

Test Management Approach in Product Testing

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Overview

Product testing is more complicated, labor-intensive, and time-consuming than ever before. Businesses are demanding greater openness, transparency, and scalability from their software Investments and looking for versatile solutions that enable them connect to users and resources worldwide while leveraging their existing investments. As a result, contemporary business applications run on many different platforms and in many different environments and feature add on modules that support every imaginable business process. All this versatility has multiplied the number of variables that may affect the performance of an application making the task of testing software more complicated and time-consuming than ever before.

Industrial Challenges in Product Testing

- Organizations are under increasing pressure to complete their testing in ever-shorter time frames.
- New features may suddenly appear or disappear, the design and functionality of product features often change to meet the demands of the marketplace or to accommodate tight schedules.
- Many testing organizations are abandoning outmoded paper-based systems and turning to software test management solutions to organize, plan, and analyze their testing efforts.
- The products have a rich set of features and many of the features can be implemented in multiple ways increasing the number of possible scenarios to be tested.
- The users expect the same level of reliability, stability and multi vendor operation from the newer products, as they get from the traditional products.
- The testing community is also vast with diversified backgrounds and using different test tools and methodologies.
- Due to fast changing standards the product releases have a short cycle time.

Efficiency of Product Testing Management Solutions

To meet the challenges many testing organizations are abandoning outmoded paper-based systems and turning to software test management solutions to organize, plan, and analyze their testing efforts. Because test management solutions enable businesses to work more intelligently and efficiently. Test management solutions provide the following benefits:

- Manage knowledge and facilitate communication
- Enforce the standardization of test cases
- Promote the creation of reusable test cases
- Leverage previous results in test planning
- Respond to issues quicker
- Make information accessible

Test Management Approach

Test Planning and Organization

Test planning begins with the identification and definition of product features in a feature list: a simple list of the visible functions, sub functions, commands, menu choices, reports, and so on that needs to be tested. It ultimately forms an outline of the testing project in which the product features are categorized and prioritized.

Test Case Definition and Standardization

The Test Management approach enables organizations to define custom test cases and enforce standardization through test templates. A test template is a blueprint for creating test cases that may be used to test product features and performance across multiple builds, platforms, and environments. Test templates can be easily edited, copied, and duplicated. Changes in the design or functionality of a product feature can be easily accommodated. Test templates enable testing organizations to control the distribution of test cases and to implement a standardized look-and-feel for all test cases. Test case standardization also ensures that test results are consistent and that the data collected from different tests may be compiled and compared.

Running Tests and Tracking Results

Test tasks give testers the information they need to set up and execute a test (the environment, test procedure, and expected result), they enable the testing team to track and analyze the results of the test, and they are the foundation for any defect reports based on that test.

The analysis summary report show the number of test tasks assigned, the number of tests run, the percentage of the tests that passed or failed, the time required to execute the tests compared to the time estimated in the test plan.

Submitting Bug Reports

Bug's discovered during testing are submitted to the development team for resolution, and the fixes are retested in subsequent regression testing. The Bug Tracking Report enables testers to submit Bug's immediately while it is still fresh in their minds. The quicker the tester reports the Bug the less likely the tester is to forget key details that will enable developers to reproduce the Bug.

Linking Test Cases to Bug Reports

During the course of product testing, QA engineers may encounter bugs that are responsible for malfunctions in many different product features. QA engineers may submit multiple identical bug reports to developers. The submission and re-submission of what are essentially identical bug reports only creates more work for the developers. The Bug Tracking Report links Test Cases to the respective Bug's enabling testers and developers to share information and work more effectively.

Test Closure and Summary

A final test summary report is prepared and submitted to the client. Metrics related to schedule and defects are prepared and an analysis is done and recommendations are made. A process and a stable framework for handling on-going product testing requirements on a long-term basis are implemented.

Conclusion

The Test Management Solution enables testing organizations to manage every stage of the product testing life cycle from test case design, to test execution and test analysis more effectively and efficiently resulting in reduced costs and the ability to deliver high quality products.

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