SRUTHI SHEELA\_MANUAL TEST CONCEPTS

**1.Why testing is required?**

Testing is needed because it reflects the working of software application or product. It is important to ensure application should not lead to failure in later stages.

2.**What Types of applications we test?**

Three types of applications we test, Web based Window based and mobile applications.

**3.What is SDLC and what are different phases in SDLC?**

There are different approaches designed and defined to be used during implementation process of software and those approaches are called “SDLC” (Software Development Life cycle) models.

SDLC models describes different phases of the software cycle and each and every phase produce deliverable needed for next phase in Life cycle. Requirements are translated in to design mode and code is generated according to design and this phase is called development phase. After development and coding phases, testing check the deliverable of product according to requirements. Testing follows SDLC model which is similar to development cycle followed by the development team. There are following six phases in every Software development life cycle model:

1. Requirement gathering and analysis
2. Design
3. Implementation or coding
4. Testing
5. Deployment
6. Maintenance

1.Requirement gathering and analysis: In this phase, mainly focused on project managers and stake holders. Project managers and stake holders manage general business questions and requirements in this phase. Requirements are analyzed for their validity. Finally, a requirement Specification document is ready which helps to next phase of model.

2.Design: In this phase, software design is prepared based on first phase requirements. System design helps in mentioning hardware, system requirements and also for designing system architecture. The system design in this phase act as input for next phase. In this design phase tester comes with testing strategy, which shows what to test and how to test.

3. Implementation or coding: After system design phase, the input work is divided into models or units and coding is started. Developer mainly focus on code in this phase.

4.Testing: After code is implemented, testing is done according to requirements and make sure whether product is addressed according to requirements or not. In this phase different types of Functional Testing like unit testing, integration testing, system testing, acceptance testing and also non-functional testing take places.

5. Deployment: After testing is done the product is delivered to customer for their use. Once product is handled to customer, they will start beta testing if any bugs are there then they are caught and they will report to engineering team. After product is received by engineering team they will fix the bug and final deployment will take place.

6.Maintenance: After product is delivered to customer, they start to come up with different problems and needs to solved from time to time. Maintenance is where we take care of developed product.

**4. What is waterfall methodology?**

The waterfall model is the first process model to be introduced. It is referred as linear-sequential life cycle model. This method is user friendly method and this method is also known as Linear-Sequential life cycle model. Overlapping in this phase is not existed. If previous phase is not completed, then next phase will not start execution. The whole waterfall model is divided in to separate phases and output of one phase will become input for next phase.

WATERFALL MODEL:

Requirement Gathering and analysis:

All requirements of the system are specified in a specific document in this phase.

System Design: The system design is prepared according to requirement specifications which are received from first phase.

Implementation: The system is first developed in small programs called units, which are integrated in coming phase. Each unit is tested and developed for its functionality and this is called Unit Testing.

Implementation and integration: After testing of each unit the system is integrated and implemented in each phase.

Deployment of system: After functional and non-functional testing is completed, product is deployed in customer environment.

Maintenance: After product is deployed to customer or market some bugs are caught and developed should need to work on it. Using maintenance changes are delivered to customer environment:

**Q: What is agile method?**

The at agile method refers to any approach to project management that strives to unite teams around the principles of collaboration, flexibility, simplicity and responsiveness to feedback throughout the entire process of developing a new program or product.

**Q: What is scrum method?**

In scrum method everything regarding the project is not mentioned but much of them left to scrum software development team. The development team will know best how to solve the problem they are presented.

**Q: what is the process in agile model?**

Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product. Agile Methods break the product into small incremental builds. These builds are provided in iterations

**Q: What is daily standup meeting and what we discuss?**

A daily stand up meeting is one type of short time meeting which is held each day. The meeting is held between 5-15 minutes long and sometimes it also referred as stand up meeting.

**Q: what is product back log items?**

In scrum, PBI is one unit of work which can be completed by a team in one sprint iteration. Backlog items are decomposed into one or more tasks.

**Q: what is user story/feature/sprint back log items and tasks in user story?**

User story is normally visible to only end users. Developing will includes Programmer, tester, user interface designer or analyst perhaps database designer or other.

**Q: what is sprint planning meeting?**

In Sprint planning, Scrum Master is involved who arrange the meeting, a product owner, know about backlog items and their respective criteria, and the entire agile team to meet Sprint Commitment.

**Q: what is sprint review meeting?**

In Scrum, each sprint need to deliver product with increment. And at end of each sprint team has to produce coded tested and usable piece of software. Sprint meetings are held at end of each sprint.

**Q: what is sprint retrospective?**

This meeting is arranged by scrum master and team discuss about concluded sprint and focus more on how to enhance product more.

**Q: what is sprint grooming?**

Product backlog refinement is also called as sprint grooming. Sprint grooming will ensure that backlog is ready for next sprint meeting.

**Q: what is burndown chart and velocity?**

Burndown chart will ensure project is on track or not. It’s like pictorial representation of project work. Velocity is the rate of progress of scrum team.

**Q: what is user acceptance criteria test cases?**

The software which is working needs to be assembled and they are combined together of system requirements and user stories. UAT test cases are created and each case cover particular scenario of software.

**Q: What is V model?**

Exception of processes are done in V shape so it is called as V model. It also known as Validation model or Verification model. This is extension of waterfall model and it is totally based on testing phase for each corresponding development stage.

**Q: What is STLC?**

STLC stands for Software Test Life Cycle. It resembles the sequential order for activities to be carried out in software testing and also it helps in certification of software product.

**Q: What is defect?**

While designing or developing the software there are some mistakes or errors which means flaws and those are called defects. Defect can be existed when result deviates from its actual result.

**Q: How to arise a defect and what we specify while logging defect?**

Defect logging means arising defects when application is under test or product is being testing or receiving feedback from customers. Defect logging can be eradicated by fixing the defects by making new versions of the product.

**Q: Defect lifecycle?**

Defect life cycle is a cycle where a defect goes through a life cycle. This Defect life cycle starts when defect and life cycle ends when defect is closed. While closing defect it will make sure that it is not produced again.

**Q: What is unit testing?**

Smallest parts which can be testable are called units in software development process. Each unit can be tested for scrutinized for proper operation and this process is done mostly by manually.

**Q: when do we use regression testing?**

Regression testing deals with software programs and make changes to programs and also it makes sure that old programming can work with new changes. Most of regression testing can be done by code specialists in large companies.

**Q: What is integration testing? when do we use integration testing?**

In software testing each individual software module combined and tested as a group which take place before unit testing and after validation testing.

**Q: when do we use smoke testing and sanity testing?**

Smoke testing:

Smoke testing is occurred when critical functionalities of the program is working or not.

Smoke testing is done before they start the detail testing.

Sanity Testing:

Sanity Testing is occurred when bugs detected.

**Q: What is UAT?**

UAT (User Acceptance Testing) is last stage of software testing process. During this UAT process, software users test the software to check whether it can handle required tasks in real world scenarios.

**Q: What is alpha beta testing?**

Alpha beta testing is one of acceptance testing and it is performed before deploying the product to customers. Alpha beta testing is performed by internal employees of the organization.

**Q: what we will do if come across any critical severity issue before release day?**

Delay the delivery until the bug is fixed. Talk to the customer about the bug and let them decide how they want to proceed.

**Q: When do we use white box testing and block box testing?**

Black Box Testing applicable to higher levels of testing like Acceptance Testing System Testing and white box testing is applicable to low level testing like unit testing and integration testing.

**Q: when do we use automation Testing?**

To test piece of application’s UI we prefer functional or GUI testing. After we determine what type of tests to automate and what actions will perform by automation tests.

**Q: Difference between load and performance testing?**

Actually both are same. Load testing check the user response time for one application whereas performance testing used to check the user’s response time for multiple scenarios of same application.

**Q: Different types of non-functional testing types?**

1)Load/Performance testing.

2)Compatibility testing.

3)Localization testing.

4)Security testing.

5)Reliability testing.

6)Stress testing.

7)Usability testing.

8)Compliance testing

**Q: What is test case?**

Test Case is a document describes by step by step process of how to test the application.

**Q: What is test planning/test strategy document?**

Test planning/Test Strategy is to prove the system or product meet the required specification and other requirements. And also it describes the scope, approach, resources and schedule for testing the activities.

**Q: What is entry and exit criteria in testing?**

Entry criteria determines when a test activity should start and exit criteria determine when to exit the test should end.

**Q: What is TDD and BDD (cucumber framework)?**

TDD (Test Driven Development):

The concept is we write these tests to check if the code we wrote works fine or not.

BDD (Behaviour Driven Development):

BDD combines general techniques and principles of TDD from domain driven design.

**Q: What is priority and severity in defect?**

Severity is defined as extension for defect which can affect software. Severity totally related to standard or devotion to standard. Priority status is based on customer requirement.

**Q: How to estimate test cases?**

Test cases are estimated based on Excepted result and actual result. Actual result should match expected result.

**Q: What is most challenge defect u came across?**

The biggest challenge defect is finding bugs which are stable already and make no sense but effect software application.

**Q: What are test design techniques?**

Designing is process of planning and implementing ideas and technique is way of performing a task. There are two types of design techniques:

1.Static technique

2.Dynamic Technique.

**Q: If we don’t have time to test call test cases what we will do?**

Ad-hoc testing is the best option if we don’t have time to call test call cases.

**Q: What is functionality of system?**

Functional requirements may be calculations, technical details, data manipulation and processing other specific functionality that define what a system is supposed to accomplish.

**Q: What are the tools to manage defects/stories?**

Agile ALM Tools also provide an option to create a Defect on the Product Backlog.

**Q: Who will assign the work?**

Test lead will assign the work

**Q: What is requirement traceability matrix?**

RTM (Requirement Traceability Matrix) is one type of document which mention requirements throughout the validation process. Requirements are tested in test protocols.

**Q: what are typical environments we have in projects?**

* Development
* QA == Functional testing of the system
* System Integration Testing == Tests the system from end to end
* User Acceptance Testing = Allows the user to validate the functionality over time
* Production == Production
* Production Parallel == A parallel of production to replicate production issues
* CCE = Client Certification Environment

**Q: what are different defect metrics and measurements we prepare in testing?**

Process Metrics: This metrics will help to improve efficiency of the SDLC.

Product Metrics: This product Metrics deals with quality of the software product.

Project Metrics: Used to measure efficiency of product.

**Q: What is development environment?**

This develop Environment is combination set of processes and programming tools used to create program or software product.

**Q: What is QA environment?**

QA Environment where upgrading testing procedures, hardware and also software which simulate product environment. In this environment we allow users to test waveset application.

**Q: What is staging Environment?**

Staging Environment is the reflection and independent copy of product Environment. It also includes production Environment and database.

**Q: What is Product Environment?**

Product Environment includes personnel, processes, data, hardware and software need to perform day to day operations. In this environment real time staging of programs take place