

Regression testing

Regression testing is the process of retesting a software application after making changes or modifications to it, to ensure that the new changes have not adversely affected the existing functionality of the software. This type of testing is essential for detecting defects and issues that may have been introduced during the development cycle, and ensuring that the software continues to function as intended after modifications.

A real-life example of regression testing is the case of a popular mobile banking application. The app has been developed and released to the public, and users have been using it to manage their finances on their mobile devices. However, the development team has received feedback from users that the application is slow and unresponsive when accessing account information.

The team decides to make some modifications to the application to improve its performance. They optimize the code, fix some bugs, and add some new features. Once the modifications are completed, the team conducts regression testing to ensure that the changes have not affected the existing functionality of the application.

During regression testing, the team tests the app's login functionality, balance inquiry, transaction history, and other critical features. They also test the new features that have been added to the application. They use various testing tools and techniques to simulate real-life scenarios and test the application's performance under various conditions, such as network interruptions, low battery, and low memory.

The regression testing process reveals that the modifications have indeed improved the application's performance. However, it also uncovers a few issues that were not present before the modifications. For example, the team discovers that the application crashes when the user tries to view the transaction history of a specific account. They also find that the application takes longer to load when the user's device is low on memory.

The team then proceeds to fix the issues and conduct further rounds of regression testing until they are satisfied that the application is functioning correctly. They then release the updated version of the application to the public, confident that the modifications have improved the application's performance and that the existing functionality has not been negatively affected.

In conclusion, regression testing is an essential part of the software development process. It helps developers ensure that modifications to the software do not adversely affect existing functionality, and that the software continues to function as intended. Real-life examples, such as the mobile banking application, demonstrate the importance of regression testing in identifying and fixing issues and ensuring the quality of the software.