Abstract

Automated Teller Machine (ATM) is a tool of financial transactions that have been commonly used by financial institutions to serve the customer. ATM has critical function, so the it need an accurate system modeling method such as formal methods.

Formal methods can produce unambiguous specifications, consistent, and complete, because it uses a mathematical description of each system needs. One of the formal specification method is the B-Method, which is designed to build the system specifications and has been widely used to build and develop a system that is critical. B-Method using B as a specification language. B-Method has many tools that can support the development of the specification, verification in the B-Method.

This final task specializes in security analysis of transactions at the ATM machines and Banks as the data center from an ATM. Basis for the specification obtained from the simulation of ATM systems which is then modified in accordance with the results of direct observations on the ATM machines in the real world. Result of the research in this final project shows that ATM system that can satisfy the safety requirement can be formal modelled with B-Method.

Keywords: B-Method, B, formal method, ATM, specification