

**HANDY MOBILE SHOPPING APPLICATION**

**MUHAMMAD ZULFADLI BIN ZAKARIA**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

## BORANG PENGESAHAN STATUS TESIS

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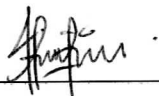
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\_\_\_\_\_  
(TANDATANGAN PENULIS)

Alamat tetap: 25, Jalan AU5D/11,  
Lembah Keramat, 54200 Kuala Lumpur.

\_\_\_\_\_  
(TANDATANGAN PENYELIA)

En. Ariff Bin Idris  
Nama Penyelia

Tarikh: 25 June 2010

Tarikh: \_\_\_\_\_

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HANDY MOBILE SHOPPING APPLICATION

MUHAMMAD ZULFADLI BIN ZAKARIA

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
UNIVERSITY TEKNIKAL MALAYSIA MELAKA  
2010

## DECLARATION

I hereby declare that this project report entitled  
**HANDY MOBILE SHOPPING APPLICATION**

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

STUDENT:  Date: 15 June 2016  
(MUHAMMAD ZULFADLI BIN ZAKARIA)

SUPERVISOR: \_\_\_\_\_ Date: \_\_\_\_\_  
(MR. ARIFF BIN IDRIS)

## **DEDICATION**

To my beloved parent and siblings, I love you all. To my supportive friends and my supervisor Mr. Ariff Idris, thank you so much for the assistance and help.

## ACKNOWLEDGEMENTS

Bismillahirrahmanirrahim

Praise to Allah for giving me strength and patience to complete the Projek Sarjana Muda.

To my beloved parents and siblings who give me full support morally and economically, motivate and inspire me during the hard time to complete this project.

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To all my friends, who always give me the moral support and been there whenever I am in need.

## ABSTRACT

Handy Mobile Shopping Application (HMSA) is a prototype system application development project. The primary purpose is to develop an application that helps user to shop easily using this application that is installed in user's Personal Digital Assistant (PDA) or Java's capable smart phones. This application is primarily built for the usage of user that want to buy a computer hardware/software in Digital Mall, Petaling Jaya. With this application, user can easily choose or compare the price offered of that particular software/hardware before directly goes to the preferred shop. The concept of this application is user friendly whereby user just brings their PDA's into the mall and connect to the server for this application and then starts browsing the preferable shop to list their products and then starts to use the functions of the application that are provided. For the improvement, application for the employee also has been developed to process all the customer's orders that have been made. HMSA was developed using Rapid Application Development (RAD) methodology for the project software development process. The methodology is selected because its suit with this project development as the project is a prototype application that will be developed within only 4 to 7 months. As a result from this project development, hopefully this application will help users to improve their shopping activity quality in terms of the time they spent to shop, decision making support and user friend friendly application usage.

## ABSTRAK

*Handy Mobile Shopping Application* (HMSA) adalah satu prototaip pembangunan sistem aplikasi. Tujuan utama ia dibangunkan adalah membantu pengguna untuk membeli-belah dengan mudah menggunakan aplikasi ini yg dipasang di dalam PDA atau telefon pintar pengguna itu sendiri. Aplikasi ini dibangunkan untuk kegunaan penggunayang ingin membeli perkakasan/perisian komputer di Digital Mall, Pettaling Jaya. Dengan aplikasi ini, pengguna boleh membuat pilihan atau perbandingan harga dengan mudah sebelum pergi ke kedai yang dikehendaki. Konsep aplikasi ini adalah mesra pengguna di mana mereka hanya perlu membawa PDA mereka ke Digital Mall dan kemudian membuat penyambungan ke pelayan bagi aplikasi ini. Selepas itu, pengguna boleh memulakan pencarian kedai yg mereka kehendaki dengan menggunakan fungsi-fungsi yg disediakan oleh aplikasi ini. Untuk penambahbaikan, aplikasi bagi pekerja kedai juga dibangunkan bertujuan untuk memproses tempahan yg dibuat oleh pelanggan. Untuk proses pembangunan projek perisian, HMSA dibangunkan dengan menggunakan RAD metodologi. Metodologi ini dipilih kerana ianya sesuai dengan pembangunan projek ini di mana projek ini adalah projek aplikasi prototaip yang akan dibangunkan dalam lingkungan masa 4-7 bulan. Hasil daripada pembangunan projek ini, ia diharapkan dapat membantu pengguna untuk meningkatkan kualiti aktiviti membeli-belah mereka dari segi masa yg di luangkan, sokongan keputusan yang dibuat dan juga penggunaan aplikasi mesra pengguna.



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**LIST OF ABBREVIATIONS**

PDA	-	Personal Digital Assistant
WLAN	-	Wireless Local Area Network
GSM	-	Global System for Mobile Communications
HMSA	-	Handy Mobile Shopping Application
WIFI	-	Wireless Fidelity
CLDC	-	Connected Limited Device Configuration
CDC	-	Connected Device Configuration
API	-	Application Programming Interface
J2ME	-	Java 2 Micro Edition
JVM	-	Java Virtual Machine
SQL	-	Structured Query Language
JSP	-	Java Server Pages
RAD	-	Rapid Application Development
UML	-	Unified Modeling Language
JDK	-	Java Development Toolkit
MIDP	-	Mobile Information Device Profile

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## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

A mobile device (also known as cell phone device, handheld device, handheld computer, "Palmtop" or simply handheld) is a pocket-sized computing device, typically having a display screen with touch input or a miniature keyboard. In the case of the personal digital assistant (PDA) the input and output are combined into a touch-screen interface. Smartphone's and PDAs are popular amongst those who require the assistance and convenience of a conventional computer, in environments where carrying one would not be practical.

Of course, the mobile devices will have no function without its application. The application technology in the mobile devices itself is important and many researcher and innovator are competing to develop a better and more useful application. The application itself will help user to manage and do their daily routine life activity other than messaging and video conferencing. An application is created to estimate budget, calculate and select cheaper product, selecting best shop to buy from, keeping shopping list as well as giving better opinion or decision support.

Handy Mobile Shopping Application (HMSA) objective is to help users to shop easily using the application that is installed in their Personal Digital Assistant (PDA).

Digital Mall at Petaling Jaya has been selected as a location to implement this project since it is the newest place to shop computers hardware or software instead of Plaza Low Yat. This application will be installed in mobile devices so that user can bring it anywhere and use it every time they go to Digital Mall to buy computer hardware.

With this application, user can easily choose or compare the price offered of that particular software/hardware before directly goes to the preferred shop. They also can get an updated hardware or software of each shop in that mall and automatically can make an order through this application besides can estimate their shopping budget. All the details of the software or hardware will be shown as long as they stay connected with the Handy Mobile Shopping Application server. The concept of this application is user friendly whereby user just brings their PDA's into the mall and connect to the server for this application and then starts browsing the preferable shop to list their products and then starts to use the functions of the application that are provided.

## **1.2 Problem Statement**

Nowadays, computer's usage has improved among people. The demand of it has rapidly increased day by day as well as its hardware and components. For people who lived in Kuala Lumpur or Selangor area, Digital Mall is a place where people will seek and buy their computer's hardware and well known as computer hardware paradise because of its price offered and diversity of product.

Before buying an item, buyers manually need to make a simple shopping list on a piece of a paper and write down all the item specification and prices before they buy and do the comparison. From there, they actually have wasted their time to gather information on that particular item because of the surveying process to each shop in that mall. This entire problem can be solved by using this mobile application. This application can search and compare prices automatically for user as well as calculate the

price of the item, then select which item is cheapest and which shop offer the lowest prices for the designated hardware specification. In addition, buyers do not have to use pen and paper during the shopping process and they can keep all the information within their mobile device. All the information can be retrieve at any time and at any place when the users need it as long as they stay connected with the application's server.

### 1.3 Objective

The main objectives of the application are:

- i. To develop a prototype Handy Mobile Shopping Application system.
- ii. To help user in decision making of buying item.
- iii. To improve user's shopping time management.
- iv. To compare prices of computer hardware and select which item to buy from which shop according their item details.

### 1.4 Scope

The scopes of this project are:

- i. Users who want to shop at Digital Mall.
- ii. Data criterion in this application is mainly focused on hardware that being sold in Digital Mall.
- iii. This application will be installed and used in mobile devices such as PDA's and Java's capable smart phones.

## **1.5 Project Significance**

The signification of this project is to enable user to search and compare prices automatically and easily, then choose which item is cheapest and which shop offers the lowest prices for the designated hardware. They also can keep all the information within their mobile device without using the pen and paper during the shopping process and stay up to date with the information.

## **1.6 Expected Output**

The expected output for this system is to give benefits in terms of its functions to the users who want to shop easily using their mobile devices. With this application, user will find that their mobile devices can help them to solve their shopping activities which this application will be installed in it. More that, the shopping process can be controlled using it and the flexibility of freedom on choosing and comparing different item is in this application.

## **1.7 Conclusion**

As a conclusion, this application is created to suit the shopper's activity in buying process that have tons of various items need to buy and compare easily by using their mobile devices in a flexibility ways of usage. This chapter reviews on the description of the project and some related background information on the project. Besides that, this chapter observes the problem statement of this project to give a clear insight of what is the scope and objectives of the project. This chapter will become the guideline to all the work that will be carried out in the later stage.

## CHAPTER II

### LITERATURE REVIEW AND PROJECT METHODOLOGY

#### 2.1 Introduction

Chapter 2 is the important chapter for any project that will be develops. The intention of this chapter is to present a selected literature review, which is very important for the research. This chapter also describes and explains on the literature review carried out on the system and also the methodology that be used in developing this system. Besides that, previous research also will be discussed in this section at least three existing system and methodologies that being used in other research which is related to this system will be explained and compared to highlight the differences.

For the next section, every project development includes discussion of the methodology used where are methodology is use as the solution tree to the project. Methodology is a set of guidelines, standards and processes that is involved and followed explicitly in order to produce a product or software. In this study the methods is consist of the compatibility development process. By having the proper project methodology, the project is able to be complete within the given time.

For the project required section, where all the requirements such as software and hardware as well as the operating system requirement will be listed so that developer can

understand all the features that are available in the requirement before proceeding to the proposed project.

Finally, the last section of the chapter discusses the project schedule and milestones. In this section, a Gantt chart will be attached together with this section. The Gantt chart listed details of all task and activity required during the progress of the project and the conclusion section will end the entire explanation for this chapter.

## **2.2 Literature Review**

Literature review is aims to review the critical points of current knowledge on a particular topic. Therefore, the purpose of the literature review is to find, read and analyze the literature or any works or studies related to this system. It is important to well understand about all information to be considered and related before develop this system.

For this project, some researches have been done to understand the concept and purpose of smart shopping mobile application, programming language, databases, protocol language, hardware and mobile device architecture, and existing system that related to this project.

### **2.2.1 Domain**

In the environment of every project has it own domain. As well as this Handy Mobile Shopping Application (HMSA), the domain for the project is Information and Communication Technology (ICT) in mobile application. "According from C.S. Pattichis *et al.* (2006), the technology in general has specific advantages that are used in wireless telemedicine systems, to be precisely are GSM, 3G (W-CDMA, CDMA2000, TD-