

Abstract

Testing is a fundamental part of software development, where software tests can be used to find bugs in completed products or assist the software developer to build applications free of failures. For that purpose, it evolves general testing methods for generating and running tests in traditional desktop applications. For accessing web pages and their content, actual testing approaches for the Web concentrate on providing easy-to-use APIs. But these tools do not offer any support for dealing with the special characteristics of adaptive web applications. For example, adaptive web applications include a special user context, which describe the user himself, his device or his behavior. For that reason, the application needs two different internal components, one for creating the user context and one for adapting the requested output document. Actual testing methods leaving the test author with most of the work, because he must build separated test cases for each kind of user context. Otherwise he cannot perform test cases, which verify independently the different components of adaptive web applications to eliminate mutual reaction from one test case.

The goal of this thesis is to extract the specific requirements for the creation and automatic running of functional software tests in adaptive web applications. Additionally, different tools which provide the access of web pages and their content will be discussed. Finally, the identified weakness of actual testing methods is the starting point to design and implement a new testing approach especially for testing adaptive web applications.