SDLC

Analysis- In Analysing phase we will analyse the SRS document before planning and designing. Developers and Testers use the same document. The kt sessions are done and critical points are discussed on the Business Impact perspective.

Designing- In Designing phase we will plan and cover what are all the things that should be developed or tested throughout the SDLC. In this phase the plan for developing the software is done with SRS document.

Implementation- The plan is executed and the software is built in this phase. The source code is done and the built is made ready in this phase.

Testing- After the software is built it will be tested in this phase to check whether the software meets the clint requirement and find out bugs and fix that. All test cases are executed tested and bugs are raised and fixed in this phase.

Evaluation- After all bugs are fixed in QA Environment, it is moved to Production environment for high level testing. If there are bugs in production environment the cost will be high.

STLC

Testing Analysing- In Analysing phase we will analyse the SRS document before test planning. All the modules will be explained in this phase and KT will be given about the product

Test Planning- In test planning the what are all test scenarios and testing that should be done and the number of days required for testing everything is planned here. All module owners will be allocated in this phase.

Test case development- In this phase the test case is written after analysing and proper planning with the help of SRS documents and understanding from KT sessions.

Environment setup- After writing test cases to test them we need a QA environment so a separate test or QA environment is developed.

Test Execution- All the test cases are executed in the phase, bugs are reported and fixed.

Test closure- After all the test cases are executed and bugs are fixed, a complete report will be sent to the product owner about the test scenarios covered , number of bugs raised, number of bugs fixed and other things done by the testing team.

Functional Testing:

The testing that involves only the functionality of the product is called Functional testing.

1.Smoke testing- It is the first test after the built, in this we will test all the critical test case of each functionality. It is also called as Build verification testing or Build aaceptance testing.

2.Regression Testing- It is an end to end testing of a module , more critical to small test cases are covered. It is done to check whether new features haved affected the already available features.

3.Unit Testing- It is done by the dev to test the internal codes using available frameworks like TestNG.

4.Integration Testing- It is done by the testers when two modules are interacted with each other, the primary focus of this is to test cases of the combined modules.

5.Feature Testing- It is done only when a new feature is released. Here we test only the new features for that release.

6.Sanity Testing- It is an high level testing done in the production, it is the final testing and done in evaluation phase.

7.System Testing- It is done when all the modules are combined and tested as a whole system. Regression testing test cases of each module is used for system testing.

Non Functional Testing:

Every testing other than functional testing is called as Non functional testing.

Perfomance Testing,

1.Load Testing- This testing is done by giving a particular load for a prolong period of time.

2.Stress Testing- This testing is done by giving load more than the threshold value and check where it exactly breaks.

3.Spike Testing- This testing is done by Sudden increase and decrease of the load to find whether it is breaking or not.

4.Volume Testing- The volume is increased to maximum and the testing is done.

Bug Life Cycle:

New- The bug is found and newly created by the tester.

Assign- When a bug is created then it is assigned to the developer triagic team, they will verify that bug and assign it to the particular developer.

Fixed- Once it is assigned to the developer ,it will be fixed and moved to retest.

Retest- The fixed bug is again assigned to the tester who has reported the bug and he has to retest it.

Reopen- If the bug is not fixed properly then it must be reopned and assigned to the developer

Verify- The bug must be retested and verified

Close- If the bug is fixed properly then it should be closed

Rejected- The bug is rejected by developer as the tester has wrongly understood the requirement.

Deferred- The bug is accepted but it is not a critical bug and It may be considered for next sprint.

Duplicate- Same bug created again so one bug will be deleted and followup with the first bug.

Priority:

When a logo of a company is broken it will not cause any impact to the application but from business perspective it is a high level problem. This is called priority.

High- Company logo or something that highly affects business is called high priority bug.

Medium- Bugs like alignment, font will come under medium priority

Low- Bugs like text type change or any small changes but not found by the user is called low priority.

Severity:

When an important function like login button is not working or something that affects the functionality of the application then it is severity.

Blocker- The bug that stops the entire process, like login button is not working is called Blocker and it must be fixed immideatly .

Critical- The bug that is affecting the functionality like validations is called critical and it should be fixed immideatly,

Major- Bugs like text box size are called major and it can be fixed in next built.

Minor- Minor bugs are like font colour font size and they can be fixed in next sprint.

Waterfall Model:

In waterfall model all the process will go step by step, for example if a product is to be done in 2 months the base built will be given at 1.5 months then only the tester can test that . When they find bugs then again everyone should change codes and it will increase work for everyone and mainly the time and cost will be increased.

Agile Model:

In Agile methodology development and testing will be done parellely , for example if a work is to be done in 2 months the scrum master will discuss this with developers ,QA member, Sales team in a sprint meeting and divide the work into 4 sprints. Each sprint will have 15 days and a prototype will be given every 15days by developers . Consider there are 5 models to be done in 2 months, first 15 days the developer will work on the critical model 1 and the testers will be writing test cases, second 15 days the developers will work on 2 and 3 model and the testers will test 1st model, Third 15 days the developers will work on 4 and 5 model and testers will test 2 and 3 model, Last 15days the testing team will have all 5 models to test. Once when a developerA completes the work in 15days then from 16th day the tester will start testing and DeveloperA will be fixing the bugs raised by the tester and DeveloperB will be working with the source code of DeveloperA for next sprint. A sprint resctraction meeting will be conducted at the end of sprint with all team members and will discuss about what gone well , what doesn’t go well and what is the learning in the last sprint.

Spiral Model:

In spiral model there are four steps, Requirement analysis and feasibility study, design,code,test. Feasibility study means what are all the possibilities and not possible things in that feature. First feature is analysed, designed, coded and testing is done and moved to production. For second fature the analysis ,design,code is done and for testing , the second feature is tested and then integration between second and first feature is tested and finally first feature is tested. In the same way for every new feature the step by step testing is done. This will take more time and cost. If there is any code change then it will take more effort and code changes to complete it. It is now used rarely in some organizations as Agile methodology is more convenient to them.

Vmodel:

Verification is the process of testing or checking the internal codes, documents and this is done by developers and BA, it is a static testing. Validation is the process of testing the actual software and its quality, it is a dynamic testing and this is done by testers.

In V model the developers and teters work parallely like developers will do verification and QA will do validation. During the requirement phase the acceptance criteria is written, during Architecture phase the integration testing test cases are written , during the design phase the units, models and subsystem tests are planned, then codeing is done. After codeing is tested by developers by unit testing , then the written test cases are tested with the module that is given by the developer. It is also somewat similar to agile method.

Test case Techniques:

1.Error Guessing:

This method is used for drafting the test cases. Escpecially for the negative test case drafting, this error guessing is used.

2. Equilent :

For this technique we select the range from 1 to 500 with equal break between them

-100 to 0 ,59 fail

0 to 100,67 pass

101 to 200, 120 pass

201 to 300,290 pass

301 to 400, 370 pass

401 to 500, 460 pass

500 to 600, 580 fail

3.Boundary Value Analysis:

Taking range from 1 to 10,

A-1=fail

A=pass

A+1=pass

B-1=pass

B=pass

B+1=fail