

ABSTRACT

Automated testing in software development is gaining significance, particularly on Low-Code platforms like as Mendix, which facilitate visual and expedited application development. Mendix offers unit testing support via Microflows nonetheless, the scalability of tests remains constrained. This study seeks to enhance test coverage by converting the Microflow model into an Extended Finite State Machine (EFSM), then evaluated using the TestOptimal tool. The transformation process occurs in three stages: initial application logic, integration with the user interface, and optimization of transformation rules. The assessment used precision, recall, and traceability measures to evaluate the quality and completeness of the EFSM model's depiction of the current application logic. The findings indicated an augmentation in test coverage from 15 to 44 test cases, with elevated accuracy and recall metrics, especially for procedures independent of UI components or database interactions. This study demonstrates that the Model-Based Testing methodology with EFSM may extend the testing scope from unit to integration, while also offering a novel avenue for test automation on the Low-Code platform.

Keywords: *testing, Low-Code Development Platform (LCDP), Model Based Testing Extended Finite-State Machine (MBT EFSM), Mendix, Microflow*