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LOCATION AWARE PERSONALISED ASSISTANCE

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Abstract - The motivation for every location based information system is: "To use exact information, at right place in real time to provide details of surroundings". People travel for many purposes: on business, for recreation, education, and entertainment, to meet business partners, friends and families. Users with location-aware wireless devices can query about their surroundings (e.g., finding the nearest malls, restaurants, hospitals, etc.) at any place, anytime.

A Location Based Service (LBS) is to provide information and various location based services, accessible with mobile devices through the mobile network and geographical position.

Key Words: Android, GPS, LBS, Google API, Google map.

1. INTRODUCTION:

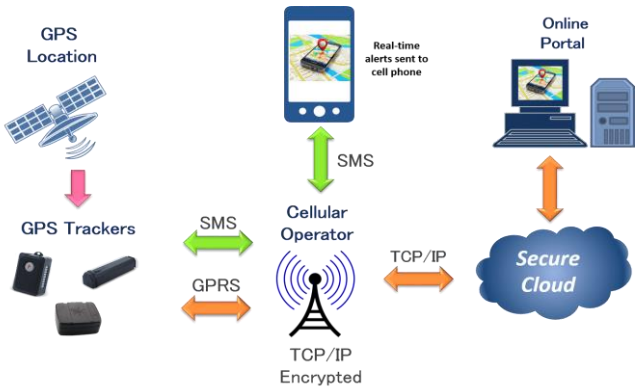
Mobile phones are used to deliver the valuable services. Location-based services or LBS refers to A location-based service (or LBS) is a service that is based on the location of a mobile information of the user. They also open a new area for developers and service providers to develop and provide value-added services: advising clients of current traffic conditions, providing routing information, helping the users to find nearby shopping malls. System for capturing, storing and analyzing location data and associated attributes which are specially referenced to the earth. Point-of-interest data such as the location of restaurants or cinemas.

Location-based services offer many merits to the mobile users. For the mobile user, Location based services are:

- All the surroundings details
- Information about nearby sales
- Meet to nearest place
- Profile changer

1.1 LBS (LOCATION BASED SERVICES):

- Location services, wireless location services, mobile location-based services
- Allow that mobile users (MUs) use services based in their position or geographic location.
- A LBS services can be used in a variety of contexts, such as health, work, personal life, etc. LBS include services to identify the location of a person or object, such as discovering the nearest banking cash machine or the where about of a friend or employee.
- Location based Services offer many advantages to the mobile users to retrieve the information about their current location and process that data to get more useful information near to their location.



1.2 GOOGLE API

The Google Places API is a service that returns data about Places — defined within this Web Service as, spatial locations, or preferred points of interest — using HTTP requests. Place response specifies locations as latitude/longitude coordinates.

The four types of requests are available with the Google Places API. There are 3 fundamental Place services available:

- Place Searches - It returns an array of nearby Places based on a location defined by the user.
- Place Details - It returns more specific data about a user defined Place.
- Place Reports - It allows the users to add new locations to the Place service, and to delete Places that the application has added to the database.

1.3 ANDROID LOCATION API:

These are the different classes present under Location API package to retrieve the Location information of the user.

- Location Manager- The class provides access to the location service. It also provides facility to get the best Location Provider as per the criteria.
- Location Provider- It's an abstract super class for location providers. A location provider provides periodic reports on the geographical location of the device.
- Location Listener- This class provides call back methods which are called when location gets changed. The listener object has to be registered with the location manager.
- Criteria- The class provides the application to choose suitable Location Provider by providing access to set of required properties of the Location Provider.

Android also provide an API to access the Google maps. So with the help of the Google maps and the location APIs the application can show required places to the user on the map.

2. MODULES OF PROJECT:

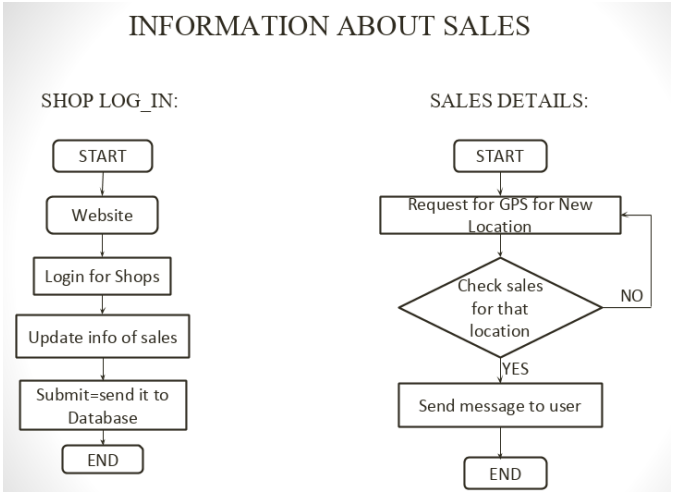
- **All the surroundings details**

- In this module, to get an Information about nearby places like Restaurants, Hospitals, Shopping malls, ATM's and Historical Places with Ratings Based on Current Location of user.
- For developing this module, use Google API and Collect information displayed to user.

- **Information about nearby sale:**

Basically we get information of big brands usually of famous big shops (like lifestyle, maxx).In addition to that, we are developing application for marketing of sales of small shops. In that, Shopkeeper can register and login on website and give details of sales in their shops. Users nearby that shop location will get message of the sales.

The Mobile advertising can allow advertisers to reach significantly more people than traditional advertising media at a fraction of the cost. Mobile advertising using location is ideal for businesses with a market and large-scale distribution capabilities. As a rule, the more people your business serves, the most cost-efficient advertising can be. Mobile advertising using location can also be more targeted than some traditional media, ensuring that your messages are seen by the most relevant audiences.



- **Meet to nearest place**

In this module, it can determine an area that is equidistant from the current position of all group members. It then looks up suitable restaurants, Malls, Cinemas or any Cafe in this area and offers them to the group members.

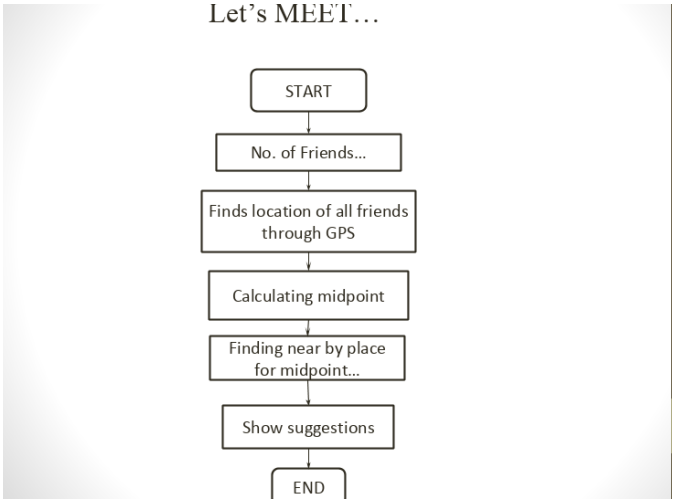
To find midpoint of multiple friends, use a midpoint calculating algorithm.

LatLng(double latitude, double longitude)

Constructs a LatLng with the given latitude and longitude, measured in degrees.

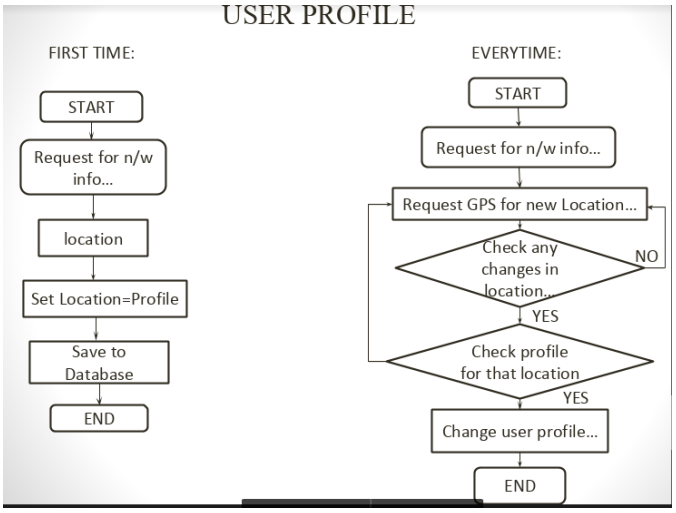
LatLngBounds(LatLng southwest, LatLng northeast)

Creates a new bounds based on a southwest and a northeast corner.



- **Profile changer**

- In this module of project we are going to implement automatic profile changing facility means using this feature of our android app, the profile of user's mobile device will automatically change from normal mode to silent mode & vice versa.
- Sometimes the person forgets to change the profile of mobile phone at certain places, so this app will help which automatically change profile.



3. CONCLUSIONS

The LBS application can help user to find hospitals, ATM, Cinemas, Restaurants, Historical places, Special offers or any other facility of interest indicated by user within certain range. Just like a GPS device its location will also be updated as soon as user changes his/her position.

It helps User to automatically change profile at particular place.

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