Study & Implementation of Navigation of Destination Based on Alarm System in Mobile

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Abstract— It is a Location based alarm with Tasks is an attempt to add an alarm facility for mobiles, based on the location of the device using GPS. The location based alarm will give you alert when you reach your desired destination. Location based alarm is a GPS based alarm, If you set an alarm, it will make a sound and notification once it's detected you are within the user defined range from the destination. The user needs to save the Start location using longitude and latitude, the alarm will ring when the user is near to the Destination Point. This location based alarm is useful for the travelling sales persons and persons who are travelling in any Mode of transportation. The travelling sales person needs to do different kind of works in different places. It is difficult to remember all the places for him. So by using this application he can set an alarm to the places, where he need to go. The GPRS settings must be enabled on a mobile device to use this application .we are using a SHA1 signature to generate a key Google map API key and Google play service API for displaying the map in mobile device.

Keywords—Component, Formatting, Style, Styling, Insert (key words)

I. INTRODUCTION

This application is an android application. The use of android mobile devices vastly increases in the present generation because Android is an open source operating system and there are more than 4,00,000 apps available in the Android market. Android is a Linux based operating system for mobile devices such as Smartphone's and tablet computers. The android can run multiple applications at the same time. There are different versions in android i.e. Android 1.0, Android 1.1, Android 1.5 (Cupcake), Android 1.6 (Donut), Android 2.0 (Éclair), Android 2.2 (Froyo), Android 2.3 (Gingerbread), Android 3.0 (Honeycomb), Android 4.0 (Ice cream sandwich), Android 4.1 (Jelly Bean). Our application can run only above the version 2.3.

The location based service allows software to obtain the User's Starting location and Destination Location. This includes location obtained from the Global Positioning System (GPS) satellite constellation.

II. RELATED WORK

The Existing Approach has the provision to set a alarm based on Location, with out adding a task and Alert button Feature.[Reference [6]]
The existing approach is normal GPS tracking and we use this approach in this app[Reference [1],[2],[3]].

There are some drawbacks of existing system: 1. Searching for a location is difficult. 2. Location cannot be set accurately. 3. Not A Feature of adding Task . 4. Not a feature of Alert Button.
Used a android technology [reference [4],[5]]

To overcome these drawbacks we proposed the system called "My Destination" which is discussed in the proposed approach.
This application allows the user to manually place an alarm and then the alarm will trigger when the location is arrived, it includes automatic activation of the alarm and deactivation based on the location of the user.

III. PROPOSED METHOD

To set an alarm user need to enter the initial location and Destination location. The alarm will raise when the user is near to the destination location. (the default radius is 500meters, user can also change the radius according to his desire). The New feature in this proposed system is ALERT Button, Sometimes we are in a danger situation or place, then we can send your current location to your family member by click this button. So they can do something for you.

The mobile device is a hardware equipment which enables the usage of My Destination using GPS.

The GPS is a space-based satellite navigation system that provides longitude and latitude of location in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites.

It will also enable the user to view the nearby places and place the alarm at any of the desire location which be tracked by GPS.

Fig 1

IV.   IMPLEMENTAION

This application includes 4 modules
          1. Sign Up
          2. Set Location
          3. Set Alarm (using reminder and radius)
          4.Alert Button

Sign Up: In this module, user register on the app by fill their name, e-mail address, phone no. and the relative phone no. then user can start sign in on this app. To implement Login we are using firebase service, in this we are storing user details in server.

Set Location : In this module**,** User needs to enter the desired location, where he wants to get an alarm. First of all user will enter the starting location and then the Destination location.
It indicate only the starting and final point on the Google map .

Set Alarm: In this module we can set Alarm by set a alarm name, reminder and radius of the destination location.
 After set a location, we select a mode of transport and then go on a page where we set a alarm. Then first of all we set a alarm name , then set any reminder with the alarm, this tells you what kind of work is done at what location. To implement this we need different API's and Google map API key. Process to generate Google map API key is shown in methodology section. To fetch Location results we are using Places API, it will give places information. For maps we are using Google maps.

Alert button: In this module, there is only a button.The purpose of this button is send your current location to your relatives phone no., whatever you filled at registration time. when you will be in some danger.

V.   METHODOLOZY

Locate "Keytool.exe" in your java\jdk\bin folder. With the help of this keytool.exe SHA1 certificate is generated.

For Example:
 "C:\Program   Files\Java\jdk1.6.0_18\bin\keytool.exe" -list -v - alias androiddebugkey –keystore

3"C:\Users\LINDI\.android\debug.keystore"   -storepass android -keypass android
   This command will generate a SHA1 certificate signature like   this HA1:E4:DE:65:56:5F:1F:39:D0:58:D2:BF:71:AB:2A:48:8 9:EC:AF:32:2B.Now we need to paste this signature in android developer's website, we will get a Google map API key.

Google-play-service API: Google play service is a proprietary software development kit and application programming interface set for Android devices. The layer provides APIs that allow apps for Android to provide functionality that directly integrates with Google services, such as account syncing, Google+, Google Maps and many more services.
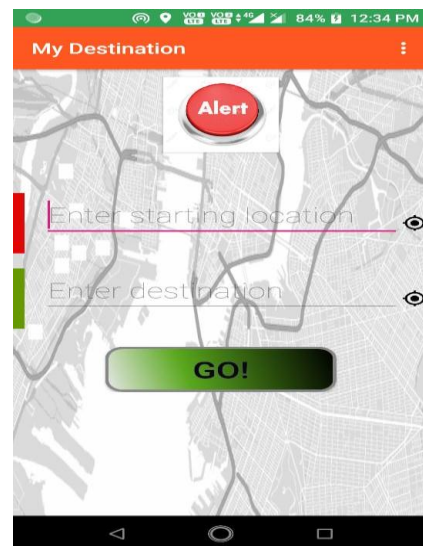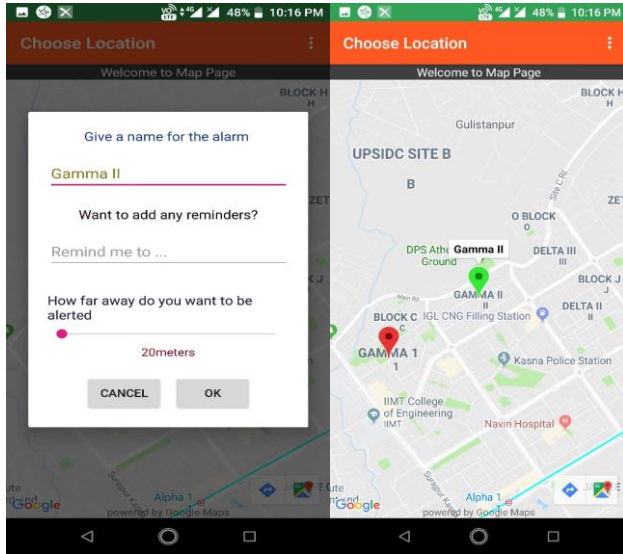

Fig 2

Fig 3

VI.   CONCLUSION

The overall purpose of this application is to remind the works which we are having in our daily life based on the work location to which we are going. In this location based alarm system based on the location of the mobile devices user will automatically retrieves the notification in relevant situations allowing them easily to activate or deactivate the alarm system. Till now there were so many applications for reminding the work schedule which are working based on the time. But in our application we have introduced a new thought for reminding the daily works by using the GPS location system for placing alarm based on the location and

do, where to do and thus work depending upon the location . Application side has the Google Map which contains list of locations of any particular city. Stores the data of Destination location in the Sqlite database which contains message of place and work for location based on alarm system .My Destination is not dependent on path, it only depends on initial and final location of the user.

Application checks the database if it matches with the user Destination Location via serial port the alarm will Trigger in the form of Ringtone and we can also set a music and tunes of your choice.

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