

# Android Detector

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*Mobile applications are a rapidly developing segment of the global mobile market. They consist of software that runs on a mobile device and performs certain tasks for the user of the mobile phone. Mobile users are deeply concerned of the privacy of their mobile information. Security side is another main thread that subverts mobile user's life when attack or lost. We build a mobile detection android application that aims to protect mobile phone (android smart phone) from thieves and helps mobile owner to track and recover his phone once stolen or lost.*

*GPS, Mobile Application, Web Application.*

## I. INTRODUCTION

Android is a mobile operating system that is based on a modified version of Linux. It was originally developed by a startup of the same name, Android Inc. In 2005, as part of its strategy to enter the mobile space, Google purchased Android and took over its development work (as well as its

development team), Google wanted Android to be open and free; hence, most of the Android code was released under the open-source Apache License, which means that anyone who wants to use Android can do so by downloading the full Android source code. Moreover, vendors (typically hardware manufacturers) can add their own proprietary extensions to Android and customize Android to differentiate their products from others. This simple development model makes Android very attractive and has thus piqued the interest of many vendors. This has been especially true for companies affected by the phenomenon of Apple's iPhone. A hugely successful product that revolutionized the smartphone industry, such companies include Motorola and Sony Ericsson, which for many years have been developing their own mobile operating systems. When the iPhone was launched, many of these

manufacturers had to scramble to find new ways of revitalizing their products. These manufacturers see Android as a solution they will continue to design their own hardware and use Android as the operating system that powers it.

Our system aims to build mobile application using Android. With website integrated with satellite GPS to facilitate the process of inserting customers through protect their information on mobile, and detect mobile when it lost.

The use of the techniques and security is the key to achieve better privacy and performance for the System to make the customer happy and his information and device secure. Save information on Android device from any stranger steal or find device when it lost and stored information in their own account[1] Detect mobile location on Google maps by get the coordinates throw GPS satellite[2]Ease of communication between the Customer and the system stuff in case of alerting that there's an error in the process of their information[3].

## II. ANDROID APPLICATION

In this section, we present a brief introduction of the Android Application technique and an evaluation of existing implementations.

### A. Android Application

We build a mobile detection android application that aims to protect mobile phone (android smart phone) from thieves and helps mobile owner to track and recover his phone once stolen or lost. Our application reduces mobile attack outcome by using SMS in controlling actions in the mobile. Through our application user has a safe environment to remote wipe data, know where mobile location is in the map, sound the ringtone when forgetting mobile on silent mode, burn privacy files, and know attacker people face when stolen. Our m-application offers a secure environment by preventing unauthorized user to see private information. Mobile detector can detect lost mobile location by GPS location using satellite communication. Use can convert silent to loudly ringtone mode, erase data, and take a snapshot from camera. It acts as

an integrated entity to be fit with user requirements by using many methodologies to archive goals:

- **Detect Mobile Location:** Customer can access to the mobile throw internet and detect it location on Google map Customer can send attention word via SMS and receive SMS contains mobile coordinates.
- **Backup Data:** Customer can choose what data to backup.
- **Update Personal Information:** Customer can update his / her information.
- **Change Password:** The Customer can change his/her password.
- **Contact Administration:** Customer can give the administration feedback, notification and others by email.

After customer logged into website and access to mobile throw internet, and get coordinates location throw GPS, the system put the coordinates on Google map and get mobile location. The customer selects Attention Word for GPS and other stuff to deal with device. Each Customer needs a register to login.

User must send SMS message with attention word that get mobile coordinates specified from user on his lost android, then the mobile app on the lost android will check message; if the message match the attention word then it will get the coordinates via GPS Satellite and send the coordinates with link that open Google maps on mobile coordinates in website via SMS message to the mobile that sent the attention word. (If message contents don't match the attention word that saved in the app it will consider like a normal message and do nothing).

### B. Existing Implementations

Google Maps has a wide array of APIs that let you embed the robust functionality and everyday usefulness of Google

Maps into your own website and applications, and overlay your own data on top of them:

- Maps JavaScript API

Embed a Google Map in your webpage using JavaScript. Manipulate the map and add content through many services.

- Maps API for Flash

Use this ActionScript API to embed a Google Map in your Flash-based web page or app. Manipulate the Map in three dimensions and add content through many services.

- Google Earth API

Embed a true 3D digital globe into your web page. Take your visitors anywhere on the Earth (even below the ocean) without leaving your web page.

- Maps Image APIs

Embed a fast and simple Google Maps image or Street View panorama in your web page or mobile site without requiring JavaScript or any dynamic page loading.

- Web Services

Use URL requests to access geocoding, directions, elevation, and places information from client applications, and manipulate the results in JSON or XML.



Figure 1: Maps

The Maps API is a free service, available for any web site that is free to consumers. Businesses that charge fees for access, track assets or build internal applications must use Google Maps API for Business which provides enhanced features, technical support and a service-level agreement.

A map and directions Web site from Google. Similar to MapQuest, Google Maps provides turn-by-turn directions to a destination along with 2D satellite and 3D earth views;

however, Maps also offers photographic views of the turns, which show the real streets and surroundings.

### Mobile Versions

Google Maps for Mobile runs on various smartphones including iPhone, BlackBerry and Android. The mobile versions provide directions, but no street, satellite or earth views. They use the phone's GPS capability if present as well as Google's own cellular and Wi-Fi location finding services.

### III. WEB APPLICATION

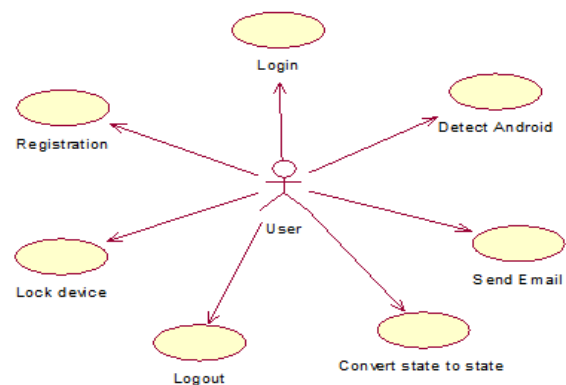


Figure 2: Web Application use case

EVENT	TRIGGER	SOURCE	USE CASE	RESPONSE	DESTINATION
User want to login	Username, Password	User	Login	Login validation	User
User want to register	User information	User	Registration	Registration validation	User
User want to lock lost phone	Lock device attention word	User	Lock device	Verification Message	User
User want to convert lost phone state to another	convert state to state attention word	User	Convert state to state	Verification Message	User
User want to get SIM number from lost phone	Get SIM number attention word	User	Get SIM Number	SIM number	User
User want to detect mobile location	Detect android attention word	User	detect android	Mobile location coordinates	User

Figure 3: Android Event table .

the customer has many processes; customer must login to his/her area with valid user name and password to access these processes. The following are the processes of all actors:

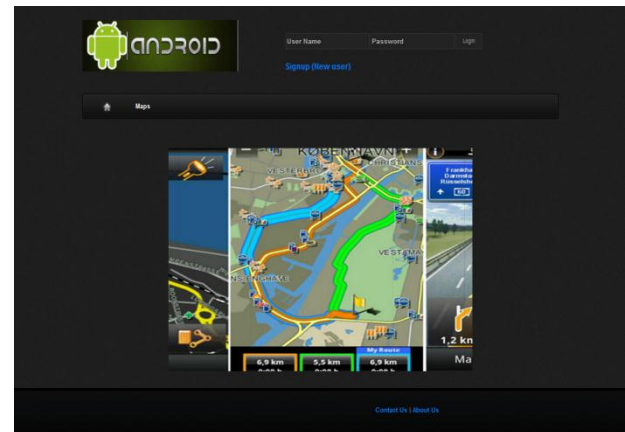
- **Super admin:**

- Managing users & admins.
- Login.
- Change password.
- Check website status.
  - Show number of online users.
  - Show registered users within time period.

• **Admin:**

- Managing users only.
- Login.
- Change password.
- Check website status.
  - -Show number of online users.
  - -Show registered users within time period.

### The WebSite Interface Home Page

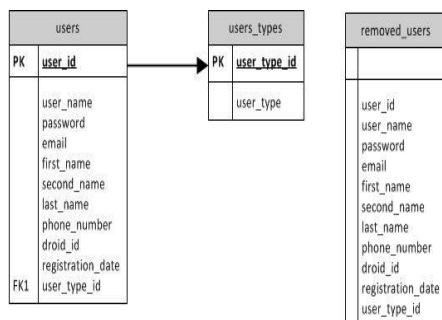


**Figure 5: Website Home page**

This is the home page of system and that include the area that allows the user login the system as show in Figure.

• **Customer:**

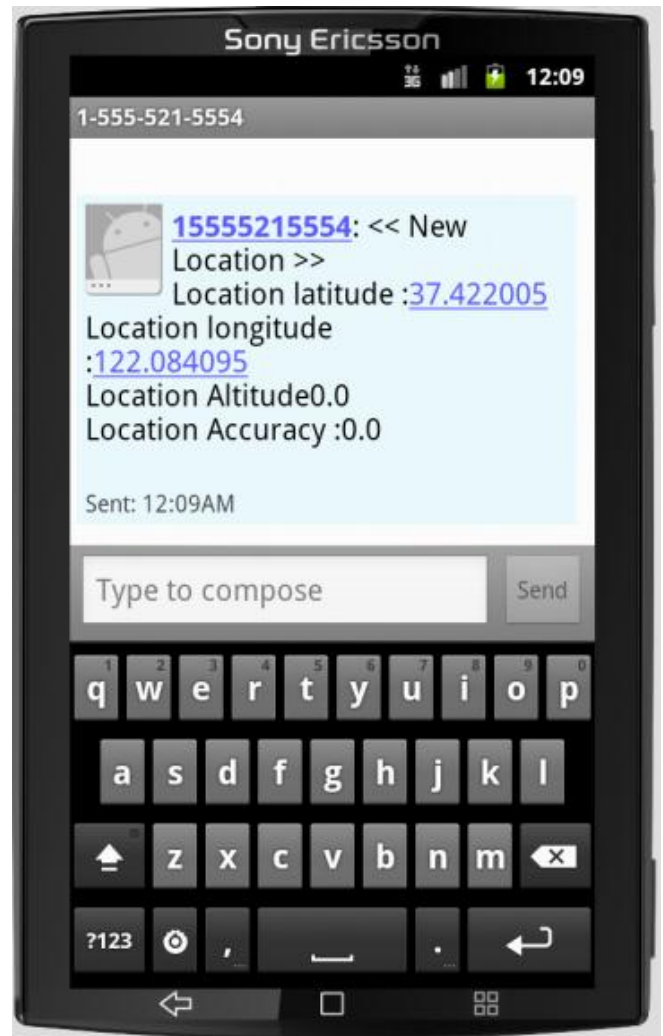
- Login.
- Change password.
- Update personal information.
- Detect mobile location.
- Access mobile throw website.



**Figure 4: Database ER Diagram**



**Figure 6: Android Application Welcome Page**



**Figure 7: SMS showing mobile coordinates**

You have now seen screen snapshots for the project, webapplication and mobile application

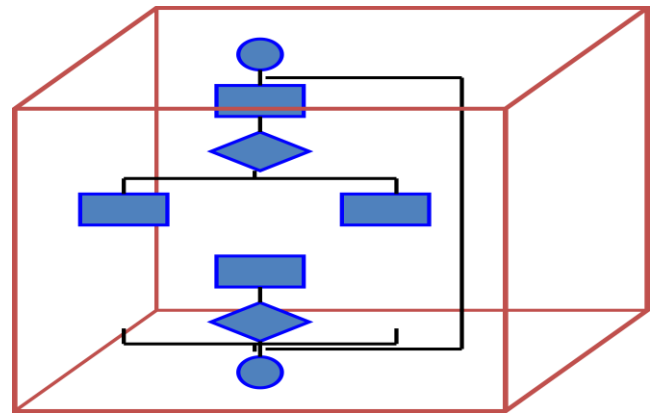
## SYSTEM TESTING

Software Testing can be defined as activity that helps in Finding out bugs/defect/errors in a software system under development, in order to provide a bug free and reliable system/solution to the customer. Software testing is the final stage of development, after the entire package had been completed. Later, as the importance of early detection of software defects penetrated Quality

Assurance concepts, SQA professionals were

<b>Test Flow</b>	<p>1-Tester will enter user name.</p> <p>2-Tester will enter password.</p> <p>3-Tester checks out.</p> <p>4-Tester checks enter wrong username and/or password.</p> <p>5-System display a message "Invalid account"</p> <p>6-Tester enters valid account.</p> <p>7-System must forward us to customer area.</p> <p>8-Tester enters valid administration account.</p> <p>9-System must forward us to administration area.</p>
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encouraged to extend testing to the partial in-process products of coding, which led to software model (unit) testing and integration testing.

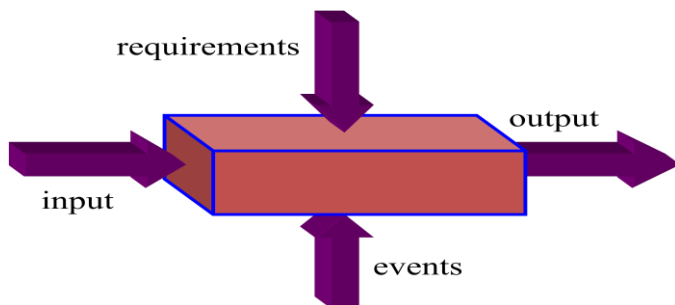


**FIGURE 9: WHITE BOX TESTING**

**Structured testing:** Examine internal calculation paths in order to identify bugs, testing that take into account the internal mechanism of a system or component. Other name "Glass Box Testing"

**Test Cases: login**

**Figure 10: Test Cases:login.**



**Figure 8: Black Box Testing**

Functionality testing: Identifies bugs only according to software malfunctioning as they are revealed in its erroneous output, testing that ignores the internal mechanism of system.

### Future Works and Conclusion

Through what is explained in the project, I found some things that can be lacking in the project which can be considered ideas for the future can be applied through several phases which depending on the

needs of project, I can infer that some important points<sup>in</sup> the project, which will be mentioned below.

#### Online Tracking Device:

I will link the site with the device, and the transfer of device location coordinates will resent to web site or another device (smart phone) every five seconds or less to keep customer track mobile movement

(If location changes)

#### Summary:

You have now seen that the implementation of the project will return many benefits for all users of this system, where the system will achieve the goals stated in the first quarter and solve all the problems of all customers whom have important information in a mobile device and care about it.

Will also by using advanced secure system keep pace with current security developments in the world, which means that the Customers will be in mainstream of secure information system.



**Figure 11: Tracking System**

**References:**

- [1] Beginning Android™ Application Development-page
- [2] <http://www.eclipse.org/org/#about>
- [3] <http://developer.android.com/guide/basics/what-is-android.html>
- [4] <http://tomcat.apache.org/>
- [5] [http://download.cnet.com/Navicat-Premium-Essentials-Multiple-Databases-GUI/3000-10254\\_4-10870715.html](http://download.cnet.com/Navicat-Premium-Essentials-Multiple-Databases-GUI/3000-10254_4-10870715.html)
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