

Analyzing the Effectiveness of Different Testing Techniques in Ensuring Software Quality

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Abstract : Software testing is an essential process in software development that aims to identify defects and ensure that software is functioning as intended. Various testing techniques are employed to achieve this goal, but the effectiveness of these techniques varies. This research paper analyzes the effectiveness of different testing techniques in ensuring software quality. The paper explores different testing techniques, including manual and automated testing, and evaluates their effectiveness in terms of identifying defects, reducing the number of defects in software, and ensuring that software meets its functional and non-functional requirements. Moreover, the paper will also investigate the impact of factors such as testing time, test coverage, and testing environment on the effectiveness of these techniques. This research aims to provide valuable insights into the effectiveness of different testing techniques, enabling software development teams to make informed decisions about the testing approach that is best suited to their needs. By improving testing techniques, the number of defects in software can be reduced, enhancing the quality of software and ultimately providing better software for users.

Keywords : software testing life cycle, software testing techniques, software testing strategies, effectiveness, software quality

Conference Title : ICSME 2023 : International Conference on Software Maintenance and Evolution

Conference Location : Barcelona, Spain

Conference Dates : May 22-23, 2023