Abstract

Software testing is one of the important phases in determining software quality. In the software development cycle, the testing phase takes more than 50% of the development time. The process of creating test cases in software testing is the most difficult process and determines the success of the testing phase. Test cases for software testing can be created based on the existing analytical modeling in the software specifications. This kind of testing technique is known as model-based testing, which is one of the blackbox testing approaches.

In this study, the analytical model used is the UML Activity diagram. The reason for choosing UML Activity diagrams is because this diagram can model activities in software based on behaviors and conditions that are in accordance with the sequence.

The output of this research is a prototype of a test case generator using an activity diagram. The analysis of the suitability of the test cases generated for the Digi-OTA application is 100% when tested with valid data test specifications, while when tested with invalid test data specifications it produces 100% for approving actors, 95.98% for employee actors and 95.45% for detail officer actor.