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Testing Phase in SDLC

Software development lifecycle (SDLC) is a multi-phase framework guiding software development processes. Explore the components of the testing phase, including three types of tests: quality assurance, system integration, and user acceptance.

Testing Phase of SDLC

The testing phase of the software development lifecycle (SDLC) is where you focus on investigation and discovery. During the **testing phase**, developers find out whether their code and programming work according to customer requirements. And while it's not possible to solve all the failures you might find during the testing phase, it is possible to use the results from this phase to reduce the number of errors within the software program.

Before testing can begin, the project team develops a **test plan**. The test plan includes the types of testing you'll be using, resources for testing, how the software will be tested, who should be the testers during each phase, and **test scripts**, which are instructions each tester uses to test the software. Test scripts ensure consistency while testing.

There are several types of testing during the test phase, including quality assurance testing (QA), system integration testing (SIT), and user acceptance testing (UAT).

Types of Tests

During **quality assurance (QA) testing**, developers test the software's procedures and processes - the software must operate according to the customer's requirements.

System integration testing (SIT) checks how well the software interacts with other software applications. For example, when a software application is developed for a smartphone, the new application is tested with various types of cellular operating systems on different kinds of phones. Another common type of integration testing occurs when a website is developed and the customer wants to recreate the same website for mobile applications. A software developer will test the revised code for the mobile website to ensure that the website operates well on different kinds of mobile devices.

User acceptance testing (UAT) is also called beta testing, or end user testing. During the UAT process, developers test whether the software or system works for the end user. In other words, the people who will use the software now have an opportunity to test their new product. User testing gives potential customers the opportunity to provide feedback on software functionality.

Users will look for things like whether the system works with other systems, if the system crashes while performing specific functions, if the software uploads and downloads quickly, and if the software does what the user wants it to do promptly.

Lesson Summary

The testing phase of the software development lifecycle focuses on investigation and discovery. This phase is important because developers can determine if their code and programming work according to customer specifications. The testing phase includes quality assurance testing (QA), system integration testing (SIT), and user acceptance testing (UAT).

Quality assurance testing (QA) tests against the customer's procedures and policies. **System integration testing (SIT)** tests how the software interacts with other software applications. And, **user acceptance testing (UATs)** tests whether the application works the way the customer requires.

Developers use test plans to guide them through the testing process. Test plans include resources for testing and test scripts.