

Model-Based Testing Approach for Web Applications

Li Ye

R&D, Multimedia Enhancement, Nokia Corporation
Valimotie 21, FIN-00380
Ye.2.Li@nokia.com

Abstract

Model-based testing is the technique relying on behaviour models of the system under test and/or its environment to derive test cases, for testing the functional and non-functional properties of the system. Especially testing the functional properties of the system is the mainstream trend in software testing research. Reported experiences reveal that model-based testing techniques seem to be particularly tailored for small applications. Whether this technique is suitable for complex Web applications (WebApps) is still under investigation. This paper first evaluates and compares different models, and then discusses a model-based testing approach for WebApps. The research in this paper focuses on testing the functional properties of WebApps that aim at verification and validation. Moreover, this paper tends to carry out research on testing WebApps by utilizing Use Cases that is a Unified Modeling Language (UML) model based testing approach, the research is conducted by WebApps case study testing the functional properties checking with the Use Case modeling based testing approach. The research shows how model-based testing approaches can be utilized in testing WebApps, and how UML and its extension mechanisms in modeling and testing WebApps could be further exploited.