

**Universiti Teknologi MARA**

**Developments of the KeyT Mobile  
Application for the Keychain Tracker**

**Umar Bin Harun**

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

**JUN 2018**

## ACKNOWLEDGEMENT

Firstly, I want to say Alhamdulillah to Allah, full of praise and thanks, I was able to finish this research within the time duration that had been given.

I am too indebted to the peoples that had been helps support and conceptualize this project for the time being. Because of them, many obstacles I had to face I can overcome it.

Special thanks from my heart for my supervisor's, Dr. Natrah bt Abdullah that had many time to spend for me to make improve compliment while to complete this research.

Special appreciation also goes to my beloved mother and the family that always encouraged to always be steady in study.

Last but not least, special gratitude to my dearest friend especially Nurzahin Asyraf and Muhamad Shahreen that always helping me when is needed, and made me feel confident to complete this research. Besides, always together with me while complete this research.

## ABSTRACT

The people today is using mobile phone for various uses to manage their life. For example, to traced of a location. They are using of the Global Positioning System (**GPS**) tracking in their phone. In this keyT mobile application that want to be build, it using GPS tracking geolocation by Application Programming Interface (*API*). **GPS tracking** is the use of Global Positioning Systems in order to define the exact geographic position or location of a place, person, vehicle or any other assets. GPS is capable of recording the location of assets at regular intervals as well. This technology can be applied for this application that want to be build. We know many of us had ever missing keys. Someone that missing their key will look for specific location that theirs remember have the key. They will find it at the location that always theirs remember like the living room in the house. They also will finding the solution to make easy to search the key. They are using the device as the keychain to attach it with the keys. To detects or trace it, they will use the GPS technology to build tracking application in their mobile phone that will embedded with the keychain. The objectives for this research are to identify the user requirements for the keyT mobile application. Moreover, designing and developing the KeyT mobile application. In the process to settle the whole project it used the guideline that had been approached by many developer namely Mobile Application Development Life Cycle (MADLC). It involved the process of planning, analyzing, designing, developing and testing. The application also must be tested with another phone to make sure of the flexibility of the application. The functionalities of the application must be worked and can be detect of the keychain device. KeyT is the mobile application that can detect the keychain device that had been attached to the key owner. The application is use the google map geolocation to see the location of the keychain device.

## TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
<b>SUPERVISOR APPROVAL</b>	<b>i</b>
<b>STUDENT DECLARATION</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>LIST OF FIGURES</b>	<b>vii</b>
<b>LIST OF TABLE</b>	<b>viii</b>
 <b>CHAPTER ONE: INTRODUCTION</b>	
1.1 Background of Study	1
1.2 Problem Statement	1
1.3 Project Objective	3
1.4 Project Scope	3
1.5 Project Significant	3
1.6 Summary	3
 <b>CHAPTER TWO: LITERATURE REVIEW</b>	
2.1 Global Positioning System	4
2.1.1 Google Map API	6
2.2 Android Version	7
2.3 Similar Application	9
2.3.1 Tractive GPS Dog and Cat Finder	9
2.3.2 Tile	9
2.3.3 JG iTag Alarm	10
2.4 Summary	11
 <b>CHAPTER THREE: METHODOLOGY</b>	
3.1 Planning	12
3.2 Analyzing	13
3.3 Designing	14
3.4 Developing	15
3.4.1 Database	16
3.4.2 User Interface	16
3.5 Testing	17
3.6 Summary	17

# CHAPTER 1

## INTRODUCTION

This chapter will introduce about the background of study, the problem statement, aim focusing and the significant of the project.

### 1.1 Background of Study

This application will make the owner of the key can trace their key using their phone. They need to buy the keychain tracker at the shop. Attach the keychain tracker to the key. After that, they need to download in their phone the application that already be built to make the sensor functioned. The application can be detected at the screen the location of the keychain that had been attached.

Today many technologies increasingly had been build and use to track the location. For example, Geographic Information Systems (GIS), Global Positioning System (GPS), Radio Frequency Identification (RFID), and Wireless Local Area Network (WLAN). Each of the technology has advantage and disadvantage itself. For example about the coverage range to detect location, the offline or online and the device that been used to trace used many electricity or not.

This project are study about the geolocation technology to identifies device location, provide direction and to integrate between the mapping software. It will explore about Global Positioning System (GPS).

### 1.2 Problem Statement

Many peoples are ever missing theirs key for theirs own life. The key is very important especially for the owner of the house. Some people the key is their major problem to their life because they have the problem to remember where theirs placed the key. If the key is missing they will face the hardness to find their key.