

**BORANG PENGESAHAN STATUS TESIS\***

JUDUL: MOBILE ACADEMIC BUILDING MAP FOR CLASSROOMS AND OFFICES LOCATIONS AT ACADEMIC BUILDING

SESI PENGAJIAN: 2007/2008

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**MOBILE ACADEMIC BUILDING MAP FOR CLASSROOMS AND  
OFFICES LOCATIONS AT ACADEMIC BUILDING**

**ZAINAL FITRI BIN MOHD ZOLKIFLI**

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

**2008**


## DECLARATION

I hereby declare that this project report entitled

### **MOBILE ACADEMIC BUILDING MAP FOR CLASSROOMS AND OFFICES LOCATIONS AT ACADEMIC BUILDING**

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

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## **DEDICATION**

To my beloved parents, Mohd Zolkifli bin Zainal Abidin and Latipah binti Ab. Ghani, my family, my supervisor, Miss Intan Ermahani binti A. Jalil, my housemate at Taman Tasik Utama and anyone who helped me throughout the development of this project.

Thank you.

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First of all, all praises to Allah the Almighty for His bless and guidance for me throughout the Projek Sarjana Muda I (PSM I). For all His knowledge that revealed to me, I am thankful.

I would like to express the deepest appreciation to my supervisor for PSM I, Miss Intan Ermahani A. Jalil, who has always, respond to my question and her willingness to share her knowledge and time to guide me. Without all her advices and opinions the development of the PSM I would not have been possible. I also would like to thanks my PSM 2 supervisor, Miss Haslinda Ismail for her support and guidance.

I would like to thanks all my friends who have help and share their knowledge. They always willing to share and sacrifice their time for me, which I am very grateful and many thanks for their concern over my projects.

Last but not least, I would like to thanks my beloved family. They always support me in good times and bad times, and always been my source of inspiration in making this report and PSM I a success. Thank you for supporting me.

In addition thanks to Universiti Teknikal Malaysia Melaka (UTeM) and all who has helped me in any way to complete this report and PSM I. I really appreciate it.

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## ABSTRACT

The main purpose of developing this application is to provide an easier access for UTeM lecturers, staffs and students to the Offices and Classrooms Map at the Academic Building. Currently, in order to provide direction, each building has its own map placed somewhere in the building and signboards are provided too. If someone looking for a location, he or she will have to actually go to the building, which the location is located, and search for any map or signboards there. This application will benefit the UTeM citizen by providing portability and mobility of a map into a mobile phone. Besides, this application can show any direction of the offices and classrooms in the Academic Building when user search the specific location. This application is developed using J2ME and can be deployed in any java enabled handphone.

## ABSTRAK

Tujuan utama pembangunan sistem ini adalah untuk memudahkan pensyarah, staf dan pelajar UTeM untuk mengakses peta yang menunjukkan pejabat dan bilik kuliah di Bangunan Akademik. Sekarang, setiap bangunan mempunyai peta atau papan tanda yang menunjukkan arah terletak di dalam bangunan tersebut. Jika seseorang sedang mencari sesuatu lokasi, ia perlu mencari sebarang papan tanda yang terletak berdekatan bangunan tersebut. Pembangunan aplikasi ini akan memberi manfaat kepada warga UTeM dengan menyediakan satu peta yang mudah dibawa ke mana-mana. Selain itu, aplikasi ini mampu menunjukkan arah pejabat dan bilik kuliah sekiranya pengguna memasukkan nama lokasi yang dikehendaki. Aplikasi ini dibina menggunakan J2ME and boleh digunakan di mana-mana telefon bimbit boleh menjalankan aplikasi *java*.



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# CHAPTER I

## INTRODUCTION

### 1.1 Project Background

Mobile industry is a fast growing industry. More applications are developed every day to support the user needs. Mobile academic building map application is one of them. It will benefit the lecturers, students and staffs of UTeM in which it will provide them location that they wanted to know by displaying it in their mobile phones.

Currently, if students want to find a lecturers room they have to find it manually, meaning there is no map for them to refer and they will have to ask someone the location. It can be hard and time consuming especially for new students or staffs to find a location in order to complete their works. Target users for this application are the students, lecturers and staffs of UTeM.

By using Mobile Academic Building Application, users will benefit the mobility provided and can search for places such as lecturers' room, offices and classrooms at academic building without much hassle. Users can install this application in their mobile phone and they can search for places at the Academic Building even from their home.

## **1.2 Problems Statement**

Finding places sometimes can be difficult especially when coming to a new place. Unfamiliar with the surrounding and with no reference makes finding more difficult thus delaying the work that is supposed to be done. There is no exception at the Academic Building.

After some research and observation, some situation occurs reflect to the problems above:

### **First Situation**

Two students came to FTMK offices searching for a lecturer's room. These students are from other faculty and the lecturer is from FTMK. They ask the staff for the lecturer's room and after the staff ask for another staff then he come back with the location.

### **Second Situation**

A group of students came for a replacement class at night which is held at BK17. Not knowing where the class is they headed to chancellery building as in their knowledge, the academic building only consist of BK1 to BK15 as read on the sign in the academic building. They can not find the class at chancellery building and therefore headed to academic building which they arrive late for the class.

These two situations are just tip of the iceberg, maybe more of these incidents can happen to anyone. Using a map can benefit finding the location easily. But there is no easy access map yet for reference.



In order to make the application run smoothly and effectively some researches have to be conducted for the following problems:

- a. How to draw a map that will provide a clear direction and understanding for the users?
- b. What is the searching method that will be used?
- c. How to make the map interactive and user friendly?

### **1.3 Objectives**

The application is proposed to provide an interactive map and show direction for users. The objectives are as follows:

- a. To provide a mobile map for students and lecturers to find lecturers' room at the academic building.
- b. To provide interactive map which shows user direction and how to get there.

## **1.4 Scope**

The application focused on the Academic Building. Users can search for location on 6<sup>th</sup> floor at Academic Building only. For this application, it just cover 6 lecturers' rooms located at Academic Building.

### **1.4.1 Modules to be developed**

- a. Location searching.
  - User needs to press keypad from 1 to 6 corresponding to the lecturer's name.
- b. Return location based on the input by direction.
- c. Return location based on the input by map.
- d. Step by step navigation maps.
  - An interactive line will show how to get to the place starting from the starting place to the location searched.

### **1.4.2 Target users**

- a. UTeM students.
- b. UTeM lecturers.
- c. Other UTeM staff.

## **1.5 Project Significance**

Obviously the project significance is to make searching for location easier and to promote mobile technology among citizen of UTeM. Users will benefit from searching function and the direction provided by the application in order to locate a location that users want. Interactive map and step by step map navigation will enhance user experience and attract user to use the system.

## **1.6 Expected Output**

This application will enable user to search for a location by pressing a keypad from key 1 to 6 in order to make the searching. Name of 6 lecturers was initially set for each different key. User can only search these 6 location based on the lecturer's name only. The application will return location by direction or by map. The map will be illustrated from above view, therefore will provide clear and understandable map for users. Users then can see the direction provided by an interactive line moving to the location searched.

## 1.7 Conclusion

From this chapter, the Mobile Academic Building Map for Classrooms' and Offices' Locations at Academic Building can be described as portable application as it can be installed on any java enabled mobile phones. It will provide user with easy access to Academic Building Map to search for locations there. The application is hopeful to be useful to users and exposed user to mobile application.

The next chapter will mainly consist of literature review and project methodology which can be divided into sub topics such as project domain, project methodology, project requirements and project schedules and milestones. Some researches have to be carried out in order to find out the requirements and project reviews therefore a complete analysis can be done.

## **BAB II**

### **LITERATURE REVIEW AND PROJECT METHODOLOGY**

#### **2.1 Introduction**

Literature review is a review of a case study. It includes all the facts and findings related to the case study. Research about a case study should include the review of the relevant literature of facts and findings. The review made will be the guide for developing a good system or application.

This chapter also explains the methodology to be used in the project development. The methodology consists of several phases as guidelines that are to be achieved. The methodology is a way to use all available approaches, technique and tools used to achieve predetermined objectives. The project milestone from the start until the delivery phases, and the project requirements such as software and hardware are also will be further explained in this chapter.

## **2.2 Fact and Findings**

Fact is a statement or assertion of verified information about something that is the case or has happened while finding is the act of determining the properties of something, usually by research or calculation. For this project, fact and finding is important to determine the domain of the project. All the fact and finding will be support by a review of the existing system and technique that related and already be used by the others.

### **2.2.1 Domain**

The mobile map application makes use of Java Runtime Environment for mobile device which is Mobile Information Device Profile (MIDP) combined with Connected Limited Device Configuration (CLDC) in order to deliver the application's functionalities can be deployed to wide variety of mobile devices. Therefore the application can be classified into mobile application domain.



- Search place names
- Location-sensitive search
- Point of Interest viewing and search
- GPS positioning (Bluetooth, internal GPS)
- Basic mobile navigation (Directions/routing)
- Save favorite locations
- Most modern Java enabled mobiles are supported

### **Benefits**

- Supports both on-line (over GPRS/3G) and offline maps (from flash drive)
- Supports GPS Positioning.
- Expandable and flexible

### **Weaknesses**

- No routing directions function.
- Cannot search objects around some places.

The Nutimap is a good map application developed using Java. This application is flexible yet simple. It can support map from either online or offline sources and it support GPS, which is an excellent features.