

**AUTOMATED KIDS TRACKING SYSTEM USING ANDROIDS (KiTSA)**

**MOHAMMED NASSER AHMED**

This report is submitted in partial fulfilment of the requirements for the  
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**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
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## **BORANG PENGESAHAN STATUS TESIS\***

JUDUL: AUTOMATED KIDS TRACKING SYSTEM USING ANDROIDS (KiTSA)

SESI PENGAJIAN: 2012 / 2013

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(TANDATANGAN PENULIS)

---

(TANDATANGAN PENYELIA)

Alamat tetap: Emerald Park Bukit  
Beruang – Melaka 75450

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PM DR RABIAH AHMAD

---

Nama Penyelia

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Tarikh: 30<sup>th</sup> August 2013

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Tarikh:

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## DECLARATION

I hereby declare that this project report entitled  
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is written by me and is my own effort and that no part has been plagiarized  
without citations.

STUDENT : MOHAMMED NASSER AHMED Date: 30<sup>th</sup> August 2013  
(STUDENT'S NAME HERE)

SUPERVISOR : PM DR RABIAH AHMAD Date: 30<sup>th</sup> August 2013  
(SUPERVISOR'S NAME HERE)

## DEDICATION

To my beloved parents, that always giving me moral support that act as power of my inspiration. To all my friends, your support and encouragement helps me pass through and to solve problems in this project. To my supervisor, PM Dr. Rabiah Ahmad, your guidance is highly appreciated and I learn a lot from you during this project.

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In addition, I would also like to express my gratitude to my loving parent and friends who had helped and given me encouragement.

## **ABSTRACT**

Automated Kids Tracking System using Androids (KiTSA) is a mobile system that is can capture the location of phone. By using this system the parents will be able to detect their kid's location at the real time, in addition they will have the history about their kids' activities, the methodology used in this project is extreme programming. We use android: java language for the language of the program with XML as the interface. The project then will proceed by using Eclipse and android SDK tools to develop this system. For storing the database, we use online database which stored on free hosting website, a built in android database.

## ABSTRAK

Androids (KiTSA) adalah sistem mudah alih yang digunakan untuk mengenalpasti lokasi telefon mudah alih. Dengan menggunakan sistem ini ibu bapa akan mengesan telefon anaknya dimana mereka berada, tambahan pula ibu bapa akan dapat mengetahui sejarah aktiviti anaknya. kaedah yang digunakan dalam projek ini ialah "extreme programming". Kami menggunakan android iaitu bahasa java didalam program ini dan XML sebagai antara muka. kemudian projek ini akan diteruskan dengan menggunakan eclipse dan alat android SDK untuk mengembangkan sistem ini. Untuk penyimpanan data, kami menggunakan pangkalan data dalam talian yang disimpan di laman web hosting percuma, terbina dalam pangkalan data android



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## LIST OF ABBREVIATIONS

<b>KITSA</b>	-	<b>Kids Tracking System using Android</b>
RP	-	Research Problem
GPS	-	Global Positioning System
RQ	-	Research Questions
SMS	-	Short Message Service
3G	-	3rd-Generation
NISSMART	-	National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children
ERD	-	Entity-Relationship Diagram
DFD	-	Data Flow Diagram
XML	-	Extensible Markup Language
PHP	-	PHP: Hypertext Preprocessor
JSON	-	JavaScript Object Notation
IDE	-	Integrated Development Environment
SDK	-	Software Development Kit
JDK	-	Java Development Kit

JRE	-	Java Runtime Environment
ADT	-	Android Development Tools
UML	-	Unified Modeling Language

**LIST OF ATTACHMENT**

**ATTACHMENT**

**Appendix A**

**TITLE**

**User Manual**

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## **REFERENCE**

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.0 Project Background**

As the development of technology, the application of mobile phone also has tremendously increased.

Previously mobile phone was only used for sending SMS or making call, but nowadays it can be used for many purposes and services, it helps to provide better human living.

Due to the tremendous development of mobile technology we are going to develop KiTSA (Kids Tracking System using Android) on mobile phone.

KiTSA is a mobile system that can capture the location of phone. By using this system the parents will be able to detect their kid's location, in addition they will have the history about their kids' activities.

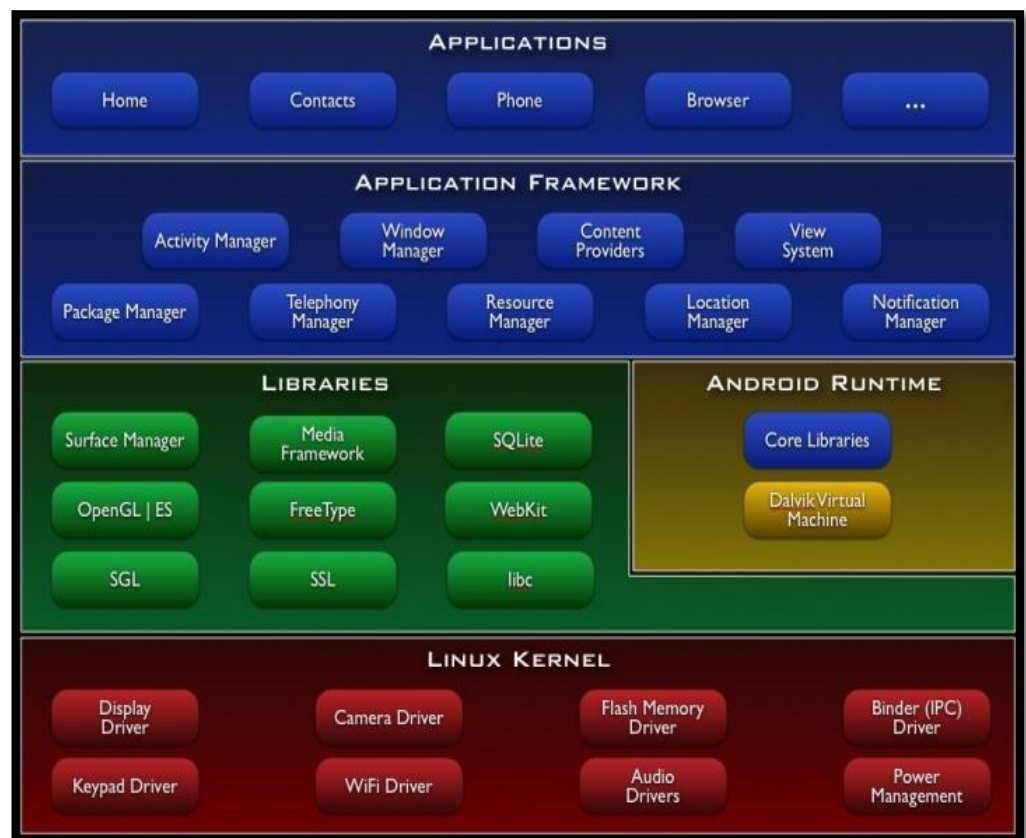
KiTSA will use database and it will require login, which means the kid's mobile phone needs to be registered under their parent's database and they will be monitored by their parents only, all that will be done by using Android.

So this chapter will include background about Android, problem statements, research questions, objectives, project scope, project significance, expected output, and report organization.

### 1.0.1 Why Android?

Android is a software stack for mobile devices that includes an operating system, middle-ware and key applications. Android includes the application framework, the Dalvik virtual machine, media support, integrated browser and optimized graphics support. It also includes support for GPS, Blue-tooth, Accelerometer, Camera, Wi-Fi and 3G Networks amidst other things.

Below is Figure that shows the major components of the Android operating system.



**Figure 1.1: Android Architecture**

## 1.1 Problem Statements

### - Many children are missing from their families.

According to National Incidence Studies of Missing, Abducted, Runaway, and Thrownaway Children (NISSMART), in 1999, an estimated 204,500 children were involuntarily missing from their caretakers because they were lost, injured, or stranded; 68,100 of these children were reported to authorities.

### - Parents should play a supporting role in deciding their child's future.

Parents should play a supporting role in deciding their child's future, and they are really care about it, in order for the parents to help their children they need to know more about their children, for example they need to know where are their children always go? Are they attending their classes or no?

In case of losing the child mobile phone the parents also need to know and detect where is the mobile phone at this moment.

In order to help the parents to find the answers for the previous questions, the Idea of KiTSA comes out to provide easy and secure system for tracking the children.

**Table 1.1:** Summarize of problem statements

<b>RP</b>	<b>Problem Statements</b>
RP1	The Parents need to find their kids' location for the kid's safety and save them of being missing.
RP2	The parents need to make sure where their children go, where they have been, and make sure they attend their classes.
RP3	In case of losing the child mobile phone it's hard to find it and know the exact place of the mobile phone.

### 5.3 Research Questions

**Table 1.2:** Research Questions

RP	RQ	Research Questions
RP1	RQ1	Where is the kid right now?
RP2	RQ2	Which place the kids have visited before at given time?
RP3	RQ3	Where is the lost mobile phone location?

#### 1.2 Objectives

1.2.1 To design automated kids tracking system using androids (KiTSA).

1.2.2 To develop KiTSA.

1.2.3 To test KiTSA.

#### 1.3 Project Scope

The scope of the project is defined as follows:

1.3.1 Create a system that will enable parents to track their kid's mobile phone.

1.3.2 Create a database where information regarding kid's details will be stored and managed.

1.3.3 To make the connection between the parents and kids mobile phone.

#### 1.4 Project Significant

This system will give benefits to the parents who want to track their kids and monitoring kid's movement by tracking the location, according to data history, it will have some important benefits in tracking the location and recording the history of kid's movement.

#### 1.5 Expected Output

By end of this project, the parents will be able to get some benefits of this project that were expected to get results as shown as below:

- 1.5.1 The parents will be able track their kid's location at current time.
- 1.5.2 The parents will be able to capture the location history stopped by the kids and see the history where their kids have been.
- 1.5.3 Provide clear database about the kids and their parents for developer in order to settle any problem with the system.

## 1.8 Report Organization

This project is consists of six chapters to visualize the analysis activities is shown in Figure 1.2.

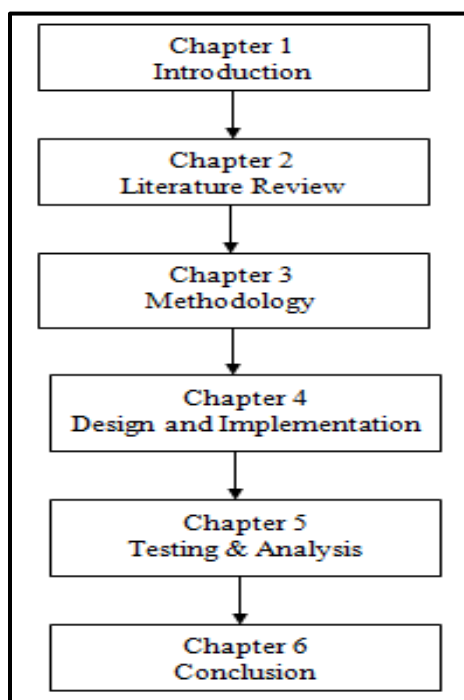


Figure 1.2: Incident Approach of project

### 1.8.1 Chapter One: Introduction

This chapter discusses the project background, problem statements, research questions, research objectives, project scopes, expected output and the project organization of this project.

### **1.8.2 Chapter Two: Literature Review**

This chapter explained the related work of this project such as GPS Tracker Watch, and Debezt GPS Tracking System. Facts and finding of the related works about the tracking system will be included in this chapter as well.

### **1.8.3 Chapter Three : Methodology**

This chapter describe about the methods of how this project will be carry out. What steps and methods used to fulfil the research objectives stated in the chapter 1.

### **1.8.4 Chapter Four : Design and Implementation**

This chapter include the results produced of the system using the simulator machine in eclipse, it also will discuss all the steps to get KiTSA ready for the parents.

### **1.8.5 Chapter Five : Testing and Analysis**

This chapter will discusses on the result of the system that will be created, and discuss the result on the smart mobile phone.

### **1.8.6 Chapter Six : Conclusion**

This chapter is a summarization of all the chapters cover in this project.

## **1.9 Chapter Summary**

Initially mobile phones were developed only for voice communication and SMS but now days the scenario has changed, voice communication is just one aspect of a mobile phone. There are other aspects which are major focus of interest. Two such major factors are web browser and GPS services.

The KiTSA application can help parents to detect their kid's location, where they have been, and find the kids' phone when it lost. Just like a GPS device its location will also be updated as soon as user changes his/her position.