

Commodity Based LBS in Google Maps In Android

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Abstract— The objective of the activities is to add to a web application as online ware based framework which can be gotten to through web. Access the information from the server to the customer for step by step upgrading. The information about the business or shop incorporating is gotten with the Google map, when the client touches the position which is demonstrated. The client touches the switch catch, that building points of interest and current item offers shows from the database in server. The Android application will give a simple item seek office, listing, viewing rundown, cautions of new items, rebates alarms, money alternative et cetera. The proposed result of the venture is to give a charming and everlasting knowledge to give intuitive peculiarities such Instant informing administration, dashboard, email help, input etc. The fast pace of progress in both innovation and plans of action is filling a dynamic and becoming open deliberation in the Business and around the business world about the suitable utilization of that information.

Keywords— *Android Mobile Operating System, Location Based Services (LBS), GPS, GIS*

1. Introduction

Mobile devices have become popular to access the information on-the-move. Users carry around mobile devices all the time, and thus they often search location-based contents (e.g., locations of specific spots around them, reviews about the spots, and routes to the spots) in their daily life. However, physical restrictions of mobile devices such as display size and input capabilities affect users' operations, e.g., it is difficult to input a search query and move to another page. When searching contents by using mobile devices, users' situations often change and this change may affect the users' information needs.

The Location Based Service in this application can be grouped in following types,

1.1 Public Safety / Emergency Services

The location of the client can be determined by the mobile carrier hence it finds great use during Emergency since it can be used during the emergency/health hazard to locate the mobile clients.

1.2 Maps Navigation

The clients can utilize the Google Maps to get to the specific area or to follow the course between any two areas.

1.3 Marketing/Advertising

Many corporate organizations publicize their things focused around the area of the customers. (e.g. Sale in Shopping Mall close to your area.)

1.4 Location based Reminders

The phones can be used to set as the reminder based on the location. (e.g. setting the Location based Alarm while traveling in the train.)

1.5 Preferred Location Search

The user can also initiate the search of any nearby ATM or Restaurant within 5/10/15 kms range from his current present location.

In everyday life, we will need to purchase loads of products or items from a shop. It might be sustenance things, electronic things, house hold things and so forth. Presently days, it is truly tricky to get eventually to go out and get them without anyone else because of occupied way of life or heaps of works. With a specific end goal to understand this, B2c E-Commerce sites have been begun. Utilizing these sites, we can purchase merchandise or items online just by going to the site and requesting the thing online by making instalments on the web.

The objective of the ventures is to add to an Android application as internet shopping framework which can be gotten to through web. The web application will provide an easy product search facility, cataloguing, watching list, alerts of new products, despatch invoice, discounts alerts, currency option and so on. The application will likewise give peculiarity, for example, conveying and expected landing time and date can likewise be followed through web.

The proposed result of the venture is to give a charming and everlasting background to give intelligent peculiarities such talk room and Instant informing administration, dashboard, email help, input etc.

1.6 Location-Based Services (LBS)

An area based administration is an administration focused around the topographical position of a geographical handheld gadget. Two of the LBS illustrations are (i) discovering an adjacent ethnic restaurants and (ii) spotting a close-by store with the best cost of an item. A system structure of region based organizations, showed in Fig. 1, joins three essential parts.

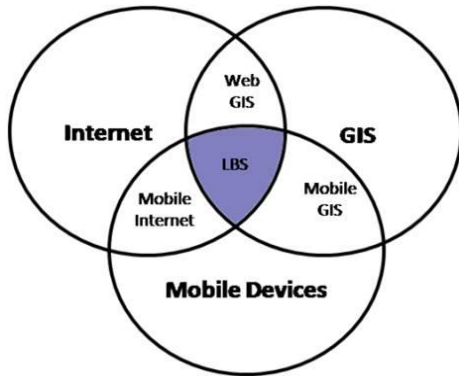


Fig. 1: LBS Model diagram

- (a) *Mobile handheld gadgets*, which are little machines that can be held in one hand. For most cases, they are Smart phones.
- (b) *Positioning framework*, which is a route satellite framework that gives location and time data to anybody with a beneficiary.
- (c) *Mobile and remote systems*, which hand-off the inquiry and area data from devices to administration suppliers and send the results from suppliers to devices.
- (d) *Service suppliers*, which give the area based administrations.
- (e) *Geographical information suppliers*, which are databases putting away a tremendous measure of geological data, for example, data about restaurants and corner stores.

1.7 Applications

- Choose items speedier and less demanding at one spot.
- Saves time of heading out to the merchant/vender's spot.
- Alerts and continuous reporting through Emails (to both merchant and additionally purchaser).
- Reports generated can be saved for future references.
- Inventory reports for the seller/vender on day by day, month to month, and yearly.

1.8 Scope

This secure location based service can be used in GPS enabled android devices and can be used along with Google maps to provide accurate search results.

- It obliges customer server between methodology correspondences, which to be sure expand correspondence. Here information region is considered which find the area in Google map's.
- It can be tried with all kind of networks like Smartphones, tablet pc, emulator and so on.
- Code is composed in such a method for android, that it can be tried with Android SDK and emulator.
- The venture will be finished in April 2015.

1.9 GIS Provider

This segment gives geospatial usefulness for numerous Lbs. including guide data, map visualization what's more index administrations. Google Maps with its API can be considered a GIS provider.

2. Architecture Diagram

Task is entered and stored in the SQLite database. Location tracking is performed using the GPS service. Changes in location can be emulated with the help of (Key Hole Mark-up language) KML file in Android. The location change is compared with the database entries to see if there are tasks associated to the current location. Corresponding task information is displayed on the mobile screen. Web server is invoked whenever change in location is sensed and is used for displaying retail discount information. Figure 2 shows the architecture of location module designed for tracking and retrieving the information based on location to the user. The details of the architecture diagram as shown in Fig. 2.

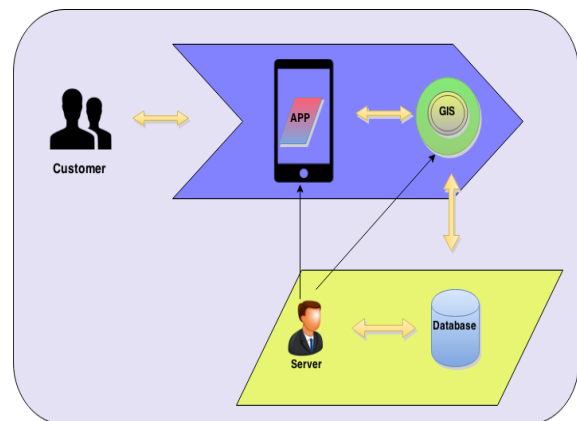


Fig. 2: Architecture Diagram

2.1 Client Side View

Client need to hunt any area in the application and select a point got in the Google maps, Activity Listener associate the application into the GIS and get the additional data and send's to the client. Client permits initiating distinctive sorts of seeking like shopping, prescription,

voyaging, and nourishment. The client side operation is shown in Fig.3.

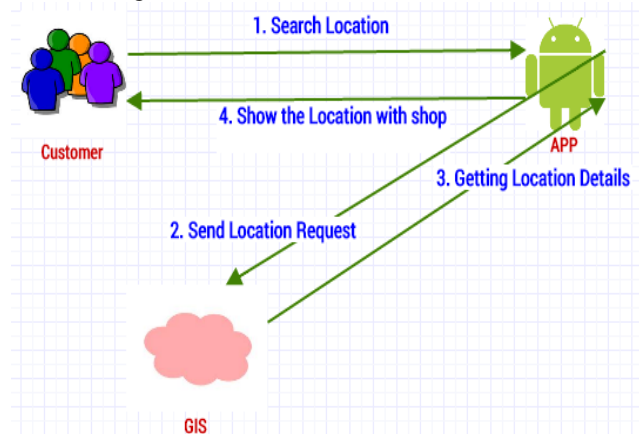


Fig. 3: Client Side View

2.2 Database View

Here Data digging idea are utilized for getting right points of interest of that point. All the Data's about the areas are put away in the database. When customer select's a point, the application investigations the scope & longitude of that point, get the correct points of interest of that point. The right information's are mining from the aggregate Database. Add/Delete & change the information's by the server for step by step upgrading. The database view operation is shown in Fig. 4.

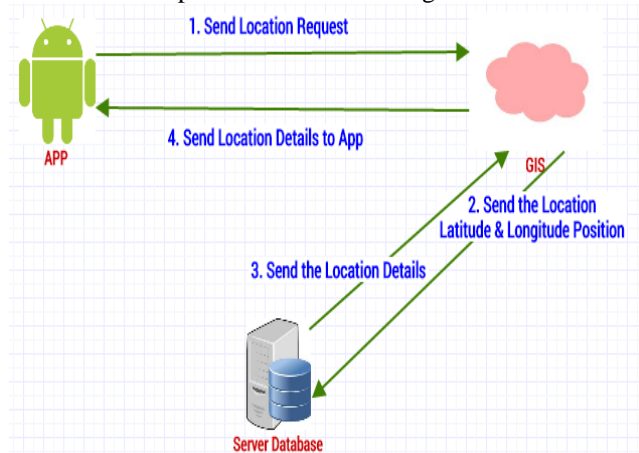


Fig. 4: Database Side

2.3 Server Side View

The server side view operation is shown in Fig. 5.

The retailer sends appeal to server includes new information's in the database. The serve add/delete or alters the information's in the server database. The information's are oftentimes changed by the server with the consent of retailer. After effectively changed the information's in server, one conformity alarm send's to the retailer.

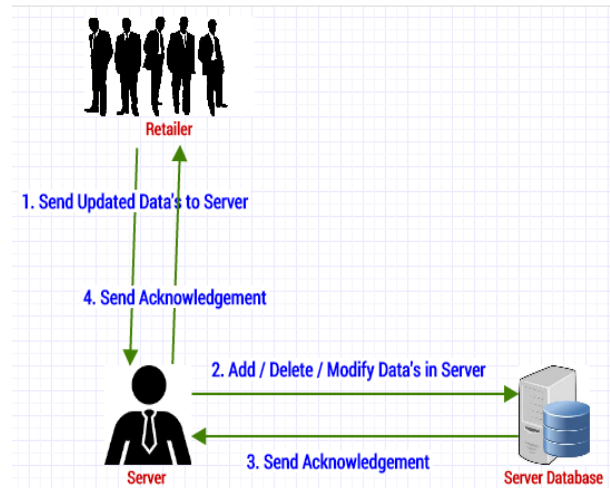


Fig. 5: Server side view.

3. Implementation

Location application will get the task input from user and will listen for location changes. The new co-ordinates are passed to service routine written for handling task. Following are the benefits of task application

- Adding and editing task
- Storing task in SQLite database
- Tracking and displaying location
- Viewing retail discount information
- Retrieving information on mobile device
- Task around few Km displayed as alert.

3.1 Service Invocation

Service running in background will track the user location continuously. Android Software Development Kit (SDK) does not provide a special intent that will listen for changes in location. Broadcast Receiver listens for BOOT_COMPLETED event. Therefore once the device is booted on, the location service is invoked automatically using our service routine. Permission has to be set in the Android Manifest file.

3.2 Location Services

Application will have to register to the Broadcast Receiver which is an Android component for receiving location updates. These Permissions for location updates are registered. Location information is retrieved with the help of Location Manager System by invoking the command `getSystemService (Context.LOCATIONSERVICE)`.

3.3 Database

Task data is stored in the SQLite database and can be viewed using special third part browser while running the

program. Database entries are pulled from the device in DDMS perspective and downloaded to the user system for further analysis. Latitude, longitude, distance of interest and essential product details along with product identification code and shop name are stored in MySQL backend for shopping offers display.

3.4 Discount Information

Retailers wishing to publish product discount information can do so by registering into the webserver. Once done, the administrative rights of uploading discount information are given to the retailer. Request communication from mobile to the web server is done through Hyper Text Transfer Protocol (HTTP). Matched discount information corresponding to latitude and longitude will be passed back to the Android mobile using JSON format and the same will be displayed.

4. Conclusion

In this paper, we showed the use and evaluation of aide, which gives a speaking to toward oneself advancement of a tweaked aide for the headway of bleeding edge adaptable organizations. The inside piece of this aide is a range organization plot that gives disengaged from the net and online region information in consistent lives. Each customer look for his/her own particular territory in aide incrementally with an aid of consolidated server and a close-by server. We minimized the imperativeness use of a device by using a base set of sensors concentrated around customer development. Customer assurance was in like manner considered by illustrating a decentralized framework. Our conviction is that the proposed philosophy supplements current confinement advancement, taking an indispensable dare to augment the space of versatile organizations to indoor circumstances in consistently exists. In spite of the way that spotlights on the genuine wellspring of customer association (i.e., territory), we acknowledge that our technique is a building piece to a current structure that gives diverse customer setting, including both range and condition.

5. Future Enhancement

Photo Tagging: LBS can be used to tag the photos clicked from camera and can be showed on the map on the location where they were clicked.

Apps Security in an Organization: Conjuring of web server and recovering the pertinent markdown data into a cell phone is in advancement. Subsequently walking towards building a complete area based administration. In the same way one controls alternate applications by method for GPS areas. It will be extremely helpful for security purposes and to control the exercises of the clients in a

certain zone. For Example, inside the college and office enclosures diversion and entertainment applications can be limited to utilize.

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