Test Execution

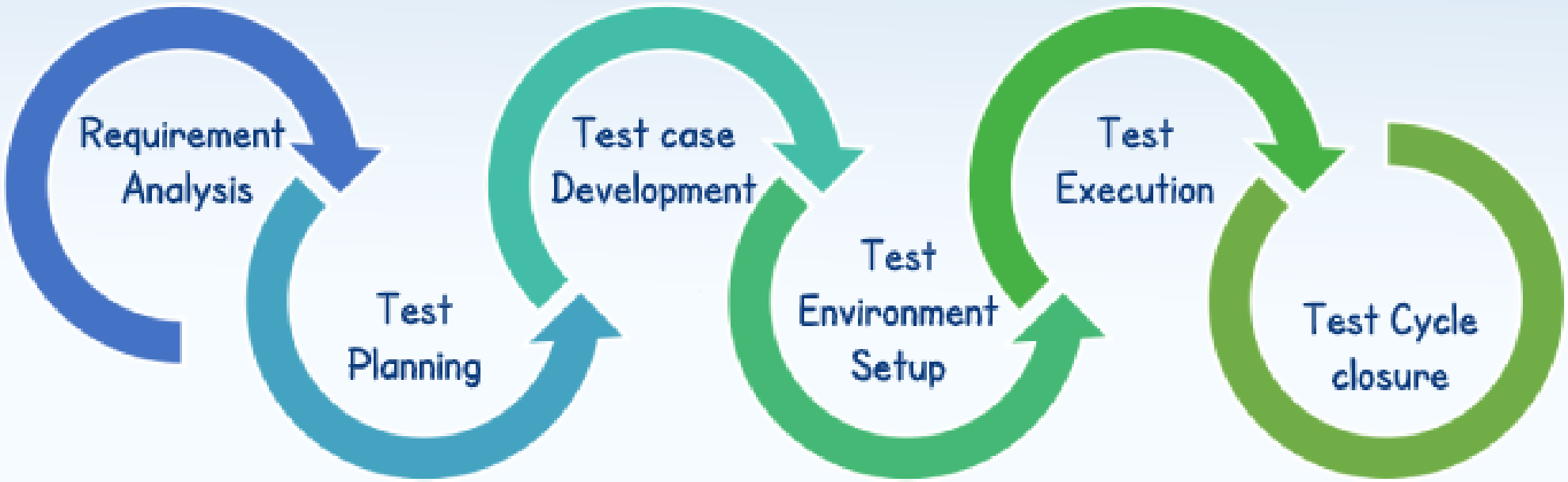
Plan, Design, Execute, Report

What is test execution?

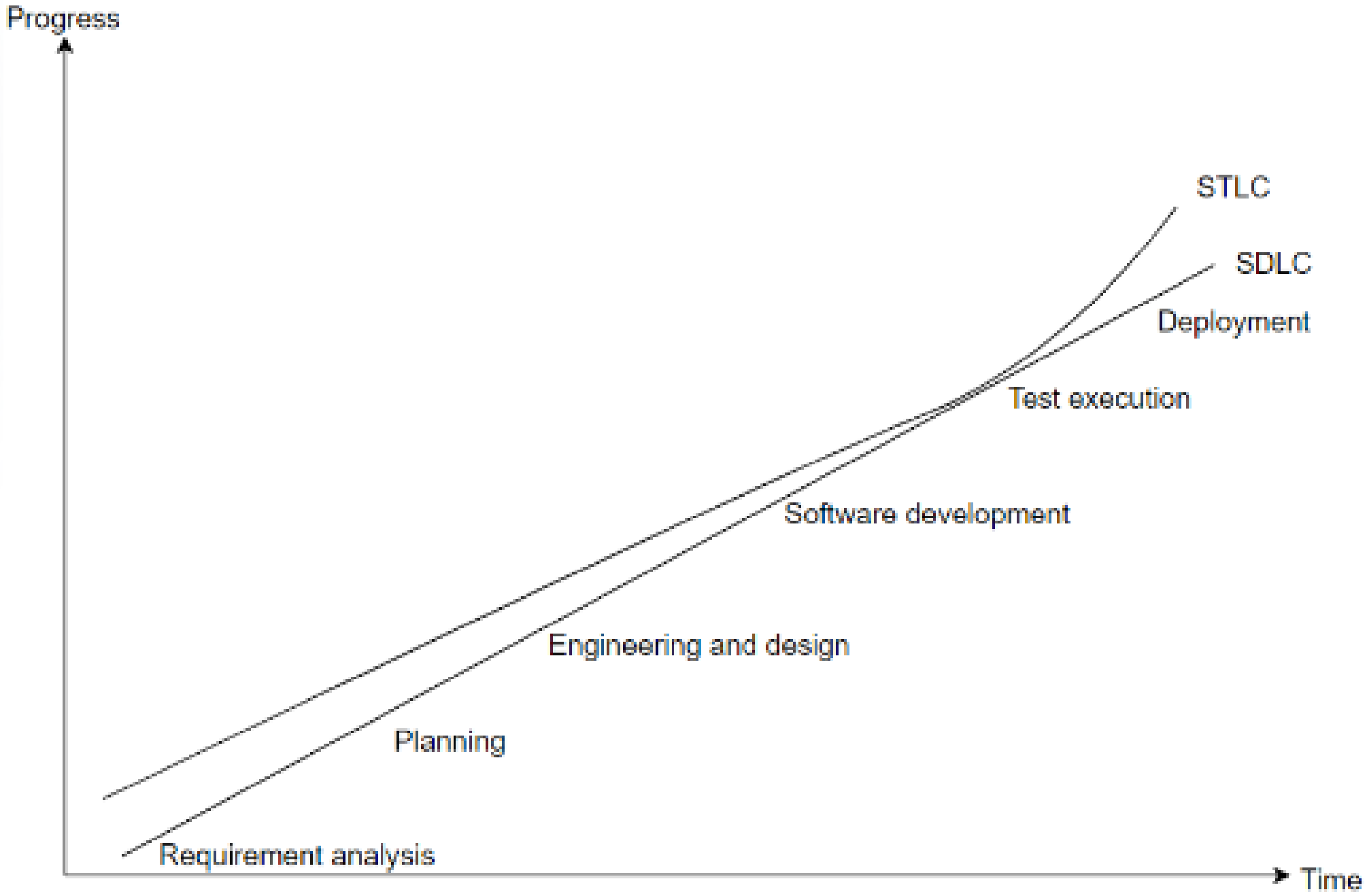
Test execution means carrying out (or executing) a set of specially-designed tests on a software product, to verify that it meets all of its pre-defined specifications and functionality. The tests are performed according to a test plan, which breaks the whole activity down into separate modules and/or requirements, with detailed test cases for each one.

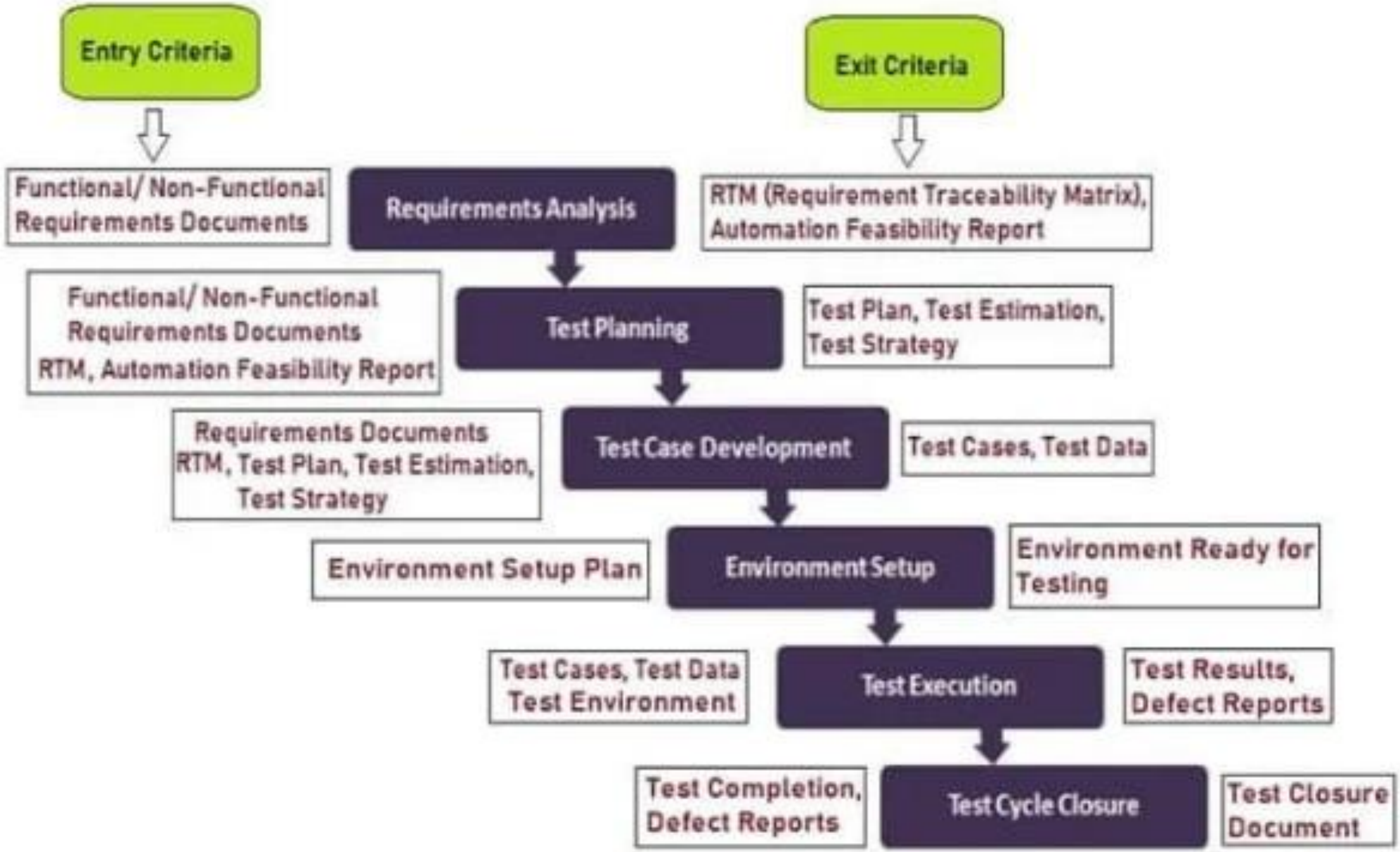
On the basis of primed documentation and a properly set up test environment, tests are run. All test results are recorded by the test management system. Negatively passed tests—those in which the outcome is different from what was anticipated—are noted as mistakes and forwarded to the project team for script amendment and subsequent rechecking after rectification.

Phases of STLC Model



Test Execution refers to the execution of test cases of software applications to ensure they meet the pre-defined requirements and specifications. In this case, it compares the intended results with the actual results. The Test Execution phase is an essential part of the Software Testing Life Cycle (STLC) and Software Development Life Cycle (SDLC). It begins with the completion of the Test Planning phase.


Progress
STLC
SDLC
Deployment
Test execution
Software development
Engineering and design
Planning
Requirement analysis
Time


Entry Criteria
Exit Criteria
Functional/ Non-Functional Requirements Documents
Requirements Analysis
RTM (Requirement Traceability Matrix), Automation Feasibility Report
Functional/ Non-Functional Requirements Documents RTM, Automation Feasibility Report
Test Planning
Test Plan, Test Estimation, Test Strategy
Requirements Documents RTM, Test Plan, Test Estimation, Test Strategy
Test Case Development
Test Cases, Test Data
Environment Setup Plan
Environment Setup
Environment Ready for Testing
Test Cases, Test Data Test Environment
Test Execution
Test Results, Defect Reports
Test Completion, Defect Reports
Test Cycle Closure
Test Closure Document

Points that ensure the effective execution of test cases

- Ensure that the test design (i.e., defining the test cases) is complete.
- Test management tools must be available to use.
- A proper workflow to track test results and metrics.
- Every folk should know what data to be tracked.
- Team members must know the criteria for logging tests and reporting bugs.

Test Execution evaluates the efforts of all team members involved in the development process and answers some of the below questions:

Important activities of the Test Execution phase

System Integration testing

Defect Reporting

Defect mapping

Re-testing

Regression testing

Ways to perform Test Execution

Run test cases:

Run test suites: A test suite is a collection of test cases (both manual and automated).

Run test case execution and test suite execution records -:Recording Test Execution is a key activity in the test process

Generate test results without execution:

Modify execution variables

Run manual and automated tests:

Schedule test artifacts document the results of previous tests and provide information about what needs to be tested in future Test Executions:

Defect tracking:

Guidelines for Test Execution

Test Execution consists of three phases: the creation of test strategy and cases, execution of test cases, and validation of test results.

Select the test suites based on the potential defects and business requirements. Further, they are shared with the development and business team for their reviews and feedback.

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Test Readiness Review occurs before the Test Execution phase and after build deployment

Exploratory testing is performed once the build is ready for testing to eliminate any critical defects before starting the next level of testing.

After the deployment phase, smoke and sanity testing are performed to ensure that the current build is working correctly.

The output of the execution of test cases is in the form of test reports, i.e., bug report or Test Execution status report

Test Execution Aspects

1. Make sure the test design and test case creation are completed.
2. Select a subset of the test suite for this cycle based on risk.
3. For each test suite, assign test cases to testers.
4. Track test status, execute tests, and report bugs continuously.
5. Identify and resolve blocking issues as they arise.
6. Report daily statuses, adjust assignments, and reevaluate priorities.
7. Analyze and report findings from the test cycle.

Test Execution States

1. **Pass**: The test procedure is run and satisfies the intended result.
2. **Fail**: The test procedure is run but does not satisfy the intended result.
3. **Inconclusive**: Further analysis is needed to determine the results of the test.
4. **Block**: This test procedure cannot be run since one of the test case requirements has not been met.
5. **Deferred**: The test procedure is not yet executed and will be scheduled for a future test release for execution.
6. **In progress**: A test procedure is currently being executed.
7. **Not run**: No test has been run yet.

Test Execution Priorities

choose the right tests and prioritize them effectively

- Risks covered
- Platforms covered
- Test complexity
- Test case depth
- Test case breadth

Test Execution Report

The software Test Execution report is one of the important deliverables offered to the client after completing the software testing and development process

- Test Summary Report Identifier
- Summary
- Variances
- Comprehensive Assessment
- Summary of Results
- Evaluation
- Summary of Activities
- Approval

Achieve Faster Test Execution Cycles

Cloud testing is most typically used to simulate testing environments over the cloud. LambdaTest is one such cloud-based cross browser testing platform that lets you test your web and mobile applications across 3000+ browser, device, and OS combinations. By leveraging parallel Test Execution on LambdaTest's online Selenium Grid, organizations and enterprises can accelerate their testing efforts and improve their product's quality. To test your websites and applications in real-user conditions, you can harness LambdaTest real device cloud.