**Day 1 -Assignment-GUVI**

1.Types of Testing

We have 2 types of testing

* Functional testing
* Non-Functional testing

Functional testing

Functional testing mainly concentrates on validate the functionality of the software

And concentrate on user requirements

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In functional testing we have unit, integration, regression, smoke, sanity, white box, black box testing etc…

Unit Testing:

* Unit testing is a testing conducts on the single component of the software.
* They concentrate on the single program.
* Testing conducted by the developer

Eg: Gmail it has n number of functionality login, inbox, outbox, compose etc…

They concentrate on login functionality and they do the testing.

Integration testing:

* Integration testing conducts between two or more components.
* Focus on checking the data communication between multiple module.
* We keep on adding the new module to the existing module and check the dataflow between them.

Eg: In Gmail we compose and send the mail it should reflect in sent items one module and it should reflect in the outbox it is another module they check the data flow between this two.. then user delete the mail it should reflect in the bin like this they check the data communication

Regression testing:

* Regression testing verify the functionality of the application whenever we add the new

functionality or we write new code so it will not affect the existing functionality..

* It is end to end testing we run all testcases in regression testing
* For eg: we want to develop the application for image and video editing we developed the app we have 1000 test cases we run the test cases in regression testing. Test cases passed the testing we release the built ..so the client want some extra features we want to add new features .. we have another 200 test cases for new features so we want to test 1000 test cases then 200 so total 1200 test cases we want to run and to check the functionality are working correctly or not..
* We have to make sure it will not effect the existing functionality.

Smoke Testing:

Smoke testing is high level testing we concentrate on critical or main functionality of the application ..

We run less number of test cases and check whether the build is stable or not in the environment..

In smoke testing it should pass the basic functionality testing like installation etc….

Sanity Testing

Sanity testing is used to check the whether the bug fix or new functionality are working fine or not.

White box testing

White box testing conducted by the developer it done on coding part they should know the knowledge about coding

Black box testing

Tester will do the black box testing they test only the functionality of the software as per the requirement.

Grey box testing

The combination of white box and black box testing is a grey box testing..

Non Functional testing

Other than the functionality testing ,In non-functional testing we do performance, load ,volume, stress and security testing etc….

**2.STLC Phases**

Software Testing life cycle it is part of development process it includes

* Requirement Analysis
* Test planning
* Testcase development
* Environmental setup
* Test case Execution
* Test cycle closure

Requirement Analysis:

We take the requirement from the client it is documented already

Then we refer the document we do the remaining process.

Test planning:

* In test planning we identify the resource, team formation and time estimation, preparation of the test plan review and test plan sign-off.

Testcase development(test designing)

* Preparation of test Sceneries, and test case preparation(step by step process to check the functionality. Review of test cases and sign off.

Environmental setup:

We set up the environment for the test case execution.

Test case execution:

Executing the test cases and do relevant testing and reviews and find the defects, tracking the defects and report to the developer.

Test Closure:

Analysis the report and bug reports evaluating exit.

3.Qualities of manual tester:

* Find out more bugs
* Communication
* Write Test cases to cover all functionality
* Update the test cases in every cycle.

4. Waterfall and agile methodologies difference

* Agile is iterative process, waterfall is non-iterative process
* The project timeline is fixed in advance in waterfall and in agile it is not fixed and project is mapped as project progress.

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* Client not involved in the during the project and deliverance in waterfall. Client involved in every stage of the project and give the feed back In agile method
* Project stages is outlined from the beginning in waterfall .

In agile it is divided into the subtask called sprint we can make changes in every stage.

* Project testing is done only after it is completed in waterfall.

Testing is done simultaneously in agile.