**STLC**

STLC is a fundamental part of software development life cycle but STLC consists of only testing phases.

There are 7 stages in it:

1. Test initiation testing
2. Test plan
3. Test case scenario
4. Test case design
5. Test case execution
6. Test summary report
7. Test closure report.

1. Test initiation testing:

It is a first step of Software Testing Life Cycle (STLC).

In this phase we understands the

1. Requirement of the project, means domain of the project

There are diff types of domains like banking domain, telecom domain, educational domain, health care domain, insurance domain, e-commerce domain.

And every team member should have knowledge about that (the domain)

Then,

1. Scope of the project:

In this phase project manager is involved and strategy of the testing will be decided here by project manager. Also which method we are going to use for testing will be decided.

1. Risk involved in the project:

* Less resources: if less no. of resources involve then person need to do extra work/efforts
* Less test data: if suppose there is less test data or no test data the we perform “Ad-hoc testing”
* Lack of knowledge: at that time KT (Knowledge transfer) will be provided.

1. Test Plan:

As per scope of the project test methodology decided and then as per that project manager will prepared test team. Means he\she just distribute work to the team.

Then here we also decide estimation of time means start date and end date of the project.

1. Test Scenario:

Test Scenario = means What to test? It is also called “Test condition” or “Test Possibility”

1. 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 means multiple steps involved while testing

-Test cases are mapped with sorted user stories.

And tester is responsible for test case design.

1. Test Case Execution:

Here we start testing as per test case design steps.

If we found any defect then we perform retesting and raise the bug ticket.

Once developer resolved issue then we again perform ‘Retesting’ and ‘Regression Testing’.

1. Test Summary Report:

- It is report of testing.

- Each tester has its own test report.

- Whenever tester perform testing on the module he/she create document of testing.

The report involve few points,

1. Name of the Module
2. How many test scenarios?
3. How many test cases?
4. Passed
5. Failed

We create bug ticket for failed taste cases.

We create this report in excel format and send to the testing team leader.

1. Test Closure Report:

‘Team leader’ is responsible for to make test closure report.

In this closure report he checks whether all process are correct or not.

Activities involve in test closure report are 1. Analysis of test summary report, 2. Analysis of bug ticket or bug report

Once the test closure report created then team leader send it to test manager or product owner.

* **Test Cases Review:**

Definition: Recheck test cases after writing.

There are 4 types of reviews:

1. **Self-review:** Review is going to be done by our self after designing test cases.
2. **Peer review:** Review is going to be taken by our team member /senior member.
3. **Internal review:** Tester, Product owner and developer all are involve in internal review.
4. **External review:**

It is perform by the client during UAT.

Development team, testing team, product owner and client all are involve in it.

We also called it walkthrough inspection.

**Q. How you are going to know about good test cases?**

1. Test cases should be simple and easily understandable
2. It should be complete all the functionalities
3. Do not assume functionality
4. Avoid test case repetition
5. It must be identifiable
6. Create test cases with end user in mind.

* **Requirement traceability matrix (RTM):**

- It is a mapping between prepared test cases and business requirement.

- RTM document is generally used to ensure the test coverage.

- This document is prepare before the test case execution.

- Due to this testing team will not miss any functionality during testing phase from the requirement specification.

There are 2 types of RTM,

**Forward traceability matrix:** it is a mapping bet prepared test cases and business requirements.

**Backward traceability matrix:** it is a mapping bet Defect and business requirements.

* **Bug life cycle/Defect life cycle:**

The purpose of Defect life cycle is to easily coordinate and communicate current status of defect which changes to various assignees and make the defect fixing process systematic and efficient.

**New:**

When we create a bug ticket first time then that time status of the bug is ‘New’

**Assigned:**

When we assign bug to the specific developer that time the status for the bug is ‘Assigned’

**Open:**

When developer doing coding changes for fixing the bug, that time the status for the bug is open

**Fixed:**

When developer done their coding changes and fixed the bug that time the status for the bug is ‘Fixed’

**Retest:**

When developer fixed the bug and again assign to us (tester) for retesting

**Reassign:**

Suppose at the time of retesting we found that the assign defect still present after the developers work then we again re-assign it to the developer

**Close:**

After retesting we found that the assign issue is 100% resolved then we close that ticket.