MANUAL TESTING

What is Software?

- The software is a kind of programs that enable a user to perform some specific task or used to operate a computer.
- Software is collection of specialised program which takes input from customer & generate desired output.

Types of Software:

1) System Software: System Software (a type of computer program) provides a platform to run computer's hardware and computer application to utilise system resources and solve their computation problem.

Example: The best-known example of system software is the operating system (OS).

It responsible for manages all the other programs on a computer.

2) Application Software: Applications software is capable of dealing with user inputs and helps the user to complete the task. It is also called end-user programs or only an app. It resides above system software. First user deal with system software after that he/she deals with application software.

Examples: of Application Software are Word processing software, Spread sheets Software, Presentation, Graphics, CAD/CAM, Sending email etc.

3) Programming Software: Compiler, Text Editor (Note Pad, MS Office: Word, PPT, and Excel)

4) Custom Software: (Based on Client/Customer Requirements)

Ex: Hospital Management System, Banking Application, SAP Software

What is Software Testing?

- Software Testing is the process of identifying the correctness and quality of software programs. The purpose is to check whether the software satisfies the specific requirements, needs, and expectations of the customer
- In other words, testing is executing a system or application in order to find software bugs, defects or errors. The job of testing is to find out the reasons for application failures so that they can be corrected according to requirements.

Why you select testing field?

1) Its challenging – Testing is not easy — there are constantly puzzles and problems to solve. The job will likely bring something new every day.

If you prefer a boring job where you don't have to think too much then don't pursue a software testing career.

But if you want a job that keeps you on your toes, anyone will tell you that testing is a really great choice.

2) Its important – Testers don't always get enough recognition for the work they do, but we'd be lost without them.

- As a tester, you're advocating the end user and making sure that they're being delivered a quality product.
- Without someone to find bugs before software is delivered,
- many businesses would be suffering from poor reputations and unloyal customer bases.

3) Its creative – You have to get a little innovative when testing.

The process isn't going to be spelled out for you — in fact, it takes a little detective work.

By acting as the end-user, you're the one who has to get creative when thinking of places there may be inconsistencies.

4) There are many paths – Every company that uses software needs software testers,

- Which is to say, pretty much everyone needs software testers.
- Testers are valuable in basically any industry, from healthcare to retail to video games.
- Additionally, you can choose whether you want to go into manual testing, automated testing, performance testing, etc.

5) Since the high demand for software testers, software testing will be a high-paying job.

And you will have more chances to grow your career.

Why do we need Software Testing?

1) Helps in saving money

2) Security

3) Quality of the product

4) Satisfaction of the customer

5) Enhancing the development process

6) Determining the performance of the software

Resources Involve in S/W Development

1) Customer/End User/Client

-Customer has no. of requirements

2) BA (Business Analyst)

-Gathering Information/Requirements from Customer and made Requirement Document

3) Developer

-It is person who develops Application as per customer requirements.

-Developer only check positive scenario as per customer requirements

Example: Mobile Number Field: Only check field by entering 10 digit number

4) Tester

-Checking application completeness and correctness as per customer requirement.

-In which we do Positive as well as Negative Testing

-Positive Testing:- Use Valid data for testing

Ex. Mobile Number Field: we test field by using only 10 digit number

-Negative Testing:- Use Invalid data for testing

Ex. Mobile Number Field: We test field by entering digit less or more than 10, by entering any alphabets from A-Z, or any Symbol

5) After success full testing process Final Product will be delivering to customer

SQA (Software Quality Assurance)

- It is communication between Customer and Business Analyst SQA is done to Monitor & measure software development Factors

Factors:

1) To meet the customer Requirement

A) Which types of the application customer want?

-Banking Domain

-Telecom Domain

-Healthcare Domain

-E-Commerce Domain

2) To Meet the Customer Expectations

A) Privacy: privacy include security of any software

Ex. Banking Domain: Data gather from customer which very sensitive so data kept confidential

B) Performance: S/w should balance/sustain heavy load conditions

Ex. Amazon Application: Mobile Sell

3) Costing of the Project:

-Project costing for IT Companies is per Hour cost.

-Customer has to pay it.

-This payment depends upon resources utilization as well as time to complete the project

4) Timing Delivery:

-At the time of Information Gathering from customer Application deliver date decided.

-If company exceed the delivery date/ time then company have to pay penalty to customer called "Escalation".

5) Maintenance:

-maintenance is service provided after delivery of product/Application.

-If any problem occurs after delivery then company have to fix that issue.

SDLC: Software Development Life Cycle

Start End to end software development Process/Stages

-Means from Information Gathering to Product deliver to customer

Stages of Software development life cycle (SDLC)

1)Information Gathering/Requirement Gathering

-Customer and Business Analyst (BA) involve in this

-Customer has no. of requirements

-BA gather those all requirements

-Create on document called BRS (Business Requirement Specification)

Example: Facebook: - 1) Signup 2) Log In 3) Home Page 4) Account Information

2) Analysis

-In this stage BRS document convert into SRS (Software Requirement Specification)

-also called detailed documents

-This is work of Business Analyst.

-For example: Signup Page main Module:-

-Sub Module: First Name, Last Name, EmailID/Mobile Number, Date of Birth, Gender, Signup button

-It is also known as functional requirements specification.

SRS (Software Requirement Specification) include following some parts:

1)Functional Flow Diagram:

2) Functional Requirement

3) Use Cases

4) Snap shot

1) Functional Flow Diagram:

-Functional flow diagram it is flow of your application.

-Relationship between the modules.

-This gives proper sequence of the task

-It is a Stepwise representation of software

Example: Facebook Application:

Functional Flow diagram: 1) Sign Up Page 2) Log IN Page 3) Home Page 4) Request Page...

2) Functional Requirements:

-Functional requirements means attributes which are required to complete specific functions.

For Example: Facebook Sign Up Page

Requirement for Sign Up: First Name, last name, EmailID/Mobile Number, New password, Confirm Password, Date of birth, Gender, Signup Button

For Example: Facebook Log In page

Requirement for Log In page: EmailID/Mobile Number, Password, Forgot Password, Create New Account, Log In button

For Example: Facebook First Name

Requirements for First Name:

1) Name should be in Character

2) Name does not have numbers

3) Name does not have special Characters

4) It should not have spaces

For Example: Facebook Mobile Number Field

Requirements for Mobile Number:

1) Only 10 digit should be accept

2) Mobile Number field should not accept Character

3) Mobile Number field should not accept space

4) Country code for India +91

5) It should not accept Special Character for ex. Symbols

3) Use Cases:

-It is functionality in terms of Input, Process and Output.

For ex Facebook Application:

- Input: for Sign up page: All required field like First Name, Last Name, Mobile Number....added
- Process: Click on Sign up button then it start process to navigate on Log In page or Sign up account creation
- Output: 1) Account will be created successfully or 2) Navigate to Login Page

4) Snap shot:

-Snapshot are visualization of functionalities before development of product/application/module/software

-Snapshot created by Business Analyst (BA)

-BA create snapshot by using IRise software/tool.

-Snapshot gives ideas to developer that how s/w supposed to look like.

3) Design:

There are two Types of Design

A) High Level Design

For ex: Signup Page, Log In Page, Home Page

-It is related to Main Module

-It is developed/designed by Design Architecture or System Architecture

B) Low Level Design

-It is related to Sub Modules

-For ex: For Main Module Sign UP Page:- First Name, last Name, EmailID, Mobile Number.....etc.

-It is designed by Front End Developer

4) Coding:

- Coding nothing but the Programming
- One line is code
- Multiple lines of codes called Programming
- Set of Programs written by developer called software.
- Done by Developer

-Types of Developer:

1) Front End developer

- Work of Front End Development

-Create UI (User Interface) or GUI (Graphical User Interface) design

-Functional Flow

-Process

2) Back End Developer

- Work of Back End Development

-Back End Develop/ Database of the company develop

-Data management

-Data Gathering

-Data Security

3) Full Stack Developer

-Knowledge of both Front End and Back End

5) Testing:

-Testing is the process of checking correctness and completeness of the application as per customer requirements.

Types of Testing:

1) White Box Testing

2) Black Box Testing

3) Grey Box Testing

1) White Box Testing:

-White box testing done by the developer.

-Also called code level testing

-Also called Unit Testing

-In this developer do Positive Testing only

-Testing do with only valid data

-Example: Mobile Number: Field will be check by entering 10 digits only

-In which developer check correctness and completeness of the Program.

2) Black Box Testing:

-BBT also known as System & Functional Testing

-It is done by Tester.

-Overall Functionality of application will be test by Tester.

-In this Tester check positive as well as negative scenario.

-Example: Positive Scenario: Mobile Number Field: Field will be check by entering 10 digit only

-Example. Negative Scenario: Mobile Number Field:

1) More or less than 10 digits number

2) Character should not be accept

3) Special should not be accept

4) Space should not be allow

3) Grey Box Tester:

-It is combination of WBT and BBT

-Grey box tester has knowledge of Programming.

-Advantage of GBT: If tester found any defect in software then do not need to send back to developer instead of that he/she can solve the issue Because of coding knowledge.

6) Maintenance:

-Maintenance is service provided after delivered of the product/Application.

-In this Mainly Two Types:

1) BPO- Business Process Outsourcing

-It is Non-Technical Department

-For Example: Customer Care, HR, Finance and account team....

-For Example: If customer found any defect in application then he/she will contact to Customer care of the company.

2) KPO- Knowledge Process Outsourcing

-It is Technical Department

Examples:

- Market Research Activities
- Data Analytics
- Business Research Services
- Solution for any issue

Process of Solving Issue: if Customer found any defect in Application:

1) Customer will contact to customer Care team of the Company

2) Customer Care team don't have Technical Knowledge so they passed issue to Technical Team

3) Technical Team: Involve BA, Developer, Tester..

4) Business Analyst check issue in Requirements and assigned issue to Developer

5) Developer Analysis issue and find out the root cause of issue

6) If developer found root cause then he fixed/resolved the issue and send issue to Tester for Testing

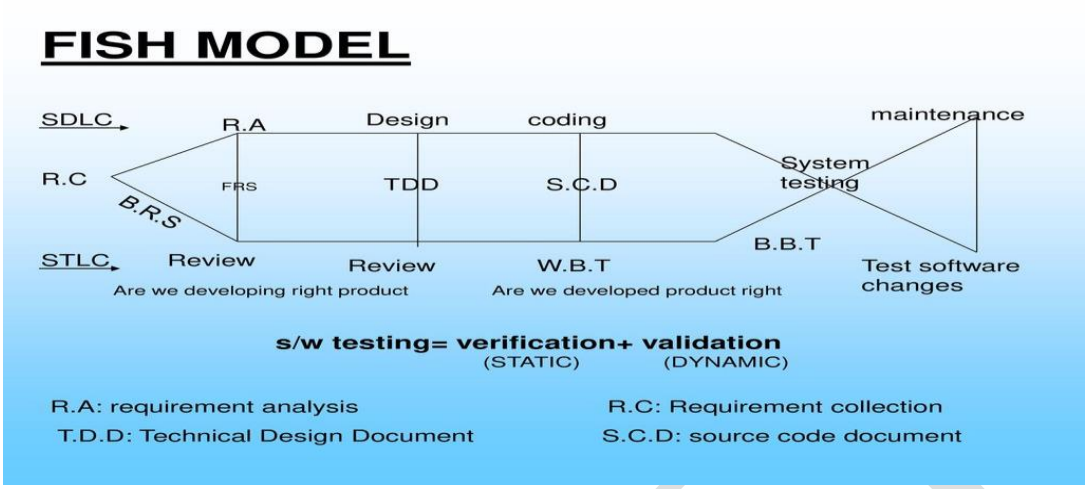
7) Tester then check is issue resolved or not which is raised by Customer

8) If issue still there then Tester send issue again back to Developer

9) If issue not present then Tester passed for Production/Release

10) Upcoming release application delivered to Customer with Required fixes.

Fish Model of SDLC



-It is advance version of SDLC.

-In Fish Model just Review Process added in Verification this is only difference Compare to SDLC

-Fish Model Divided in Two Parts

1) Verification

-In this A) Analysis or Requirement Analysis B) Design C) Coding

2) Validation

A) Testing B) Maintenance

1) Verification

-In this stage we just Verify Documents

-It is also called Static Testing

-It is also called Quality Assurance

A) Analysis or Requirement Analysis

-In this stage BA analysis convert BRS Document into SRS Document

-SRS Document involves detail information of Functionality of application.

-After creating this document BA check whether it document is correct or not because all further process depends on SRS document.

-This Checking process called Review Process.

B) Design:

-In this HLD and LLD are involve which done by System Architecture or Design Architecture and Front End Developer respectively.

-Combination of this document called TDD (Technical Design Document).

-In this same System Architecture and Front End Developer check...are design as per SRS Document or not. This is review Process.

C) Coding:

-It is done by Developer

-In this FED and BED is involved.

-After coding completed developer need to check all code, he need to compile code and check is there any error present or not

-And check whether all code as per SRS or not. This is review Process.

-It is also called WBT (White box testing)

-It is also known as Code Level Testing or Unit Testing.

2) Validation:

-After coding completed we check application functionality and correctness and completeness as per SRS Document or not.

-It is also called Dynamic Testing

-It is also called Quality Control

A) Testing:

-In this main focus on the quality of Application

-Whole Application functionality get checked in the Validation process.

-It is known as System and Functional Testing or Black box Testing.

B) Maintenance:

-It is service provided after the delivery of the product to customer.

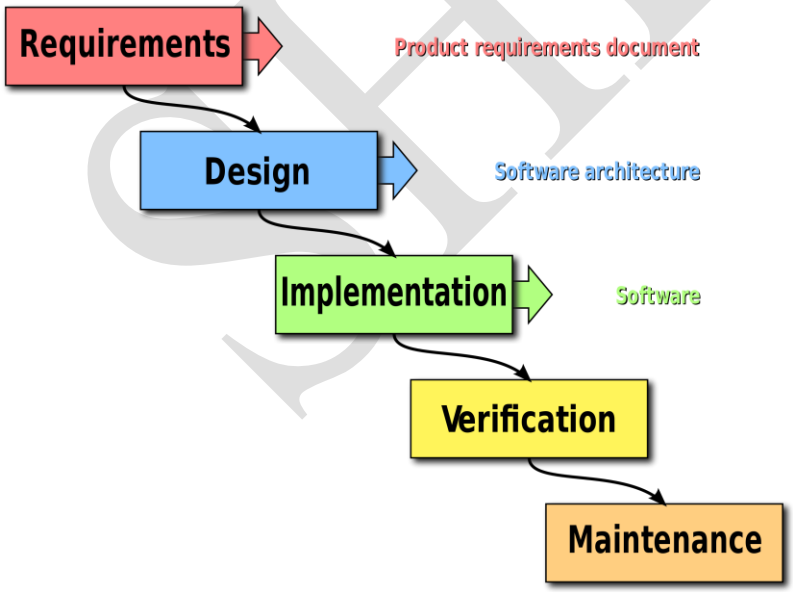
-If customer found any issue at the time using application then customer can raise issue to company customer care.

-Then Customer care will forward issue to Technical Team (Development Team, Testing Team, and BA)

-Then BA assigns issue to Developer and then he solves this issue and send to tester for testing.

-After testing we check is issue present or not. If present then send back to developer or if not then passed to production/release again.

Waterfall Model of SDLC



>In this model if one stage complete then and then we can go to next stage.

>In this if we one stage completed and moved in next stage then we cannot return back to Previous stage.

>For Example. We are in testing phase and if tester found defect then he/she cannot send back to the developer instead of doing that tester log the defect, make report and then this issue will be fixed in next version of the product.

>Duration of the Water fall model 3 Months

>It is used in Product based companies.

>For Example Product based Companies: Samsung, Microsoft, Google, Facebook, and Adobe

When to use SDLC Waterfall Model?

>Waterfall Methodology can be used when:

1) Requirements are not changing frequently

2) Application is not complicated and big

3) Project is short

4) Requirement is clear

Advantages of Waterfall Model

1) Before the next phase of SDLC each phase must be completed

2) Suited for smaller projects where requirements are well defined

3) Well understood milestones (Predefined Goal)

Disadvantages of Waterfall Model

1) It is not desirable for complex project where requirement changes frequently

2) Customer cannot request for change at the time SDLC

Companies involve in Product and Service also

1) Amazon:

-Product: Amazon TV, AWS (Amazon Web Services Cloud based)

-Service: IT, marketing, logistics (FBA)

2) IBM:

-Product: lotus notes, baan, db2

-Services: Artificial intelligence, Block chain, Business operations, Cloud computing,

Data & Analytics, Hybrid cloud, IT infrastructure, Security, Supply chain

"V" Model

- V Stands for Verification(Development) and Validation(Testing
- In V-Model Verification and Validation process perform Parallel.
- In this Development phases mapping with Testing Phases

Advantage of V-Model:

- In which customer can request for changes at any stage of SDLC but customer need to pay some extra amount.
- Means here we can return back on any stage of SDLC as per requirements. (Overcome Drawback of Waterfall Model)
- V- Model is used in Big Organization
- Duration of Project development in V-Model in 3 Months.

Verification:

1) Information Gathering and Analysis

-Here we can explain general SDLC point Information Gathering and Analysis

Information Gathering

- Customer and Business Analyst (BA) involve in this
- Customer has no. of requirements
- BA gather those all requirements
- Create on document called BRS (Business Requirement Specification)

Analysis

- In this stage BRS document convert into SRS (Software Requirement Specification) \
- also called detailed documents
- This is work of Business Analyst.

Note: Once Left side point completed of verification then explains Validation Point given below.

Validation

1) Assessment of Development phase:

A) Strategy of the Testing of application will be decided

-Strategy will be decided by Project Manager

B) Methodology of Testing

-which methodology we are going to use for testing will be decided

-A) Automation Testing B) Manual Testing

-This is also done by Project Manager

2) Test Plan Preparation:

-Here Implementation of TRM will be done

A) Resources Allocation:

-Resources will be finalised.

-Project Manager Will prepared test team.

-For example: For Security Testing, Performance Testing, Data base testing, Functional Testing & Non Functional Testing

-For above all types resources will be require and that will be finalised.

Verification:

2) Design & Coding

-Here first we explain same Design and Coding part we learned in SDLC then move to Validation part

Design:

There are two Types of Design

A) High Level Design

For ex: Signup Page, Log In Page, Home Page

-It is related to Main Module

-It is developed/designed by Design Architecture or System Architectures

B) Low Level Design

-It is related to Sub Modules

-For ex: For Main Module Sign Up Page:- First Name, last Name, EmailID, Mobile Number.....etc.

-It is designed by Front End Developer

Validation:

A) Program Phase Testing

- It is related to Developer
- It is similar to White box Testing
- Here Developer only check positive Scenario

B) Test Case Design

Important:

>>When SRS document created then BA send this document to Development and Testing Team on same time.

>>When Developer doing design, coding part then same time testing doing Test Case Design.

>>Test Cases Design means "How to test"

-Test cases means multiple steps involved while testing

-Test cases are mapped with customer requirements.

>>For Example: Scenario: 1 Check Facebook application loaded or not

>>Steps:

1) Take the URL of the Facebook Application

2) Open any browser (chrome) and paste the URL in browser search box and press Enter Key

3) Then we check application loaded or not

>>Test Scenario Means "What to Test"

>We can write multiple test cases for one Scenario.

For Example: We have to check Facebook Application is loaded or not

>>In this positive Scenario and Negative Scenario Testing

>>This is work of Black Box Tester

Verification

3) Integration (Build Installation)

-It is process of adding new module into old Application. Or

-Developers develop number of module separately and adding in one application called Integration.

-In V-Model:

-Duration of V-Model is **3 Month**

-In this duration 5-6 module will be develop.

-Once development of all modules done then in at the last integrate/combine into one application/Software.

-It is work of Developer. Once Developer work completed then he send build or module to testing (For that developer Provide Testing URL)

Validation:

Once application came for testing then first testing we perform Sanity Testing.

Sanity Testing:

-It is come under Validation Process.

-In Sanity Testing we check only Core Functionality.

-Basic Functionality will be get checked in this Testing.

-In this testing we only raise Critical Errors (Defect which Blocked Functionality of the application)

-Means here we verify build is stable or not (Build Verification)

-For Example: Facebook Application: Different Modules: Facebook Logo Spelling, Log IN Button, Create New Account button, Sign Up button.

-Critical Issue: Sign Up button not enable (Means not clickable), Facebook Logo Spelling mistake then its Blocker defect so raise in Sanity Testing.

System & Functional Testing:

-When Sanity Testing successfully completed then and then we start System & functional testing.

-In this testing we check all functionality of the application as per SRS Document.

-In this we raise small to large defect will be documented.

-In this Positive and Negative testing will be perform.

-Black box tester is responsible for that.

-For Example: Facebook Logo color not proper, Signup button color not as per SRS,

-Spelling mistake for text present on page which are not useful for Customer.

-System & functional testing fine then we passed application to UAT

UAT (User Acceptance Testing)

Before move to UAT we discuss Different Environment

>>Environment of Testing:

1) DIT (Development Integration Testing)

-Developer involved

2) SIT (System & Integration Testing)

-Tester Involved

-When system and Integration testing successfully completed then product move to UAT.

3) UAT (User Acceptance Testing)

-User and Tester involve in this testing.

4) Production (Final product will be deliver to Customer)

User Acceptance Testing:

-After Successful completion of System and Functional Testing product moved to UAT.

-Tester and User Involve

-In this environment release version will be updated

-Example: Suppose Previous Version Chrome is 90.0 and if some new features added in application or may be some issue will fixed then this changes need to pass Customer and for that need release updated version.

-Release has two Types mainly

1) Minor Release (with some changes or Bug Fixes)

>So if Minor Release for Chrome Browser then Version will update from 90.0 to 90.01 when came in UAT and

2) Major Release (with Lot of Changes and Bug Fixes)

> If Major Release for Chrome Browser then Version will update from 90.0 to 91.0 when came in UAT.

Note: You do not need to mention above two point related release while explaining UAT. It is just for your information.

-So in UAT Tester test application with User/customer. Some time customer have their test data so tester will test application with that data.

-In this environment we check UI, Design, color and Functionality of the application as per SRS Document. Less defect found in UAT.

-Mostly customer not request for change at the time UAT because of less Time bandwidth of Release date.(Release date already fixed)

-If customer request for change at the time UAT then BA take decision as per Time Bandwidth.

-When user gives the permission then Product will be moved to Production.

Documentation/Test Documentation

-Test Documentation is report of Testing.

-Each tester has its own test report.

-Whenever tester did testing on Module then he/she create document of testing.

Test Report involve following point.

1) Name of the Module

Ex. Sign Up Module

2) Test Cases designed count

Suppose Designed: 20 Test Cases

3) Test Cases Executed

Suppose Executed: 20 Test Cases

4) Passed

Suppose Passed: 19 Test Cases

5) Failed

Suppose Failed: 1

-So we create bug ticket of failed test cases.

-We create this report in Excel Sheet and after that send to Team Leader

-Then Team Leader sent this report to Project Manager/Test Manager

-Project Manager sends this document to Customer.

Verification:

Maintenance

-It is service provided after delivery of application to customer.

-In this Mainly Two Types:

1) BPO- Business Process Outsourcing

-It is Non-Technical Department

-For Example: Customer Care, HR, Finance and account team.

2) KPO- Knowledge Process Outsourcing

-It is Technical Department

-for example: Market Research Activities, Data Analytics, Business Research Services, and Solution for any issue

Validation:

1) DRE (Defect Removal Efficiency)

-DRE is the process of calculating at which level tester testing did.

-In that Tester efficiency will be calculated.

-Tester Efficiency will be calculated by below formula,

Formula for calculate DRE=A/A+B

-A=Defect found by Tester

-B=Defect found by User/Customer

Suppose: at the time of UAT

-Tester found 60 defects

-Customer found 30 defects

DRE=60/60+30=0.6 (Avg. Testing)

If DRE, then Remarks,

1) 0.8 to 1= Good Testing

2) 0.5 to 0.8= Avg. Testing

3) Below 0.5= bad testing

Suppose,

Tester found 30 defects and User found 50 defects

DRE= 30/30+50=0.375 (bad Testing)

Suppose,

Tester found 90 defects and User found only 10 defects

DRE=90/90+10=0.9 (Good Testing)

2) RFC :(Request for Change)

-In V-model customer can request for change at any stage of the SDLC

-If customer request changes then BA takes those changes and add in the SRS Document.

-SRS Document one Section "CR" Means Change Request in Red color

-It is also called as MR (Modification Request)

-But for this changes customer need to pay some extra amount

-For Example: Facebook Sign Up page

-If customer want to add Nick Name field below Name field then BA and took Customer request and add this in SRS Document in Red Color but for this changes customer need to pay some extra amount.

3) Regression Testing

-Regression testing is process of checking is there any adverse effect on application due to some new changes added or Coding changes for fixing the issue.

1) Means we performed Regression testing if some new feature/module added in old application

-Means in above example of Facebook Sign up: Nick Name feature/module added in Sign up page. For that Developer added codes

-Because of that coding is there any functionality braking of application we check through Regression Testing.

2) Some time we found defect and for resolving/fixing that defect developer change the existing code so due that might be chances brake functionality of application so that we check through Regression testing.

-We performed this “Regression Testing” After SIT and UAT because changes will be added in this environment.

Agile Model of SDLC

Agile Model/Agile Methodology

-Now days Agile methodology is very famous in Service based company because of its number of advantages

1) Agile Methodology is Module Driven Methodology.

2) It is not plan driven methodology.

3) In Agile Methodology Customer can request for change at any stage of the SDLC.

4) For any new changes customer do not need to pay extra amount.

5) Changes in the requirement do not effect on the development of other modules.

6) Agile Methodology it is a Value driven methodology.

7) Sprint Duration of the Agile Methodology is 1 Month (Change Company wise for 1week, 2 week, 3 week or Month)

8) Agile Methodology used in Service based Companies.

For Example: Suppose there is software project having 8 Modules

-Then in Agile Methodology project divided in group of modules means

-In Phase-1: 2 Module developed and released to customer

-Then Phase-2: other 2 Module developed and released and same for last four module.

Agile Architecture

1) Stake Holder

-Stake holder nothing but Customer/User.

-In Agile Methodology Customer is member of top most body of Company.

-Stake Holder can request for change at any stage means Development, Testing, and Production.

-They have bunch of Requirements (Nothing but User Stories)

2) Project Owner/Product Owner

-Project Owner gathers all requirements from the Stake Holder

-Project owner is member of Sprint planning meeting.

-Project owner responsible for creating product backlog.

3) Product/Project Backlog:

-Project backlog are the total requirements for whole product/project.

-It includes requirements of all modules.

4) Sprint Planning Meeting/Estimation Phase

-In the agile methodology the focus is on module wise release.

-It is process of sorting requirements to development of module.

-Involvement: Project Owner, Scrum Master, Development Team, Testing Team

-In this meeting only those user stories select which will be developing in next sprint.

-Selection of user stories depends on following factors:

1) Knowledge:

-Whenever team formation done then each member of team should be have domain knowledge of project is consider.

2) Efforts:

-In this Higher Management decide how much efforts require for project.

-How much resources, people (Developer and Tester) require for project is consider.

3) Complexity:

-For estimation of time, cost and resources first complexity of the Project will be consider.

5) Sprint Backlog

-Created by Project Owner

-Sprint backlog contains sorted user stories at the time of Sprint planning meeting.

-Sprint backlog contains details information of requirements which are going to develop in next sprint

6) User stories:

-User stories nothing but functional requirements for the module development.

-User Stories get decided at the time of Estimation/Sprint planning meeting.

-It consist “Description” and “Acceptance Criteria”

-Description Means what as user he wants to do (Process) and what it’s desired output.

-Acceptance Criteria Means are the Scenarios when these scenarios are correct then system generate correct output otherwise system show failure.

7) Test case Design:

-Once Sprint backlog ready then Project owner sends it to Development Team and Testing Team.

-Then Developer starts their coding work and same time tester start test case design.

-Test cases are mapped with User Stories

-Tester is responsible for Test Cases Design.

Advantages of Agile Methodology:

-There are number of advantages of agile methodology I will explain some from them,

1) Check Point:

-Example: Consider there are four module developed M1, M2, M3, and M4...

-Then Check point will be added between the two module means Between M1 and M2, Between M2 and M3...same for M3 and M4

-If at the time production or after production error occurred in application or Module then tester do not need to test all modules instead of that tester can first just test Check point provided between Module M1 and M2 if error not present then test other check point provided between M2 and M3.

-If tester found issue between M2 and M2 then tester will raise the same check point to Developer.

-Then developer just finds out root cause for Check point where issue occurred and fixed issue. But in V-Model Developer need to check all modules codes that called Post Mortem Testing. It is very time consuming Process.

-For testing Check point Tester Used "AVAS" Tool.

-Check point save time of both Tester and Developer.

2) Scrum Meeting:

-It is also called Daily Stand-up/Daily status Call Meeting.

-Time Duration: 15-30Min

-Mostly happened between (10:30-11 or 11 -11:30 AM)

-People Involved: Development Team, Testing Team, Product/Project Owner, Scrum Master

-Chair Person of Meeting: Scrum Master

Agenda of Meeting: "What is progress of Meeting".

-Three Main question asked in meeting:

1) What we did yesterday?

-It is the report/status of previous work which was completed by team members whether they are Tester or Developer.

2) What we are going to do today?

-It is pending work which have to complete today or any new work going to start today.

3) What are the road blocks or issues?

-If Developer and Tester facing some issue

>If requirement not clear for developer or tester

>If tester found any issue

3) Implementation of Automation:

-We can implement Automation in Agile Methodology.

-Automation is Time saving Testing technic.

-For Example: Facebook Page

-If in Sprint-1 we completed Manual Testing for Sign Up page then in Next Sprint we will automate this Sign Up page.

-So next when Sign Up page came for testing with some new changes then we do not need to do Manual Testing for all Fields, that time we will just execute Automation Script and only new changes will test manually. We will get direct pass, fail count of test cases through Automation Script.

-So here our Time is definitely save.

-For Automation mostly used Selenium tool which free sources available in market.

Advantages of Automation:

1) Less Resources Required

2) Less Resources means less cost

3) High Accuracy

4) Less Human Errors

5) Time saving testing Method

4) Sprint Wise Delivery:

-In Agile Module wise delivery possible because in this we develop small module and developed module can send to Customer within Less time of duration (Means Sprint wise)

-Means suppose total 5-6 module we have to develop within sprint but we just developed 3 modules. Then only developed module we can send to customer as per their requirement that's why also called Value driven Methodology.

Scrum Framework:

-It is framework used to implementation of the agile software development Methodology.

-Scrum is framework in which team solves complex problems and comes with productive solution and Innovative solution.

-Scrum is used where Project Requirement continuously changing.

-In Scrum Framework Project is divided into small no. of requirements means Sprint, Means by using Scrum Framework sprint wise delivery possible.

-Scrum is Module driven not plan driven that's why we use this.

Integration Testing & Sanity Testing

Integration:

-It is process of adding new module into old Application. Or

-Developers develop number of module separately and adding in one application called Integration.

-When white box testing over, developer have to do integration

-Integration is process of mapping new module with old module/application.

-Developer should have knowledge of functionality, relation, dependency of modules over each other that's why developer does Integration.

-In Software one module output is input for other module.

-When developer did integration then he also do Integration Testing.

Integration Testing:

-It is Developer Task

-It is process of checking correctness and completeness of the flow of functionality whenever integration of modules completed.

-Integration has two types:

1) Front End Integration (FEI)

-Related GUI (Graphical User Interface) or UI (user Interface)

-In front end developer connects two modules using "Called" Function.

-Ex: M1 and M2 connect by using called function.

2) Back End Integration (BEI)

-Related to data bases.

-Back End Integration connect two or more tables in data bases using JOIN Query (Full join, Left join, Right Join)

-Example: T1 and T2 (Table) connect by using Join Query

-Whenever Integration of modules done then Integration testing start by Developer for that he use three approaches

Testing Approaches:

1) Top Down Approach

2) Bottom Up Approach

3 Bi-Directional Approach/Hybrid Approach

1) Top Down Approach:

-If Developer have to do integration testing & he developed module but don't have next Module which can check correctness of new Module.

-When we have Main Module (Sign Up Module) but don't have Sub Module (Next Module) in that condition developer use Top Down Approach.

-In that condition developer developed/create dummy module called "Stub"

-Stub is created by using XML Language Programming.

-Stub is checked by using SOAP UI (Simple Object Access Protocol User Interface) tool.

-URS (User Requirement Specification) for Stub is WSDL (Web Service Description Language)

-Request and Response in XML (Extensible Markup Language)

2) Bottom Up Approach:

-When we have sub module (Next Module (Login Page)) but don't have Main Module (Sign Up Page) then use Bottom Up Approach.

-In that condition developer creates one dummy module by using xml programming language called "Driver".

-Developer creates dummy Main Module for testing.

-This “Driver” programming in XML Language.

3) Bi Directional Approach:

-It is combination of Top Down and Bottom up approach

-For Example: If developer developed Login Page and he have to check functionality with Sign UP and Home page that condition developer create dummy module of Sign up Page by using Driver and dummy module of Home page by using Stub.

-It is also known as Hybrid Approach.

-After the Successful Integration Testing completed then Developer passed Application URL to Testing team and also provide some testing instructions.

-Once Application came to testing after integration then first testing tester do which is Sanity Testing.

Sanity Testing:

Aim:

-To check Core/Basic Functionality

-Also called Tester Acceptance Testing.

-Also Build Verification Testing

-Also called Zero Level Testing.

-In this testing only “Critical Error” get documented/raised to developer.

In Sanity Testing we do mainly testing for:

1) Basic Core Functionality

2) Tab Validation

3) Link Validation

4) Page Validation

5) GUI Validation

1) Basic Core Functionality:

-In this tester test buttons, icons, from which user can proceed to next stage.

-Example: Submit button, Sign UP button, Login Button. (We check it is clickable or not)

2) Tab Validation:

-Tabs are nothing but text boxes in which we enter the values.

-Example: First Name, Last name, EmailID, Mobile number...field.

-In this we check Tabs are enable or not.

-Whenever we entered any value in text box through Keyboard then those char, symbols, number should be entered in Text Box.

-This Functionality we validate in Tab Validation.

3) Link Validation:

-Link Validation means is this process sequence of interlink pages get tested.

-Example: Flipkart Application:

-There is link on Flipkart Home Page for Mobile Page: When user clicked on that then Mobile informative page should be open (That arrangement done by Developer).

-So we need to check here Mobile Link is active or clickable.

4) Page Validation:

-Page Navigation means Navigation Validation

-In this process when we clicked on next and back button then should be navigate on front & back Page respectively.

-This testing also called Navigation Testing.

5) GUI (Graphical User Interface) Testing:

-This testing test the interface with which user interact directly.

-In this test, tester check whether the pages displayed correctly or not, Image should be clear not blur, Page should be full loaded.

-This is Validation of visualisation.

Note:

1) So whenever interviewer asked you what is Sanity Testing then Explain with definition and above types in that.

2) When Interviewer asked what is difference between Sanity Testing and Smoke Testing then

-just tell them actually there are no more differences in Smoke and Sanity Testing and our company we are using Sanity Testing so I have good Idea about it.

-If you asking about difference then I knew one difference...then Explain below definition and Explanation,

What is Smoke Testing?

-We can say it is similar to Sanity Testing or Advance version of Sanity Testing.

-Actually Sanity and Smoke Testing term used by different Organizations as per their Benefits.

-It is Combination of Sanity Testing + Package Validation.

Package Validation:

-It is a Combination of objects.

-Example: Facebook: If in Sign up we entered all required information in Tabs/fields-

-Then clicked on Sign up button then all filled information will get saved in data base and we will navigate to Log In page.

- When we entered valid log In credentials in log In Page field and clicked on Log In button then get errors occurs.

- Then developer need to check from which package this issue happened. That's called Package Validation.

Functional Testing:

-It also called System and Functional Testing.

-It is process of checking correctness and completeness of functionality of application.

-In this we check internal functionality depends on external functionality.

-Means whenever client/user enters data in any field it should be get store in data base.

-In this we execute test cases written by us.

In this we check internal Functionalities, means In this we check different Coverage's:

1) Behavioural Coverage

2) Input domain Coverage

3) Error Handling Coverage

4) Service Level Coverage

5) Calculation based Coverage

6) Back End Coverage

Behavioural Coverage:

-In this we Check Property & Behaviour of the object

Example: 1: Text Box

Property: It should accept user input

Behaviour: Focus and Non-Focus, Means when we clicked on Text Box then should focusable when remove focus it should un-focus.

Example: 2: Dropdown Box

Property: It should hidden list

Behaviour: show/hide list

Example: 3: Check Box

Property: do check when user click

Behaviour: checked/unchecked.

Input domain Coverage

-It Check Type and Size of the input

-Type means DataType of input

-Size means if mobile number tab is there then size will be 10.

-In this Coverage we maintain BVA (Boundary Value Analysis) & ECP (Equivalence Class Partition)

-BVA check Size of the input

-ECP Check type of the input

Example: 1: Mobile Number Field:

-BVA: Min=10, max=10, min-1 (not Accepted), min+1(not Accepted), max+1(not accepted), max-1(not accepted)

-ECP: Invalid and Valid input check:

>Valid: 0-9 number

>Invalid: a-z, A-Z, Special Symbol, (_), Space

Example: 2: First name field should be accept 4-6 char

-BVA: min=4, max=6, min-1(not accepted), min+1(Accepted), max+1(not accepted), max1(Accepted)

-ECP:

-Valid: a-z, A-Z

-Invalid: 0-9 number, Special Symbol, Space

Example: 3: Example of online transaction using Debit Card (So find out BVA and ECP for Debit Card number and CVV Number)

Error Handling Coverage

-In this we check whether system generate error message or not.

-If we entered invalid information in field then system should be generate error message.

Example: Mobile Number Field: If we entered less and more than 10 digit in mobile number field then system generated message

"Please enter Valid Mobile Number".

Service Level Coverage

-In this we check working of system as per functional flow diagram or not.

-In this Coverage check sequentially of functional module.

-Ex: If you are filling online examination form

-Then, 1) Personal Information Detail 2) Contact Details 3) Academic Details 4) Banking/Payment details 5) Submit

-In above example once one stage completed then system should allow to next stage.

Calculation based coverage:

-In this we check athematic operations.

-Athematic operations: Addition, subtraction, division, multiplication

Example: On Amezon.com If we added Vivo mobile to cart & it's price 20K then & again added new Samsung Mobile & Samsung Air Conditioner price 18K and 30K respectively. Then it will be added in to cart then total price is 68K (It is done by Addition) and if we cancelled/removed Vivo Mobile from Cart then total is 48K (It is done by Subtraction)....So here we check this operations.

Back End Coverage:

-The backend of any software is data base.

-IN back end coverage we check whether entered data stored successfully in data base or not.

-We also check whether data get fetch from data base.

-By using SQL Queries.

Example: -If we filled online examination form by adding all required information then clicked on Submit button.

-Then all data save in data base. Then we check we are able log in or not by using User Name and Password.

-We can also fetch specific person/candidate information from data base.

Non-Functional Testing

Non-Functional Testing:

-In this fast pace world of Technology development software companies are not only focused on bug-free product but also for an excellent performing product.

-In Functional testing check the correctness of internal Functions while in non-functional testing check the ability to work in External Environment.

Recovery Testing:

-It is process of checking whether system/Application is able to recover from abnormal condition/Situation to normal condition/Situation.

-Also called Reliability Testing.

-Recovery requirement are given by customer.

-Customer can give requirements that he wants that application should recover from specific point or from start point.

Example: Suppose we Downloading large music file and suddenly internet connection lost, then downloading paused, When Internet connection return back then System should start downloading of music from paused position. (This is customer Requirement)

-If Music downloading start from starting then there will customer data lost.

Compatibility Testing:

-It is process of checking whether application/system compatible with user expected platform (Browsers, Operating System)

-Browsers: Chrome, Mozilla Firefox, IE, Safari

-Operating System: Windows, Linux, Mac

-Also called portability Testing.

There are mainly two types of Compatibility Testing:

1) Forward Compatibility Testing

-If build/application is correct but browser/operating system do not working properly then it is Forward Compatibility Testing.

-We found less error in this testing.

2) Backward Compatibility Testing:

-If browser/operating system is ok but build/application is not working properly then it is Backward Compatibility Testing.

-We found maximum error in this test.

*Note: In interview just explain below types, no need to explain above types.

-In Compatibility Testing I am involve in Browser Compatibility Testing.

Browser Compatibility Testing have two types

A) Cross Browser Compatibility testing

-In this process tester check application on different browsers.

Example: Chrome, Mozilla Firefox, opera mini, Edge, IE, Safari...

B) Version Comparison Compatibility Testing:

-In this process tester check application on different version of same browser.

Example: Chrome: 94.0, 94.01, 94.02.....or IE 11, IE 10, IE 8...

Inter System Testing:

-It is process of checking whether our application able to share resources with other application or not.

-Means we check our application share data with other application or not.

Example: 1: Airtel Customer Recharge with Phone Pay Application

-We enter our mobile number in Phone Pay for plan search then clicked on Search button...Then you will get plans in result. so here Airtel server share data with Phone Pay server.

Example: 2: Withdrawal of money from other bank ATM.

-Suppose you are SBI Bank Holder and you have to withdraw money from SBI ATM. You went in SBI ATM but in SBI ATM Cash not available.

- Then you went in ICICI bank ATM and inserted ATM Card in machine and entered Password then ICICI server fetches data from SBI Bank server and proceeds for Money withdrawals.

Globalization Testing:

-It is process of checking whether application is support different languages or not.

-also called multilanguistic feature checking.

Types:

1) Localization Testing:

-Check whether application support local languages like

Examples: Marathi, Telgu, Kannad, Gujrathi, Punjabi...

2) Internationalization Testing:

-Check whether application support official languages of Countries.

Examples: Hindi, China, French, Germany.... (Country wise)

3) Globalization Testing

-Check whether application supports Global English Language.

-Also called G11N Testing means GlobalizatioN testing

-Whenever user change language, language should be change but Number should be in English (It is user requirement)

Sanitation Testing:

-It is process of checking is there any extra features added by developer or not (Which is not mentioned in Sprint Backlog) customer requirements.

Example: Mobile Number field

-User requirements was just create 10 digit mobile number field but developer added +91 field front of Mobile number as per his Previous Experience.

-So at the time testing tester found this extra feature. So will create bug ticket for that and assign to developer.

-Then on that extra feature discussion will happen in Daily Stand-up meeting.

-Then PO will contact to Customer and ask about this extra feature if customer want this extra feature then Customer need to pay extra amount for that.

-if customers don't want then developer need to remove this extra feature.

-It is also known as Garbage Testing.

Miscellaneous Testing

Usability Testing:

-It is process of checking user friendliness with our Application or build.

-In usability we check system should take less number of events to complete task or easy validation.

Example: If user clicked on submit button then App should immediately open next page quickly.

In Usability we do mostly two types of the testing.

A) GUI Testing (Graphical user Interface)

-This testing tester test the interface that user interact directly.

-Ease of use

-Speed of Processing

-Test all the functionality of elements present on Web Page

-Means Pages displayed properly or not, image should not be blur, Page should be fully loaded...

-It validation of visualization.

B) Accessibility Testing:

-This testing performed for Blind user perspective.

-When user clicked on any button and navigated on any elements present on webpage then it system gives voice feedback.

-Tool used in For Accessibility Testing in Company: 1) NVDA (Non Visible desktop access) Tester use this tool 2) Jaws Reader

-Developer use Ace Tool for Testing. (This tool gives how many serious defects, how many critical defects, high defect)

Security Testing:

-It is process of checking privacy related to user operation.

A) Authorization:

>Process of checking whether person is authorized or not.

>Authorized person is registered person.

B) Access Control:

-It is process of checking whether authorized person has permission to access Specific Operation/Application.

C) Encryption & Decryption

>>Cryptography is used to secure and protect data during communication.

>>It is helpful to prevent unauthorized person or group of users from accessing any confidential data.

>>Encryption and decryption are the two essential functionalities of cryptography.

1) A message sent over the network is transformed into an unrecognizable encrypted message known as data encryption.

2) At the receiving end, the received message is converted to its original form known as decryption.

Performance Testing:

-Performance testing is performed to evaluate the performance of the components of a particular system under a particular work load.

-Performance Testing Attributes: Speed, Stability, Reliability

-Performance testing it is process of checking speed of processing of our application/build.

-Tool: J-Meter, NewRelic, Load Runner

-We can say actually I am not involve in performance testing because our company have separate team for that.

Re-testing:

What is Re-testing?

-Re-testing is process of re-executing same build/application with multiple test data.

-We performed retesting two times:

1) Suppose we found defect then before creating bug ticket we retest same defect with multiple data.

2) After developer solved defect and assigned us. Then again we retest that application and check whether issue still present or not.

Suppose we have to log In into Facebook application but we don't remember password. Then that time we trying to login different password which you used previously. same concept used here for retesting.

What is difference between Retesting and Regression Testing?

Main difference between Retesting and Regression testing is in Retesting we just retest raised bug resolved or not (Means here we just check raised issue)

But in Regression testing we check is there any adverse effect on other modules or not due to bug fixing. (Means here we check all modules)

UAT Testing

UAT (User Acceptance Testing):

It is process of collecting feedback from customer.

People involved: User/Customer and Tester

Tool Used:

1) Q-Messenger for Desktop Sharing

2) AVAS & Bharat Mantri for Search Session ID

3) JIRA for Raising bug ticket or for internal communications

-Also known as End to End Testing. (Because here we check Front End and Back End with API as well)

Important Points:

1) UAT starts after successfully completion SIT.

2) In UAT version will be update.

Example: Facebook current version 10.0 After SIT when it's came in UAT then version will update as 10.01(Minor Release), 11.0(Major Release)

3) Here user will decide from total user stories, how many user stories he want to test from Tester.

4) Tester then checks all test cases related to that user stories.

5) Customer can change test data and it is on Customer/user whether to send application for production or not.

Process of UAT:

1) Testing Team share Desktop to user by using Q-Messenger.

2) Tester Start the Test cases execution written by him/her.

>Some time User provides data for testing then that time we use that data for testing.

3) After completion one test case execution clear cache, cookies, history and then move next test case execution.

4) When one test case execution completed then tools gives session ID in that contains all the action performed at that session.

5) When we get session ID then copy it and use "Bharat Mantri" or "AVAS" tool for searching log file.

6) Once we added Session ID in above tool we will get log file.

-Log file is available in .txt format

-Log file has front end operation and back end operation.

7) Tester sends this log file to development team by using Q Messenger.

8) Then Front End Developer checks whether front end data match with back end or not.

9) After that Back End Developer check database using SQL Queries & fetch data to see really it get stored or not.

10) When all process successfully completed then User give permission to for release the product/Application.

In UAT have two Types:

Alpha Testing

-Alpha testing used in Service based companies.

-It is conducted in control environment. (Means here tester and User involved)

Example: HDFC, HSBC, IDBI, ICCI

Beta Testing

-Beta testing is used in Product based companies.

-Beta Testing conducted in uncontrolled environment (User directly not involved in UAT)

Example: Microsoft, Rupay, Master Card, and Visa

Error, Defect, Bug, Issue

-Error: Mistake in Program is called error.

-Defect: when tester found mistake (error) then it is called defect.

-Bug: When developer accepts it is an actual defect then it is called as "Bug".

-Issue: When developer faced/found difficulty to solve bug then it is called as "Issue"

Production Issue

Production Issue/Hot Fix

-When after production customer found any defect in the product then that is called Production issue or Hot Fix.

Tool: JIRA for Communication & raising ticket

Important Points: Procedure for solving Production Issue

1) If customer found any major or just defect then raised issue to Customer Care of the company.

2) Then Customer care team raised ticket to Technical team because they don't have technical knowledge.

-Technical Team: Product/Project Owner, Development Team, Testing Team, Scrum Master

4) Product owner will assign issue to developer

5) Then developers find out the root cause and then fix/solve issue.

6) After fixing issue developer sent to testing team for testing.

7) Tester test the issue...is present or not. If issue still present then again raise to development team or reassign to development team & If issue resolved then we pass for production

Priority & Severity

Severity:

-Severity is always related to functionality of the application.

-Severity means how much system/application is getting affected because of the defect.

-Severity level will be decided by Testing team because tester knew about the seriousness of defect on functionality of product/application.

Different Severity Levels:

Critical: If a defect causes the termination or complete shut-down of the application, then

it is “Critical”.

High: If the defect results in the termination of the system but there exist one or

More alternative methods to achieve the desired results or use the system, then the defect is said to have the level “High”.

Medium: The bug will be marked as "Medium" when the defect in the system does not

cause the program to terminate but produces results that are not correct or inconsistent.

Low: A defect is marked as “Low” when the usability or functionality of the system is

not affected much but must be fixed.

-The results are obtained by small corrections and there is no break-down of the system caused by the defect.

-Defects that are related to the look and feel of the system are given the severity “Low”.

17.2 What is Priority?

-Priority nothing but which defect should be fix first.

-Priority is considered from the customer’s point of view.

-Priority indicates how soon the defect needs to be fixed by the developer.

-Priority is set by the product Owner/customer and it determines the time frame given to the developer to fix the bug.

Different Levels of Priority:

Low: A defect that can be deferred or fixed in the later stages once the higher priority ones

are fixed, as it is not serious from the requirement point of view is of low priority.

Medium: A defect that needs to be fixed during the normal course of development

activity is given the status as “Medium”.

-Such defects occur when a particular feature cannot be used the way it should be because of some environmental issue, defect in the program, or some code that has to be added. Usually, these defects are fixed and delivered to the testing team as a part of a new release.

High: Those defects that need to be fixed as soon as possible so that the testing team

can continue with the testing are said to be of high priority. The core functionality fails as a result of such defects and the system cannot be tested or used until the defect is fixed.

Who decides the Severity and Priority of a Defect?

The organization decides the standards regarding who sets the priority and severity of a defect.

-However, in most cases, the severity type of a defect is set by the tester based on the product functionality and the written test cases.

-The priority is decided by the product Owner based on customer requirements.

-Understanding with examples

Let us try to understand severity and priority by considering an e-commerce application like amazon.com

1) Example of High Severity and Low Priority

-Suppose the tester clicks on the “Privacy Notice” hyperlink at the bottom of the amazon.com homepage and the page is not displayed.

-This defect will be of high severity because the functionality is not working.

-The priority is low because people do not normally spend time reading the privacy notice.

2) High Severity and High Priority

-You logged in to your amazon.com account, add items to the cart and click the “Proceed to Checkout” button.

-You make the payment and the system crashes. This defect makes the whole buying functionality unusable and so the severity is high.

-The basic purpose of amazon.com is to buy and sell products and most of the customers are affected by this.

-So, this defect is of high priority which must be fixed immediately for the buying process to work.

3) Low Severity and High Priority

-Suppose, that in the amazon.com website, the logo is displayed as”amazn.com” with the letter “o” missing.

-This defect does not affect the buying/selling or any other functionality in any way.

-So, the severity of this defect is low. But, a mistake in the company logo affects the brand identity and impacts the user experience. So, the defect is of high priority.

Another Example:

-Suppose if the Flipkart logo is misspelled as Flipkrt. That time it directly impacts the online business for Flipkart Company.

-People will think it’s not a genuine product and they won’t buy it. Business impact is huge. So it got a very high priority issue.

-But for developers fixing this issue not that difficult. It is not even breaking any workflow also. So severity is very low.

>Severity means how the bug is impacting the applications. It’s staged like blocker/ Show stopper, critical major minor

>Priority means which bug needs to be fixed first. Stages like urgent, high, medium, and low. It always impacts the customer business.

-Suppose Flipkart logo issue not fixed soon. Flipkart Company will be under huge loss.so it got a very high priority.

4) Low Severity and Low Priority

-Suppose the tester clicks on the “Conditions of Use” hyperlink at the bottom of the amazon.com homepage.

-If there is an alignment issue in the text displayed or if there is a spelling mistake in the content displayed, the defect is said to be of low priority because people rarely read this page and it does not impact the user experience.

-The severity is also low because the functionality of the application is not affected.

Testing Terminologies:

Monkey Testing:

-When we have no. of test cases for execution but don't have sufficient time that condition we perform monkey testing.

-Also called Speed Testing

-Here we only execute High Priority test cases.

-This situation arise when developer not able to solve bug then that time developer takes extra time that bug is called blocker defect.

-Here we test basic core functionality with respect to customer requirements.

-So here we test High Priority test cases. If time left then we test Medium and Low Priority.

-Here we use random data for testing.

Exploratory Testing

-When we are not aware about the application but we have test cases, test case data, Sprint Backlog...then that time we conduct Exploratory testing.

-Exploratory testing is all about exploring, discovery, investigation & learning.

-It is all about exploring, finding out about the software means what it does, what is doesn't do, what works & what doesn't.

Ad-hoc Testing

-When we are aware about application, we have test cases as well but don't have test data...that time we do Ad-hoc testing.

-Doesn't have test data so testing carried out on the basis previous knowledge of the testers, tester test randomly without following the requirements.

-Hence Success of this testing on capability or Experience of the tester...of specific application.

-Adhoc Testing will be effective when tester have throughout knowledge of System/Application.

-It is also experienced based testing technic.

What are the Roles and Responsibility of Test Engineer?

1) User Story Analysis

2) Test Scenario Identification

3) Test Case Design

4) Test Case Review

5) Test Case Execution (Perform Functional & non-Functional Testing)

6) Test Summary Report

7) Defect Logging (Create bug ticket) & reporting (Assign to specific developer)

8) Sometimes we have to do client interaction

9) Estimation of Testing (Means how much time require for testing we give in Story Point)

10) Carrying out regression testing & retesting after defect fix.