

Universiti Teknologi MARA

**An Implementation of JUnit Test
Framework to Support Mobile
Application Testing**

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**Thesis submitted in fulfillment of the requirements
for Bachelor of Information Technology (Hons.)
Information Systems Engineering Faculty of
Computer and Mathematical Sciences**

January 2015

SUPERVISOR'S APPROVAL

AN IMPLEMENTATION OF JUNIT TEST FRAMEWORK TO SUPPORT MOBILE APPLICATION TESTING

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This report was prepared under the supervision of project supervisor, Hazlifah binti Mohd Rusli. It was submitted to Faculty of Computer and Mathematical Sciences and was accepted in partial fulfilment of the requirements for the degree of Bachelor of Information Technology (Hons) Information Systems Engineering.

Approved by

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Hazlifah binti Mohd Rusli

Project Supervisor

FEBRUARY 10, 2015

STUDENT'S DECLARATION

I certify that this report and the project to which it refer is the product of my own work and that any idea or quotation from other work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ACKNOWLEDGEMENT

Alhamdulillah, praises and thanks to Allah because of His Almighty and His utmost blessing, I was able to finish this research within the time duration given. Firstly, my special thanks to my supervisor, Madam Hazlifah binti Mohd Rusli who has giving me continuous advice, support, guidance, comments, ideas, and giving the concern from the earlier progress until the accomplishment of this project. My special thanks also to PM Aishah Ahmad @ Abd Mutalib as a program coordinator who has giving useful ideas and advices towards this project as well as to all ISE's lecturers. Thank you for all the knowledge you all have taught me.

Special appreciation also goes to my beloved parents Encik Mohamad Tahir bin Zainal and Puan Nazariah binti Othman who never give up to support me from the beginning of my life and my studies. Thank you from the bottom of my heart for everything.

Last but not least, I would like to give my gratitude to my dearest friends who has support and struggled together to complete this program and to the people who agreed to participate and contribute their papers for me which were very useful for this project. Thank you very much. *May Allah SWT bless us* with peace and happiness. Insyallah

ABSTRACT

Mobile application is an application that runs on mobile devices. Mobile testing is more challenging compared with desktop or web based testing as it has smaller footprint in virtual machine as against desktop application. Manually testing mobile applications is tedious and time consuming. Therefore, the aim of this project is to implement an automatic testing approach in testing mobile applications. This project aims to achieve several objectives which are to search for existing mobile application testing tools or technique or frameworks, create test cases based on given specifications, implement and execute test cases using an automatic testing approach and also report the outcomes of the test. An automatic testing framework, JUnit is selected to be used in this project. There are three phases in order to achieve these objectives. Phases for this project are knowledge acquisition, plan and design test cases, and finally execute test cases. Test cases were design using several techniques such as exploratory testing and scenario testing. As it is impossible to conduct 100% automatic testing, testing was executed both manually and automatically for both functional testing and white-box testing. The selected automatic approach which is JUnit was shown to be effective and basis for mobile testing and future tester can improve the result by integrate with other testing tools such as Selenium or Robotium Web Driver. This project reports the experiences of using automated testing approach for undergraduate final year project and can be used as a reference for other students and interested parties.