Abstract

This research aims to conduct white box testing on the functionality and code validity of the Android-based application, namely Management Asset by XYZ, utilizing the JUnit Test and Espresso frameworks. The background of this research is rooted in the identification of several issues persisting in the application's interface and provided data. Furthermore, the study is motivated by the absence of in-depth testing on the application, which has not been previously undertaken by its developers. The testing in this research employs white box testing methodology, focusing on the internal structure and logic of the application, including the analysis of specific code coverage. The testing process unfolds through stages of code analysis, testcase generation, testcase execution, analysis of test results, retesting, and the reporting of test outcomes. The research findings demonstrate that the utilization of white box testing with the JUnit Test and Espresso frameworks effectively identifies several issues within the Management Asset by XYZ application. Additionally, the outcomes of this research can aid developers in enhancing the application's functionality to align it with its intended purposes. Moreover, the results highlight that white box testing, coupled with testing frameworks, can serve as an effective tool for addressing issues in Android-based applications.

Keywords: automated testing, white box, branch coverage, junit test, espresso, android.