SOFTWARE TESTING LIFE CYCLE

1 Software Testing Life Cycle:

Software Testing Life Cycle (STLC) is a systematic and structured approach to testing software applications. It outlines the different phases and activities involved in testing a software product. The STLC process ensures that testing is carried out in a planned and controlled manner, leading to a higher-quality end product. Here's an introduction to the key phases in the Software Testing Life Cycle.

I. Requirement Analysis Phase:
- In this phase, the testing team reviews and analyzes the requirements documents to gain a thorough understanding of what needs to be tested.
- Testers identify testable features, dependencies, and potential risks.

II. Test Planning Phase:
- A test plan is created which outlines the overall testing strategy, objectives, scope, resources, and schedule.
- Testers identify the types of tests to be conducted, including functional, non-functional, and specific testing techniques.

III. Test Design Phase:
- In this phase, test cases and test scripts are created based on the requirements and design documents.
- Testers develop both positive and negative test scenarios, specifying inputs, expected outputs, and execution steps.

IV. Test Environment Setup Phase:
- The testing environment, which includes hardware, software, network configurations, and test data, is established.
- This phase ensures that the testing environment accurately simulates the production environment.

V. Test Execution Phase:
- Testers execute the test cases using the prepared test environment.
- They record actual results and compare them with expected results to identify discrepancies (defects).

VI.   Defect Reporting and Tracking Phase:

- When discrepancies are found, they are logged as defects in a defect tracking system.
- Each defect is assigned a severity level and prioritized based on its impact on the system.

VII.   Regression Testing Phase:

- After defects are fixed, regression tests are executed to ensure that the changes did not introduce new issues.
- This phase ensures that existing functionalities remain intact after modifications.

VIII.   Release Readiness Phase:

- The testing team assesses whether the software is ready for release.
- They evaluate if the testing objectives have been met and if the quality is acceptable for the intended audience.

IX.   Deployment and Post-Deployment Phase:

- Once the software passes all tests and meets the release criteria, it is deployed in the production environment.
- Testers may also conduct post-deployment testing to verify that the software performs as expected in the live environment.