Abstract

Recently, software development is do with an object-oriented development. In addition to UML modeling that describes the behavior of the system, UML can also be used for testing or so-called model-based testing. Test case generation must done before testing. In model-based testing, UML used at step test case generation. In model-based testing, the UML is used by test case generation. The advantages of this testing is that it can generate test case although software development is still in the design stage.

For generate test cases using activity diagram. Activity diagrams are graphical representations of all stages of the workflow. Excellence chosen activity diagram is a flow diagram illustrates various activities in the system that is being designed, how each flow starts, decision that might occur, and how they ended. Activity diagrams can also illustrate the parallel processes that may occur in several executions. This advantages is reflected in the basic activity diagram notation. In addition there are basic notation, activity diagram notations also has additional information to enrich themselves, example the object notation. Object notation illustrates the flow of objects in the activity diagram. Object notation is rarely used by developers because the object is already reflected in the sequence diagrams. The additional notation in this research is required, the improvement with the additional notation is made at pre-processing.

In this final task produced test case generator tools, so it is proven that the model-based testing eliminates some test case generation process at traditional testing, which is means a MBT faster than traditional testing in test cases generation, but must be ensured if activity diagram has been verified. The test case result has been tested for compliance with equivalence partitioning is always true when comparing the expected result and the actual result in the valid activity diagram and is always false in invalid activity diagram. Activity diagram of Bandung Smart and ATM Simulation has generate 7 test suite that is appropriate if executed result in the system under test, which means that no defect found so no needs to be fixed.

Keywords : model-driven testing, test case generation, activity diagram.