

1.4 Test Execution and Defect Management:

- Understanding the process of executing test cases and capturing test results?

Ans:- Test Execution Reporting is a crucial process that involves analysing, gathering and presenting essential test execution details and results to stakeholders. It is a process of documenting and communicating the results of the test execution phase during software testing.



Test execution reporting involves summarising the outcomes of test cases, capturing any issues or defects identified, and providing relevant information to stakeholders. The primary goal of test execution reporting is to offer visibility into the quality of the software being tested and to aid decision-making regarding the readiness of the software for release.

Test Execution Report is a structured document with the intent of summarising the testing activities, their outcomes and the overall quality of the software under test. This report helps the teams visualise their product's quality and plan their activities timely adhering to the release timelines.

With an increase in demand for having all information in one place, from the test suites/test cases counts, and success/failure percentage to their linked defect information and run history trend, Test Execution Reports have evolved and become detailed over the years, in order to fit with these market requirements.

Test Reporting tools like [BrowserStack Test Management](#) are used to create detailed Test Execution Reports.

Why is the Test Execution Report important?

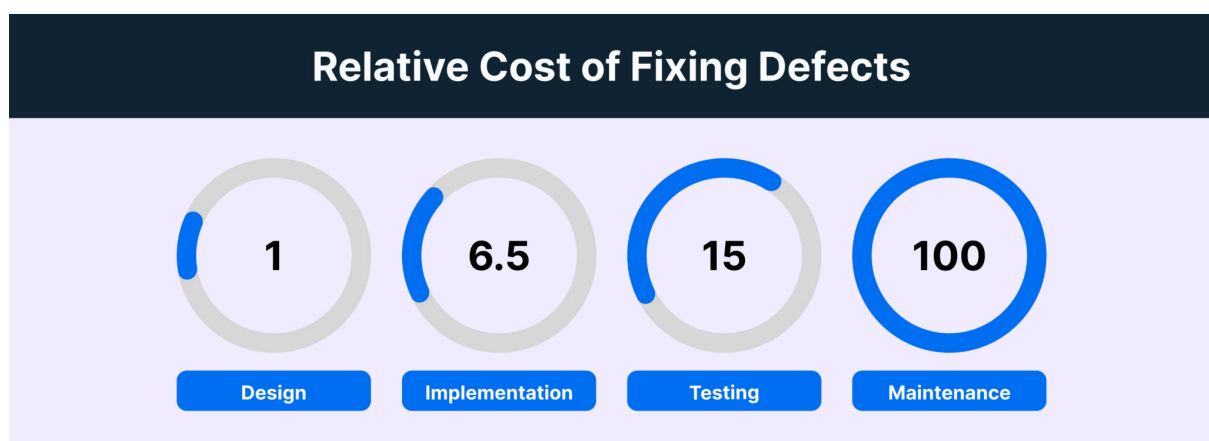
Test management is crucial for software development from an ROI perspective. It helps with:

1. Cost-effectiveness
2. Ensure release readiness
3. Improving User Churn Rate
4. Better Visibility and Control

Cost-Effectiveness

A good Test Execution Report helps in identifying critical bugs very early in the cycle. This saves a lot of time and cost as the testers do not need to manually run the tests and report issues.

Detecting a bug faster is always crucial as it can save up to 85% of the cost that would occur if they are caught later in the cycle.



Ensure Release Readiness

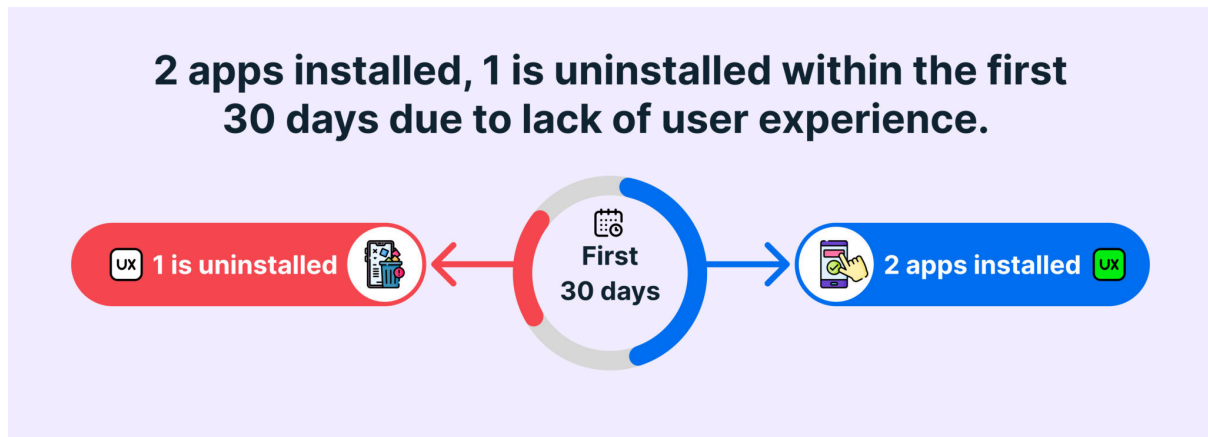
Test Execution Report validates that the requirements are successfully met. It aids in decision-making by presenting the current status of the software under

test. It helps identify defects and issues, classifying them based on severity, which makes it easier to decide the release readiness.

Nearly 21% of the software project failure is caused due to premature release or time constraints. Getting a clear sense of release readiness with test coverage assessment, defect root cause analysis, and requirements validation, by Test Execution Report helps deliver high-quality software.

Improving User Churn Rate

Software industry is highly competitive, and users expect a seamless bug-free user experience to continue using an application.



Test Execution Report contributes to continuous improvement in the testing process. Teams can analyse the report to identify areas for process enhancement and optimization. This can ensure a bug-free software release for the users, improving the overall user churn rate with a better experience.

Test execution reports have detailed information about the number of tests executed, test scenarios, none of the tests that were passed/failed, known defects if any and much more. These details provide valuable insights about the overall product health.

Better Visibility and Control

Test Execution Report in Test Management Tool allows project stakeholders to track progress, identify bottlenecks, and make informed decisions, especially for larger projects. It enables project managers to have better control over the testing activities.

Test execution reports provide the necessary information and valuable insights to stakeholders about the product quality, help them keep track of the product and decide whether it is ready for release. It also helps them in measuring whether it is aligning with the business requirements.

Still managing Tests manually?

Check out BrowserStack Test Management Tool to manage your manual and automation tests in a central dashboard.

[Contact Sales](#)

Feature	Manual Testing	Automated Testing (BrowserStack)
Powered by AI		✓
Faster Platform		✓
Easy Integrations		✓
Cost Effectiveness & Scalability	Expensive, Non Scalable	Up to 40% SAVINGS

Who needs Test Execution Reporting?

Test Execution Reporting is used for delivering high-quality software applications by:

1. Developers, who perform unit testing and debug code based on test results, deliver error-free code.
2. QAs, who test the application using different testing techniques like functional, regression, usability, and cross-browser testing to find bugs and document them in detailed Test Execution Reports.
3. Product Managers, who foresee the entire software development life cycle of the product and ensure optimum performance with faster delivery and high quality.
4. Business Analysts, who ensure all the test cases are well aligned with the business requirements specs at every stage, keeping users' interests in mind.

Components of Test Execution Report

→ The different components of a Test Execution Report are:



Test Scenarios

This gives us the details as well as total no of scenarios that were executed.

→ Test Cases

This gives us the details as well as the total number of test cases under those scenarios that were executed.

→ Pass percentage

This gives us the percentage or the count of the test cases that passed.

→ Fail Percentage

This gives us the percentage or the count of the test cases that failed.

→ Skipped/Aborted Percentage

This gives us the percentage or the count of the test cases that got skipped due to any missing prerequisites or any environmental issues.

→ Test Duration

This gives us the total time taken by all the test cases to run. Additionally, on clicking individual test cases, it tells us the time taken by that particular test case.

→ Test Environment

This gives the environment details where the tests were run.

→ Last run status

This tells whether a particular test case had passed in the last run or not.

→ Defect link

This gives us the related bug id of a test case, if any.

→ Screenshots/Video Logs

Screenshots or attachments that provide visual evidence of test execution and identified issues.

→ Test Run Trend

This captures the overall run history trend over last x runs, and indicates whether the trend is overall increasing or decreasing.

Recommendations

To ensure continuous improvement in the process, recommendations are important as they make the next test cycle more efficient.

Conclusion

Test Execution Report helps in getting a comprehensive understanding of the software's status and allows us to take any essential steps in order to improve the overall quality. It also helps in fostering collaboration and ensures everyone is on the same page. It offers transparency which is essential in developing complex software.

Using tools like [Browserstack Test Management](#) you can create, manage and analyse test execution reports with its centralised dashboard. You can maintain a centralised repository for all your manual and automated test execution results for better visibility and control over the testing process.