Testing from UML Design using Activity Diagram: A Comparison of Techniques

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Abstract

UML diagrams present the graphical representation of the system. Model-driven testing not only helps in early identification of faults but also results in reducing the testing effort at the later stages of SDLC. This paper intends to identify and make a critical review of different techniques for test case generation using UML activity diagrams (UAD). System activity diagram is used to depict the different dynamic aspects of the system. UAD not only presents the sequential or concurrent activities but also presents the conditional and parallel activities. For this literature survey different aspects like test case generation, test automation, and test case prioritization & minimization using UAD has been explored. The analysis of the literature portrays that extensive literature exists regarding automation of the testing using various aspects of activity diagrams. Similarly, test cases prioritization has also been explored using the activity diagrams incorporating manual, automated and semi-automated techniques.

References


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Index Terms

Computer Science Software Engineering

Keywords

Test Case Generation, UML Activity Diagram, Software Testing, Test Cases, Test Automation