

Research on symbolic execution techniques in automatic test case generation

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Abstract: This topic focuses on researching symbolic execution techniques to automate the process of generating Test Cases. In the context of increasing software quality requirements, the topic aims to address the critical issue of improving efficiency and accuracy in the testing process. By combining theoretical methods with experimentation, this research will build a system to support automated Test Case generation based on symbolic execution techniques. The objective of the topic is to contribute to the sustainable and efficient development of the software testing process through the application of advanced technologies. The significance of the topic lies in its practical applicability, providing an effective automation solution for the Test Case generation process in software development projects.

Keywords: symbolic execution technique, test automation, test case, advanced technology, software development process