1) Equivalence partitioning (EP)

(2) Boundary value analysis (BVA)

(3) Decision table technique

(4) State transition technique

(5) Use case technique

**Q-13** What is Boundary value testing ?

**Ans** This is a method for design test case that focus testing on cases near the limits of valid ranges.

-> It generate test cases that highlight error better than Equivalence partitioning technique.

Ex. Value from 1 to 100

Invalid

Invalid

0

2

99

101

100

1

Valid

**Q-14** What is Equivalence partitioning testing ?

**Ans** It is the process of defining the optimum number of test and use for all level of testing.

-> Group of input as equivalent and select one from them as representative input to test them all.

**-2**

**0**

**-1**

**103**

**102**

**101**

Ex. Value from 1 to 100

(Out of range)

(Out of range)

Invalid partition

Invalid partition

Valid partition

(In range)

**Q-15** What is 7 key principles ? Explain in detail.

**Ans** These are the general testing principles.

(1) Testing shows presence of defects :- Testing reduces the probability of undiscovered defects remaining in the software but, even if no defects are found, it is not a proof of correctness.

(2) Exhaustive testing is impossible :- Testing everything including all combinations of inputs and preconditions is not possible. Priorities our testing effort using a Risk Based Approach.

For example In an application in one screen there are 15 input fields, each having 5 possible values, then to test all the valid combinations you would need 30 517 578 125 (515) tests.

(3) Early testing :- Testing activities should start as early as possible in the development life cycle. These activities should be focused on checking of client’s requirement.

(4) Defect clustering :- A small number of modules contain most of the defects discovered during pre-release testing or are responsible for the most operational failures. Defects are not evenly spread in a system.

(5) The pesticide paradox :- The test cases need to be regularly reviewed and revised and new and different tests need to be written to exercise different parts of the software or system to potentially find more defects.

As bugs are eliminated by the programmers, the software improves and the effectiveness of previous tests erodes.

(6) Testing is context dependent :- Different kinds of sites are tested differently. For example Safety – critical software is tested differently from an e-commerce site.

(7) Absence of errors fallacy :- If the system built is unusable and does not fulfill the user’s needs and expectations then finding and fixing defects is impractical.

**Q-16** What is the purpose of exit criteria ?

**Ans** Purpose of exit criteria is to define when we STOP testing either at the: End of all testing – i.e. product Go Live End of phase of testing (e.g. hand over from System Test to UAT)

Exit Criteria typically measures :-

-> Thoroughness measures, such as coverage of requirements or of code or risk coverage.

-> Estimates of defect density or reliability measures. (e.g. how many defects open by category)

-> Residual Risks, such as defects not fixed or lack of test coverage in certain areas.

-> Schedules - such as those based on time to market.

-> Cost

**Q-17** What is white box testing and list the types of white box testing ?

**Ans** This is the testing based on an analysis of the internal structure of the component or system. Also called structure based testing (detailed investigation of internal logic).

-> Tester require knowledge of how the software is implemented and how it works. This test is performed at component and component integration test phase.

-> Test coverage measures the amount of testing performed by a set of test, where the test exercised on coverage items.

-> Types :-

(1) Statement/segment/line coverage

(2) Decision/branch coverage

(3) Condition coverage

(4) Others (branch condition, dataflow, linear code sequence and jump testing, modification condition decision testing)

**Q-18** What is Adhoc testing?

**Ans** This is the informal testing type with an aim to break the system or application. Doesn’t follow any test design to create test cases. Also called error guessing technique.

-> Require high knowledge of tester for this testing.

-> Testing is done without specification documents.

-> Finding defects by random checking.

-> Types of Adhoc testing :-

(1) Buddy testing

(2) Pair testing

(3) Monkey/Gorilla testing

**Q-19** What is Exploratory Testing ?

**Ans** This testing is done as exploring the product or system through every specification and functionalities. It is more structured and rigorous than Adhoc testing.

-> In this technique test design, execution and logging happen simultaneously.

-> This testing is highly teachable and manageable approach.

-> Testing based on thinking activity, which comes from charter.

Debriefing

Exploratory sessions

Charter

Risk analysis

**Q-20** What determines the level of risk ?

**Ans** Risk is a factor that could result in future negative consequences; usually expressed as impact and likelihood. Risk should be evaluated at the Business Level, Technological Level, Project Level and Testing Level. Risks are also used to decide where to start testing and where more testing is needed. -> Types :- (1) Project risk (2) Product risk

-> Risk considerations can include :-

- financial implication of software being released that isn’t tested (support costs / possible legal action)

- software being delivered late to market

- potential loss of Life (safety critical systems)

- potential loss of face (may have financial implications as well)

**Q-21** Difference between Smoke and Sanity ?

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| --- | --- |
| Smoke Testing | Sanity Testing |
| -> Perform to verify that the critical functionalities of the system is working fine or not. | -> Perform to check that the bugs have been fixed and no further issues due to any changes. |
| -> Subset of regression testing. | -> Subset of acceptance testing. |
| -> Usually documented and scripted. | -> Not documented and unscripted. |
| -> The objective of the testing is to verify the stability of the system. | -> The objective of the testing is to verify the rationality of the system. |
| -> Smoke testing is performed on initial unstable builds. | -> Sanity testing is performed on stable builds. |
| -> This testing is performed by the developers or testers. | -> This testing is performed by the testers. |

**Q-22** Difference between Verification and Validation ?

|  |  |
| --- | --- |
| Verification | Validation |
| -> It includes checking documents, design, codes and programs. | -> It includes testing and validating the actual product. |
| -> Verification is the static testing. It comes before validation. | -> Validation is the dynamic testing. It comes after verification. |
| -> Methods used in verification are reviews, walkthroughs, inspections and desk-checking. | -> Methods used in validation are Black Box Testing, White Box Testing and non-functional testing. |
| -> It can find the bugs in the early stage of the development. | -> It can only find bugs that could not be found by the verification process. |
| -> Verification is for prevention of errors. | -> Validation is for detection of errors. |
| -> Verification is about process, standard and guideline. | -> Validation is about the product. |

**Q-23** Difference between SDLC and STLC ?

|  |  |
| --- | --- |
| SDLC | STLC |
| -> It stands for Software Development Life Cycle. SDLC is mainly related to software development. | -> It stands for Software Testing Life Cycle. STLC is mainly related to software testing. |
| -> In SDLC, more number of members (developers) are required for the whole process. | -> In STLC, less number of members (testers) are needed. |
| -> In SDLC, development team makes the plans and designs based on the requirements. | -> In STLC, testing team makes the plans and designs. |
| -> It helps in developing good quality software. | -> It helps in making the software defects free. |
| -> Creation of reusable software systems is the end result of SDLC. | -> A tested software system is the end result of STLC. |
| -> Phases :- (1) Requirement gathering, (2) Analysis phase, (3) Design phase, (4) Implementation phase, (5) Testing phase, (6) Maintenance phase | -> Phases :- (1) Test planning, (2) Test case development, (3) Test environment setup, (4) Test execution, (5) Test cycle closure |

**Q-24** What is GUI Testing ?

**Ans** GUI stands for Graphical User Interface. GUI testing involves checking the screens with the controls like menus, buttons, icons & all type of bars like tool bar, menu bar, dialog box & windows etc..

-> Approach of GUI testing :-

(1) Manual based testing

(2) Record and replay (by automation tools)

(3) Model bases testing (by graphical description)

**Q-25** What is Load Testing ?

**Ans** Load testing is to check the system behavior under load; To determine at which point the system’s response time degrades or fail.

-> This testing minimize risk and cost, improves scalability and increase customer satisfaction.

-> Load testing identify :-

(1) Max operating capacity of application

(2) Current infrastructure is sufficient to run app

(3) Bottleneck in system, Hardware limitations issues

(4) Software design, server configuration issues

(5) Sustainability of app (ex. Peak user load)

**Q-26** What is Stress Testing ?

**Ans** Stress testing is use to test the stability and reliability of the system. It test beyond the normal operating point and evaluates how the system works under extreme conditions.

-> By stress testing We can determine the limit; where the system or software or hardware breaks. Also called Endurance testing.

-> Types of stress testing :-

(1) Application (2) Transactional

(3) Systematic (4)Exploratory

**Q-27** Explain types of Performance testing.

**Ans** Performance testing is conduct on basis of software’s parameter like Stability, Speed & Scalability (max user load).

-> Types :-

(1) Load testing

(2) Stress testing

(3) Spike testing

(4) Volume testing

(5) Scalability testing

**Q-28** When should "Regression Testing" be performed ?

**Ans** Regression testing is performed after Smoke & Sanity test; When changes done in software and bug fix releases as a part of maintenance phase.

**Q-29** What is Alpha Testing ?

**Ans** This testing perform by developers at software development site; also performed by independent test team.

-> It’s a form of UAT test and isn’t open to market & public.

-> Perform in virtual environment within the organization.

-> This testing uses black box & white box test techniques for software or project.

**Q-30** What is Beta Testing ?

**Ans** This testing perform by the customer at their own site using their own data; It isn’t performed by independent test team.

-> It’s a form of UAT test and is open to market & public.

-> Perform in real time environment outside the organization.

-> This testing uses black box test techniques for software or product.

-> Also called Field testing or Pre-release testing.

-> Perform at the time when software product are marketed & uses pilot test approach to collect data from users.

**Q-31** Mention what are the categories of defects ?

**Ans** Categories of defects :-

(1) Data quality / Database defect

(2) Critical functionality defect

(3) Functionality defect

(4) User interface defect

(5) Security defect

**Q-32** Bugs categories are..

**Ans** Categories of bugs :-

(1) Database bug

(2) GUI bug

(3) Functionality bug

(4) Security bug

**Q-33** What is Bug Life Cycle?

**Ans** Bug or defect life cycle is the duration or time span between the first time defect is found & the time of closed or rejected or deferred.

-> Stages of bug life cycle

NEW

DUPLICATE

REJECTED

NOT A BUG

DEFERRED

ASSIGNED

OPEN

FIXED

REOPEN

RETEST

CLOSED

VERIFIED

PENDING RETEST

**Q-34** Difference between priority and severity.

|  |  |
| --- | --- |
| Priority | Severity |
| -> Priority defines the order in which we should resolve a defect. The priority status is set based on the customer requirements. | -> It is the extent to which the defect can affect the software. In other words it defines the impact that a given defect has on the system. |
| -> Priority is relative & business focused. | -> Severity is absolute & customer focused. |
| -> Types :- Critical, High, Medium, Low | -> Types :- Critical, Major, Moderate, Minor, Cosmetic |

**Q-35** When to used Usability Testing?

**Ans** Usability Testing identifies usability errors in the system early in development cycle and can save a product from failure.

-> We use usability test when we have to check parameters like Effectiveness of the system, Efficiency, Accuracy & User Friendliness.

**Q-36** What is the procedure for GUI Testing ?

**Ans** GUI testing involves checking the screens with the controls like menus, buttons, icons, and all types of bars – tool bar, menu bar, dialog boxes and windows etc..

-> Approach :-

(1) Manual based testing

(2) Record and replay

(3) Model based testing

**Q-37** Write a Scenario of Pen

-> Positive :-

- Check the pen is working properly

- Check that pen have ball point

- Check that pen contains ink

- Verify the different outer material of pen

- Verify the working in any weather

- Check the transportability of pen

-> Negative :-

- Check that pen have any colored ink

- Check the strength of ball point

- Check that pen works on every surface

- Verify that pen is reusable

- Check that pen is waterproof

**Q-38** Write a Scenario of Pen Stand

-> Positive :-

- Check that pen stand have proper structure

- Check the different material of pen stand

- Verify that it’s containable for different types of pen

- Check the usability of pen stand in any weather

- Check the transportability of pen stand

-> Negative :-

- Check that it can stand on any type of surface

- Verify that pen stand have different compartment

- Check that it can contain other things (small size diary)

**Q-39** Write a Scenario of Door

-> Positive :-

- Check the door have proper structure

- Check the different material of door

- Verify the availability of door in any colors

- Verify that door can be reusable

- Check the door is available in any size

- Verify the sustainability in any weather

-> Negative :-

- Check the transportability of door

- Verify that door is fireproof, bulletproof

- Verify the automatic actions of close & open

- Check the usability of door at any surface

**Q-40** Write a Scenario of ATM

-> Positive :-

- Check the ATM machine is working properly

- Verify the withdraw money action of ATM

- Verify that it can work in any weather condition

- Check the functionality of change pin, mini statement

- Check the usability of ATM with different users

-> Negative :-

- Check that it’s operating without power supply

- Verify the multi user functionality at a time

- Verify the ATM have fingerprint functionality

- Check the authority of selection of note at withdrawal time

- Check the functionality of desired money withdrawal option

- Check the credit money functionality & limitations

- Verify the voice command functionality of ATM

**Q-41** Write a Scenario of Wrist Watch

-> Positive :-

- Check the watch shows proper timing

- Verify that it is wearable on wrist

- Check that we can change time on watch

- Verify the different outer material of watch

- Verify the working functionality in any weather condition

- Check the transportability of watch

-> Negative :-

- Check that watch is waterproof

- Verify the date functionality of watch

- Check the working functionality without cell

- Verify that it shows user temperature

- Check the connectivity with other devices

- Check the measure functionality like heartbeat, bp etc..

- Verify the strength of core material of watch

**Q-42** Write a Scenario of Lift

-> Positive :-

- Check that lift have proper structure

- Check that lift is working properly

- Verify that we can reach to place at any height

- Check that it can save time of humans

- Check its crucial functionality in critical time at hospital

- Check the multiuser functionality of lift

- Verify that it works in any weather condition

-> Negative :-

- Check that it works without power supply

- Check the travel functionality in horizontal direction

- Verify the transportability of lift

- Verify that it works with different speeds

- Check that lift have no limits for weight

- Check the operability with voice command

**Q-43** Write a Scenario of Microwave Oven

-> Positive :-

- Check that it is constructed properly

- Check the working functionality in any weather

- Verify the availability of oven in any size

- Check that it have timer functionality

- Verify the working functionality with different temperature

- Check the strength of outer material of oven

- Check the multiuser functionality of oven

-> Negative :-

- Check the working functionality without power supply

- Check the modes for cooking the different items

- verify that it can stand on any surface

- Check the transportability of oven

- Check that it is fireproof, waterproof

- Check the limit of operating temperature

**Q-44** Write a Scenario of Coffee vending machine

-> Positive :-

- Check that it is working properly

- Check the working condition in any weather

- Verify the multiuser functionality

- Check the availability of multi beverages option

- Check the timer functionality available

-> Negative :-

- Check the working condition without power supply

- Check the easy transportability of machine

- Verify that it have digital payment functionality

**Q-45** Write a Scenario of Chair

-> Positive :-

- Check that chair have proper structure

- Check the easy transportability of chair

- Verify the different material of chair

- Check the availability of chair in any size

- Check the sustainability in any weather condition

- Check the multiuser functionality of chair

-> Negative :-

- Check that chair have wheels or rolling functionality

- Check the seat adjustment functionality of chair

- Check the operability of chair by remote

- Verify that it can stand on any surface

- Check its sustainability against any weight

**Q-46** Write a Scenario of only Whatsapp chat messages

-> Positive :-

- Check that it shows proper chat page

- Check that user access the text box

- Check that user can type in any languages

- Verify that it support alphabets, numbers, special character

- Check that it supports functionality of emoji

- Verify that we can perform actions like cut, copy, paste, erase

- Verify that it supports reply functionality

- Check that chat history is properly visible

-> Negative :-

- Check send & receive message functionality without internet

- Verify the maximum character limit of chat messages

- Check its multi language functionality at a time

- Check entirely chat delete or remove functionality from both side

**Q-47** Write a Scenario of Whatsapp generate group

-> Positive :-

- Check that it shows new group option

- Verify the availability of contact list

- Check that it shows search contact option

- Check its multi selection functionality of member

- Check functionality like set group name, group icon

- Verify the disappearing message functionality

-> Negative :-

- Check new group generate functionality without internet

- Verify the maximum member add limit in new group

- Verify functionality of adding unsaved member in new group

**Q-48** Write a Scenario of Whatsapp payment

-> Positive :-

- Check that it shows payment option

- Verify that it shows add bank account functionality

- Check the availability of bank list

- Check the search bank functionality in payment option

- Verify that we can send money to any valid UPI id

- Check that payment is securely done through UPI pin

-> Negative :-

- Check payment functionality without internet

- Verify the maximum transferrable limit of payment

- Check the multi payment functionality at a time

- Verify the availability of payment option in different currencies

**Q-49** Write a Scenario of facebook Chat on Mobile

-> Positive :-

- Check that it shows proper chat page

- Check that user access the text box

- Check that user can type in any languages

- Verify that it support alphabets, numbers, special character

- Check that it supports functionality of emoji

- Verify that we can perform actions like cut, copy, paste, erase

- Verify that it supports reply message functionality

- Check that chat history is properly visible

- Verify that it supports forward message functionality

- Check entirely chat delete or remove functionality from both side

-> Negative :-

- Check send & receive message functionality without internet

- Verify the maximum character limit of chat messages

- Check its multi language functionality at a time

**Q-50** Write a Scenario of gmail (receiving mail)

-> Positive :-

- Check that it shows proper mail home page

- Check that mail list shows with oldest and newest manner

- Check the scrolling functionality of mail list

- Check that it shows different category of mail(primary, social)

- Verify that it shows sender details

- Check the compatibility of receive mail functionality

-> Negative :-

- Check the receiving mail functionality without internet

- Check the movement functionality of mail on same page

- Check that it shows option of search data from sender

**Q-51** Scenario of Online shopping to buy product (flipkart)

-> Positive :-

- Check that product is available on flipkart

- Check that it shows proper page of product

- Check that it shows price of product properly

- Check the available offers option

- Check the terms & condition option of offers

- Check that it shows product specifications properly

- Check the product image option is working properly

- Check buy now option of product is working properly

- Check that it shows pincode for delivery option of product

-> Negative :-

- Check the buy products functionality without internet

- Check that product price is available in different currencies

- Check that all offers can apply at a same time

- Check that it can verify multi pincode at a same time

- Check the availability of delivery out of country option

**Q-52** Write a Scenario of instagram (video call with chat)

-> Positive :-

- Check that it shows proper chat page during video call

- Check that user access the text box during video call

- Verify that it support alphabets, numbers, special character

- Check that it supports functionality of emoji

- Verify that we can perform actions like cut, copy, paste, erase

- Verify that it supports reply & forward message functionality

- Check that chat history is properly visible during video call

- Check that it shows invite other people option on video call

- Check the camera enable/disable option on video call

- Check the mic enable/disable option on video call

-> Negative :-

- Check the video call with chat functionality without internet

- Verify the maximum character limit of chat messages

- Check its multi language functionality at a time

- Check that multi people join functionality of video call

**Q-53** Advantages of Bugzilla

- Open source, free bug tracking tool.

- Automatic [Duplicate Bug Detection](https://cloudinfrastructureservices.co.uk/how-to-setup-bugzilla-issue-tracker-on-azure-aws-gcp/).

- Search option with advanced features.

- File/Modify Bugs By Email.

- Move Bugs Between Installs.

- Multiple [Authentication](https://cloudinfrastructureservices.co.uk/adfs-vs-azure-ad-how-authentication-has-evolved/) Methods ([LDAP](https://cloudinfrastructureservices.co.uk/radius-vs-ldap-vs-kerberos/), [Apache server](https://cloudinfrastructureservices.co.uk/how-to-setup-apache-web-server-mysql-server-on-linux-in-azure-aws-gcp/)).

- Time Tracking.

- Automated bug reporting; has an API to interact with system.

- Detailed permissions system.

- Optimized database structure to enhance performance.

- Robust security.

- Powerful query tool.

- Ideal for small projects.

**Q-54** Write agile manifesto principles

-> Individuals and interactions, Over processes and tools

-> Working software, Over comprehensive documentation

-> Customer collaboration, Over contract negotiation

-> Responding to change, over following a plan

**Q-55** What are the different Methodologies in Agile Development Model ?

-> Scrum

-> Kanban

**Q-56** Explain the difference between Authorization and Authentication in Web testing. What are the common  
problems faced in Web testing?

|  |  |
| --- | --- |
| Authentication | Authorization |
| -> Authentication verifies who the user is. | -> Authorization determines what resources a user can access. |
| -> Authentication works through [passwords](https://www.sailpoint.com/products/password-management/), one-time pins, biometric information, and other information provided or entered by the user. | -> Authorization works through settings that are implemented and maintained by the organization |
| -> Authentication is the first step of a good identity and access management process. | -> Authorization always takes place after authentication. |
| -> Authentication is visible to and partially changeable by the user. | -> Authorization isn’t visible to or changeable by the user. |
| -> Example: By verifying their identity, employees can gain access to a human resources (HR) application that includes their personal pay information, vacation time, | -> Example: Once their level of access is authorized, employees and HR managers can access different levels of data based on the permissions set by the organization |

-> Problems faced in Web testing :-

- Insufficient testing for browser compatibility

- Fail to conduct functional testing across mobile

- Releasing new features breaks the existing system

- Bugs like crash, functional error, typos, control flow error