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STLC

The Software Testing Life Cycle (STLC) is a structured approach to testing software to ensure that it meets the desired quality standards and functions as expected. It includes various stages that guide the testing process, from the initial planning phase to the final delivery of a bug-free product

1. Requirement Analysis

Goal: The first step is understanding and reviewing the software's requirements to ensure we know what needs to be tested.

Steps Involved:

- We go through technical requirements in detail.
- Identify which requirements can actually be tested (testable requirements).
- Collaborate with stakeholders like business analysts and developers to clarify anything that's unclear.

Outcome: We create a Requirement Traceability Matrix RTM document

2. Test Planning

Goal: In this phase, we put together a detailed plan for how we will carry out the testing.

Steps Involved:

- Define the scope of testing (what will and won't be tested), set objectives, and allocate resources.
- Plan the testing schedule and make sure everyone knows their responsibilities.
- Identify deliverables (like test cases, scripts, etc.), and estimate the time and effort required for testing.

Outcome: We produce a Test Plan document that will guide the entire testing process.

3. Test Case Development

Goal: Here, we create the test cases and test scripts based on the requirements which is done by test lead or Manager

Steps Involved:

- Write detailed test cases, usually derived from the user stories or requirements.
- Develop automated test scripts if we're doing automation testing.
- Create the necessary test data for executing the tests.

Outcome: We have a set of Test Cases, Test Scripts, and Test Data ready for execution.

4. Test Environment Setup

Goal: This phase is about preparing the right environment to run the tests.

Steps Involved:

- Set up the hardware, software, and network configurations required to conduct the tests.
- Install any necessary testing tools or dependencies.
- Ensure the test environment is as close as possible to the production environment.

Outcome: We have a Test Environment ready to go for executing the tests.

5. Test Execution

Goal: This is when we actually run the tests and check if the software behaves as expected which is done by Testers.

Steps Involved:

- Execute the test cases manually or using automated scripts.
- Log any defects or issues found during testing.
- Verify that the results match the expected outcomes.

Outcome: We have Test Logs, Defect Reports, and Test Execution Results.

Defect Reporting and Tracking

Goal: In this stage, we identify and track any defects or issues that arise during testing.

Steps Involved:

- Report defects with all the necessary details (steps to reproduce, severity, etc.).
- Keep track of the status of defects—whether they're fixed or still under investigation.
- Re-test the issues once they've been resolved to confirm they are fixed.

Outcome: We maintain Defect Logs and generate Defect Reports to keep everyone in the loop.

6. Test Closure

Goal: Finally, we close out the testing phase once everything is tested and all issues are resolved.

Steps Involved:

- Summarize all the testing activities and check if everything that was planned has been completed.
- Prepare a Test Summary Report, including metrics to show how the testing went.
- Hold a review meeting to evaluate the entire testing process and share any learnings for future projects.

Outcome: We create a Test Summary Report, a Metrics Report, and transfer knowledge to the support team.