ABSTRACT

Software testing activity is one of the stages in software development that plays an important role in determining software quality. In general, the testing process spends about 40% -70% of the time and cost of the entire software development project. One or other fact that caused the difficulty is to find the right set of test cases.

State diagrams are one of the Unified Modeling Language (UML) models that commonly used to model the dynamic behavior of a system. State diagrams are useful for modeling reactive systems, where systems respond to external or internal events. State diagrams can also be used to design software test cases.

In this final project, the author has built a test case generator prototype using state diagram model with Breadth-First Seacrh (BFS) algorithm. The test cases result then tested using the equivalence partitioning method to check the suitability between the software requirement spesification with system under test. The calculation result of the test case execution is 100%.

Keyword*: Software testing, test case generation, UML state diagram*