

BORANG PENGESAHAN STATUS TESIS*

JUDUL : CENTRALIZED BROWSER LOG APPLICATION

SESI PENGAJIAN : 2011 / 2012

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CENTRALIZED BROWSER LOG APPLICATION

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2011

DECLARATION

I hereby declare that this project report entitled
CENTRALIZED BROWSER LOG APPLICATION

is written by me and is my own effort and that no part has been plagiarized
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DEDICATION

To my beloved parents, thank you for the continuous support since I was a little girl until today. Thanks to both of you for giving me the opportunity to further my study until now. A deep appreciation and love for the encouragement, and guidance throughout everything that I love to do.

To my helpful lecturer, thank you for the guidance from the beginning until the end of this final project.

To my dear friends, thank you for all the support that you had given me and for being patient and standing beside me throughout my study.

ACKNOWLEDGEMENT

I would like to thank Dr. Mohd Faizal bin Abdollah for guiding me during this project implementation period.

I want to thank Pn Hazlen Niza binti Hussein for spent some time for me. Thank you.

I would also like to thank my beloved parents and family who always gave me support and motivation to complete this project.

Finally, I would like to thank to all my friends and people who were involved during this project's development process until it was completed.

ABSTRACT

This project is to study about the Android mobile operating system, which is a very popular operating system nowadays. This operating system has also developed rapidly. Android becomes a popular mobile operating system since it offers many useful applications to the users. The applications in Android have their own log. This log is a report of activities of an Android device. This project developed an application called Centralized Browser Log Application. This new application will capture the log activities of Android web browser application. This application is selected because it uses the Internet to access. The Centralized Browser Log Application also shows the activities of web browser application such as web history and download and upload of a data from the Internet.

ABSTRAK

Projek ini adalah untuk mengkaji tentang sistem operasi mudah alih Android disebabkan sistem operasi mudah alih ini adalah yang terkenal pada masa ini. Sistem operasi mudah alih ini juga membangun dengan pantas. Sistem mudah alih Android menjadi terkenal kerana menawarkan banyak aplikasi-aplikasi yang berguna kepada pengguna. Aplikasi-aplikasi ini mempunyai log masing-masing. Log adalah laporan tentang aktiviti-aktiviti yang dilakukan oleh peranti Android. Projek ini akan membangunkan satu aplikasi yang dinamakan Centralized Browser Log Application. Aplikasi baru ini akan menangkap aktiviti-aktiviti log daripada Android web. Android web dipilih kerana aplikasi ini menggunakan Internet untuk diakses. Centralized Browser Log Application juga akan menunjukkan aktiviti-aktiviti yang dilakukan oleh aplikasi ini seperti sejarah penggunaan web, muat turun dan muat naik data daripada Internet.

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CHAPTER I

INTRODUCTION

1.1 Project Background

Android is an operating system which gains popularity nowadays. Many mobile devices such as smart phone and tablet computer use Android as their operating system.

Android is a Linux-based operating system for mobile devices like smart phones and tablet computer. Android is developed by Open Alliance led by Google [19]. Since the year of the production of the first Android in 2009, Google had introduced six versions of Android with the Gingerbread version 2.3.3 as the last version [6]. After the Gingerbread, Google had completed the Honeycomb series 3.1 and the Cream Sandwich which was published in 2011.

Android offers many applications for the users. The applications are available in Android Market where the users can download thousands of the useful applications. Android also have the ability to browse the Internet using the smart phone or tablet computer.

Each application in Android has its own log of activities. Log can help in identifying errors and also can show the activities of the applications.

1.2 Problem Statements

Android is one of the popular operating system which has a rapid development of the applications. Starting from the year 2009, Android already has eight versions including the Honeycomb and Cream Sandwich as the latest one. Therefore, this project is to study about the versions of Android and also the applications offered in each of these versions.

User of Android smart phone or tablet computer can find many applications in the Android Market. All Android smart phones or tablet computers have the phone log which captures all the activities in the device. But this phone log does not capture the log of the web usage such as downloading a file. Therefore, a centralized log application is created to capture the log and also to centralize the utility of the web browser in an Android operating system of a smart phone or tablet computer.

This project needs to be tested and validated in real Android devices. This test is undergoing to prove that this project is suitable for the Android devices. Then, this project needs to be validated for users to use it.

1.3 Objective

The main objectives of this project are:

- to discover the differences and the applications offered in each of the version of Android operating system
- to create an application that can centralize the record or log of activities in the Android web browser application in the Android operating system
- to test and validate this application in an actual Android device.

1.4 Scope

This project is for the Android device users. Many people are using the smart phone and tablet computer which consist of Android mobile operating system. These Android devices are also lighter and smaller as compared to the lap top.

This project used Java programming language as the Android also used Java to run its application. This Java code will be implemented at Eclipse software. The Eclipse is used because Eclipse can convert the Java bytecode into Android bytecode because Java in android is slightly different from the original Java.

The Android 2.3.3 version of operating system is used in this project. This version of operating system is also known as Gingerbread version. This version is selected because majority of Android device users are using this version of Android operating system.

At the beginning of this project development, the application will be implemented in the emulator. This emulator is also known as Android Virtual Device (AVD).

After this project is successfully run in the emulator, this application will be implemented in the real Android device. Since the Android 2.3.3 version is used in emulator, therefore, the real Android device consists of the version 2.3.3 operating system is needed.

1.5 Project Significance

This project can capture the log activities of Android web browser application. This project can also show the activities of Android web browser application.

1.6 Expected Output

Once the code for this project is implemented, the log of Android web browser application is expected to be captured by this project. After this project is successfully run in the emulator, it is expected to run successfully also in a real Android device.

1.7 Conclusion

Android log can be very helpful to the users in determining the activities of the Android application. The users also can see their usage of Internet everyday.

The next chapter focuses on the literature review for the project and selects the suitable methodology to run this project. Methodology is important for a project to ensure this project is run as planned.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter reviews the literature review and methodology used to fulfill this project. Some articles, books and journals were used as references for this project. This chapter discusses on Android operating system, Android applications and Android logging system which as stated as the objectives in this project. Project methodology used in this project is modified from the waterfall model. This model was chosen due to its' suitability with project. Thus, the progress of project can run smoothly and the project's requirements could be met.

2.2 Facts and Findings

2.2.1 Introduction to Android

Android is a mobile operating system (OS) that is based on a modified version of Linux [1]. Android is open source software, which consists of the operating system, middleware and key applications along with a library which contain the API for writing mobile applications [2]. Android uses Java as the programming language.

Most Android codes were released under the open-source Apache License since Android is an open OS. The main advantage of Android is this OS offers a unified approach to application development [1]. This makes Android more attractive because developers can develop their own application which can run in numerous different devices.

The history of Android began when Google purchased Android Inc. in 2005. In 2009, Android version 1.1 was published. Since that, Android began to updating the version to fulfill the users' desires as users make their mobile phone as much as they want to do in their lap top or desktop. Table 2.1 below shows the versions of Android along with their codenames and also their update applications.

Table 2.1: A Brief History of Android and It Applications [3]

Android Version	Release Date	Codename	Applications
0.9	18 August 2008		
1.0	23 September 2008	Apple Pie	
1.1	9 February 2009	Banana Bread	
1.5	30 April 2009	Cupcake	-Bluetooth A2DP, AVRCP support -Soft-keyboard with text-prediction -Record/Watch videos
1.6	15 September 2009	Donut	-Gesture framework -Turn-by-turn navigation
2.0	26 October 2009	Éclair	-HTML -Digital zoom -Microsoft Exchange support -Bluetooth 2.1 -Live wallpapers -Updated UI
2.0.1	3 December 2009	Éclair	
2.1	12 January 2010	Éclair	-Updated UI
2.2	20 May 2010	Froyo	-Speed improvement -JIT implementation -USB Tethering -Applications installation to the expandable memory -Upload file support in the browser -Animated GIFs
2.3	6 December 2010	Gingerbread	-Updated UI -WebM video playback capability -Improved copy/paste -Social networking features -Near Field Communication support -Native VoIP/SIP support -Video call support
2.3.3	9 February 2011	Gingerbread	-NFC API improvement (peer to peer communication)

2.3.4	10 May 2011	Gingerbread	-Open Accessory API -Voice or video chat using Google Talk
2.3.5	25 July 2011	Gingerbread	-Improved network performance for Nexus S 4G -Fixed Bluetooth issue on the Samsung Galaxy S -Gmail application improved
2.3.6		Gingerbread	-Voice search issue fixed
2.3.7		Gingerbread	-Google Wallet support for Nexus S 4G
3.0	22 February 2011	Honeycomb	-Multi core support -Better Tablet support -Updated 3D UI -Google Talk video chat -Google eBooks -"Private Browsing"
3.1	10 May 2011	Honeycomb	-UI improvement -Open Accessory API -USB Host API -Mice, joystick, gamepads support -Resizable Home Screen widgets -MTP notifications -RTP API for audio
3.2	15 July 2011	Honeycomb	-Optimization for a wider range of Tablets -Compatibility display mode (zoom for fixed-size apps) -Media sync from SD card
3.2.1	20 September 2011	Honeycomb	-Android Market updates including easier automatic updates -Google Books updates -Wi-Fi improvements -Chinese Handwriting prediction improved
3.2.2	30 September 2011	Honeycomb	-Minor fixes