

ANDROID APPLICATION OF AUTO WIRELESS CONNECTION

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BORANG PENGESAHAN STATUS TESIS*

ANDROID APPLICATION OF AUTO WIRELESS CONNECTION

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ANDROID APPLICATION OF AUTO WIRELESS CONNECTION

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This report is submitted in partial fulfilment of the requirements for the
Bachelor of Computer Science (Computer Network)

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2014

DECLARATION

I hereby declare that this project report entitled
ANDROID APPLICATION OF AUTO WIRELESS CONNECTION

is written by me and is my own effort and that no part has been plagiarized
without citations.

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DEDICATION

Alhamdulillah, praise to Allah.....

En. Bederul Hisam Bin Abdul Ralim and Pn. Rosida Binti Aman

Father, mother thank you for your unconditional support and understanding....

Muhamad Hafeze Bin Muhamad Hasani, Aliya Binti Khairuddin and Hong Chin Yee

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ABSTRACT

This project is about the development of android application. The development of android application needs a software and hardware. Tools to develop the application are eclipse and emulator. Besides that, hardware is computer such as desktop or laptop. To develop the application needs knowledge of Java language. Android application must write in Java language. In this project the research about the battery phone consumption and internet speed in Malaysia. Besides that, this project have three objective which is to study the android wireless application programming, to develop android Auto Wireless Connection application and to test the android wireless application in smart phone using Jellybean 4.3 operating system. This entire objective needs to be achieved at the end of project. Besides that, this project using System Development Life Cycle (SDLC) methodology which is planning, analysis, design, implementation, testing and documentation. The testing phase is the testing part to test the android application to make sure the application may solve the problem of battery drain when use wireless and may contribute to android user.

ABSTRAK

Projek ini adalah mengenai pembangunan aplikasi android. Pembangunan aplikasi android memerlukan perisian dan perkakasan. Alat untuk membangunkan aplikasi adalah eclipse dan emulator. Selain itu, perkakasan seperti desktop atau komputer riba. Untuk membangunkan aplikasi memerlukan pengetahuan bahasa Java. Aplikasi android mesti ditulis dalam bahasa Java. Didalam projek ini, penyelidikan tentang pengaliran bateri dan kelajuan internet Malaysia. Selain itu, projek ini mempunyai tiga objektif dimana untuk mempelajari pengaturcaraan aplikasi tanpa wayar android, membangunkan aplikasi sambungan automatik tanpa wayar android, untuk menguji aplikasi tanpa wayar android yang menggunakan operasi sistem 4.3 Jellybean pada telefon pintar. Kesemua objektif mesti dicapai pada pengakhiran projek. Selain itu, projek ini menggunakan Pembangunan Kitaran Hayat Sistem metodologi iaitu dimana merancang, analisis, meraka bentuk, pelaksanaan, pengujian dan dokumentasi. Pada fasa pengujian ialah bahagian ujian untuk menguji aplikasi android untuk memastikan aplikasi itu boleh menyelesaikan masalah pengaliran bateri apabila menggunakan tanpa wayar dan boleh memberi sumbangan kepada pengguna android.

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LISTS OF ABBREVIATIONS

WAP	Wireless Application Protocol
PI	Push Indicator
PPG	Push Proxy Gateway
J2EE	Java 2 Enterprise Edition
JCP	Java Community Process
HTML	Hyper Text Markup Language
EJB	Enterprise JavaBeans
JSP	JavaServer Pages
JDBC	Java Database Connection
SOTI	State of The Internet
DDOS	Distributed Denial of Services
FMM	Federation of Malaysian Manufacturers
NFC	Near Field Communication
GPS	Global Positioning System
WDP	Wireless Datagram Protocol
WTLS	Wireless Transport Layer Security
WTP	Wireless Transaction Protocol
WAE	Wireless Application Environment
HTTP	Hypertext Transfer Protocol
IDE	Integration Development Environment
SDK	Android Software Development Kit
SDLC	System Development Life Cycle

AVD Android Virtual Device
XML Extensible Markup Language

CHAPTER I

INTRODUCTION

1.1 Introduction

Android was introduced in year 2007 that causes the changes of mobile industry and the increase of competitors such as Apple, Nokia and Blackberry. Android is an open source as it is free to use in a smart phone. Android is a Linux based and open source software. Android is developed by Android Inc which operated by Google. Google purchase android in year 2005 after based in Palo Alto, California. Besides, in year 2007 it has been announced by Google that Android has been part of Google company software and launched the first phone on October 2008.

Nowadays, people have their own android smart phone, since the release of the operating system (OS) by Google Company and provide wireless connection in smart phone. As expected, internet connection has increase in demand according to the usage of internet. One of the methods to connect to the internet is via wireless connection. User may use the internet service by using wireless connection rather than cabling. User has to subscribe internet plan for the services.

1.2 Project Background

Android is Linux based environment created by Google. They are many requests from the users that use android operating system. It has been stated that Google always developing free platform to give to hardware manufacturers and phone carriers (Marziah Karch, 2014).

Android is a stack technology that built in specifically for mobile devices that include an operating system, middleware, and key applications. It has been stated that the stack of software includes from every framework to specialized pieces of software such as a virtual machine, which facilitates optimization of memory and hardware resources such as Bluetooth and Wi-Fi (Jerri Ledford, Bill Zimmerly, etc all, 2010).

Based on internet research, Google was confirmed that Malaysia was listed among the slowest countries in the world for loading web pages on desktop computers as well as mobile computers (Yahoo Newsroom, 2012). One of the methods to solve this internet speed and battery phone drain caused by wireless issues is to develop the android application.

According to Frank Ableson in year 2009, developer need develop new android application. The android wireless architecture has three parts such as java framework, native process and kernel space. In order to build new android application several tools such as Android SDK, Eclipse IDE and knowledge of java language are needed.

1.3 Problem Statement

Android operating systems always connected to the internet and always enable the Wi-Fi if users turn on the Wi-Fi. According to the research, Malaysia network was categorized among of the slowest internet speed countries (Frank Ableson, 2009). Besides, users always turn on the android wireless and may cause battery phone drain based on Martin Brinkmann statement in year 2013. The project problem (PP) is summarized into Table 1.1.

Table 1.1 Summaries of Problem Statement

No	Research Problem
PP1	Android wireless is always connected to the internet in on mode even in sleep mode and caused battery phone drain.

1.4 Project Objectives

Table 1.2 shows the summarization of project objectives (PO) are developed as follows:

Table 1.2 Summaries of Research Objectives

RP	RO	Research Objective
PP1	PO1	To study the android wireless application programming.
	PO2	To develop android Auto Wireless Connection application.
	PO3	To test the android wireless application in smart phone using Jellybean 4.3 operating system.

PO 1: To study the android wireless application programming.

Study Java programming language to develop android application using several tools such as android SDK, ADT plug in for Eclipse and Android Emulator.

PO 2: To develop android Auto Wireless Connection application

Develop of application that requires software and hardware. The application will reduce the battery phone consumption and battery phone will long lasting.

PO 3: To test the android wireless application in real smart phone using Jellybean 4.3 operating system.

The application need to install and test in Jellybean 4.3 operating system.

1.5 Project Contributions

The contribution of this project summarized in Table 1.3.

Table 1.3 Summaries of Project Contributions

RP	RO	RC	Project Contributions
PP1	PO1	PC1	To sharing knowledge of android tools and android language to create new android application.
	PO2	PC2	To reduce the battery phone consumption.
	PO3	PC3	User may save time to charge the battery phone.

1.6 Project Scope

The project will be focused on:

- a. Research on internet speed and battery phone drain.
- b. Focus on the battery phone consumption.
- c. Develop android application related to wireless.

1.7 Project Significant

This project is to increase the battery performance and may reduce the smart phone battery consumption. In addition, several of the smart phones do not provide auto wireless connection service.

1.8 Report organization

This report consist of 7 chapter namely Chapter 1: Introduction, Chapter 2: Literature Review, Chapter 3: Methodology, Chapter 4: Design, Chapter 5: Implementation, Chapter 6: Testing and Chapter 7: Conclusion.

Chapter 1: Introduction

This chapter will discuss about introduction of project, project background, research problem, research objective, scope, project significant and report organization.

Chapter 2: Literature Review

This chapter will explain the facts and findings related on this project and solution to the problem.

Chapter 3: Methodology

This chapter will explain the methodology of project to develop android application and organise the sequence of project work phase.

Chapter 4: Design

This chapter will introduce of software and hardware use in this project, environment setup and application design.

Chapter 5: Implementation

This chapter will analyse the collected data then carry out the scripting and propose to support the evidence.

Chapter 6: Testing

This chapter will test the application using android emulator and real device.

Chapter 7: Conclusion

This chapter will conclude and discuss the project limitation, project contribution and the future work of project.

1.9 Conclusion

In conclusion, project background is the introduction of this project. In this project, research of the problem statement, project objective, project contribution, project scope and project significant are clearly identified. This project needs to achieve the objectives. The next chapter will discuss the literature of this project.