



A Survey on Android Based Application to Provide Information about Pune City

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ABSTRACT: Today there are separate mobile applications available for services like hotels, picnic spot, hospital, ATM, Police-station, bank details etc. This becomes time consuming to search for services over different application. In Our proposed system Location based Services give many advantages to the mobile users to retrieve the information about their current location and fetch that data to get more useful information near to their location. With the help of A-GPS in smart phones and with help of Web Services using GPRS, Location based Services can be implemented on Android based smart phones to provide these value-added services for advising clients providing routing information, helping them find nearby hotels, picnic spot, hospital, ATM, police-station, bank. This system is a mobile based application system. It provides information for new visitor in Pune by displaying schedules of buses, trains, day and night auto fares, hotels, picnic spot, hospital, ATM, police station, bank. In our proposed system which is helps people to find the buses, trains, and picnic spot based on city. This application will provide information about each service. It offers many benefits like saves cost, time and provide various information through one application.

KEYWORDS: Location Based Services, GPS technology, Haversine algorithm, searching and sorting algorithm.

I. INTRODUCTION

The concept of using the smart phones is to deliver the valuable services except the basic communication that had been started in the early 1990s when earlier time Internet was added in Voice Telephony. Location-based services refer to a set of applications that describe the knowledge of the geographical position of a mobile device in order to provide services which are based on that information. Location-based amenities offer many services to the mobile clients. Mobile tourism is relatively a new technology in tourism and it can be involves mobile devices as electronic tourist guides. While most of the technology is now available there but they have still some issues to be considered such as design, usability and functionality. Location-based services or LBS refer to a set of applications that provide the information of the geographical location of a mobile device in order to provide services which are based on that information of current position. Location based services (LBS) provide the mobile clients personalized services according to their current geographical location. They also open a new area for developers, cellular service network operators, and service providers to develop and provide various services providing direction-finding information, helping the users to find nearby picnic spot. Location-based services offer many advantages to the mobile clients. To determine the nearest location such as a Picnic spot or Restaurants. Maps Navigation- The users can use the Google Maps to get to the specific location or to suggestion the way between any two locations.

Location based Services can be classified in 2 categories:-

a) Public Safety Services:-

The location of the client can be determined by the mobile phones hence it finds great use during Emergency since it use during the emergency strength risk to find the mobile clients.

b) Consumer Services:-

Now days, smart phones are provide a set of location based applications and services which helps the users to access the many services based on the user geographic location. This system is a mobile based application system. It provides information for new visitor in Pune by displaying schedules of buses, trains, day and night auto fares. It saves time as it

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is not required to visit different sites of different services. This mobile application will give ease and faster access to all information that is required about the city. This becomes time consuming to search for services over different application on that proposed system.

II. RELATED WORK

In [1] This paper present an algorithm for efficient a manual mapping of the nearest police station for a specific position. Classification algorithm is based on geographic position system, geographic information and J48 classification algorithm. In [2] author showed the however implement of location based mostly services through Google net service and walk score transit Apis on mechanical man phones to administer multiple services to the user supported their location score. In [3] This paper presents the state of the art in mobile traveler guides of the second generation supported a comprehensive analysis framework. The framework extends past ones by providing each, a classification of services, also as 3 style dimension of however those services may be made-to-order for the tip user. In [4] author This paper presents the planning and implementation problems with a “mobile tourism” analysis model that brings along the most assets of the 2 same approaches and it is presents our development experiences with J2ME and highlights its main benefits. In [6] author reviewed that Increasing industrial use of the world Positioning System can presently create it doable to find something, anywhere, anytime. And conjointly told the way to increase accuracy. In [9] author presented For mobile commercial enterprise services normally the importance of another price by location awareness has been confirmed, additionally the importance of providing interactive maps. Essential applications would be content concerning native transportation (especially once personalised and faithfully updated), background data concerning native sites (in a alternative of granularity) and advanced LBS services.

III. PROPOSED WORK

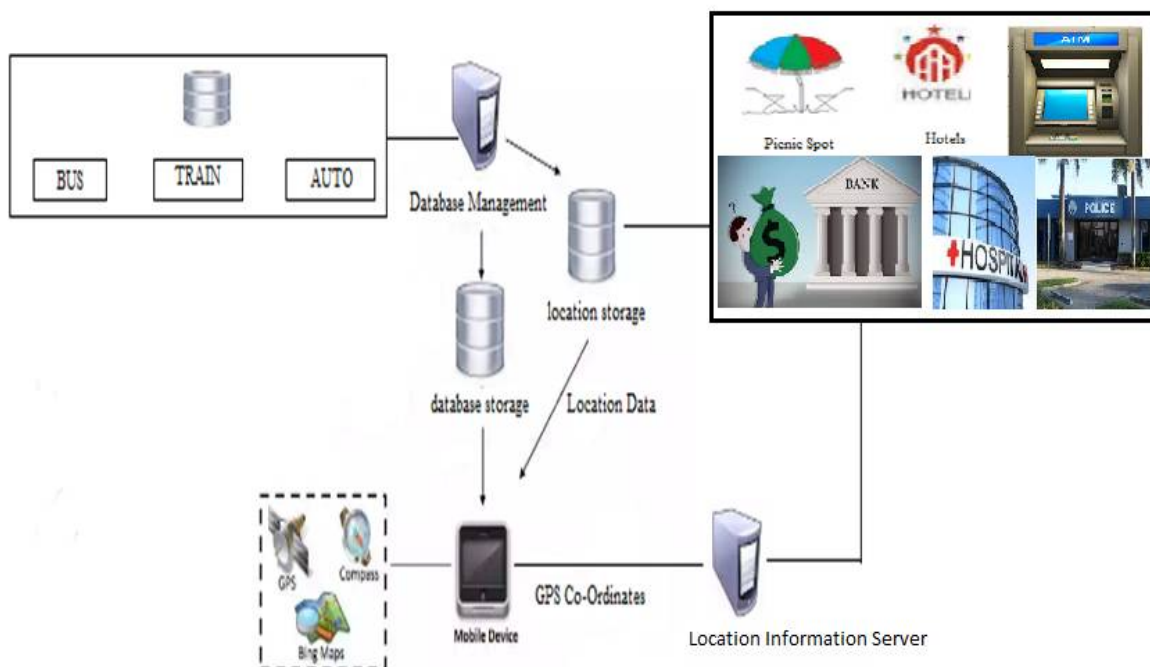


Fig: Block diagram of proposed application

A. Design Considerations:

- It is user base system.
- Client can be use current position to find nearest hotels, picnic spot, hospital, ATM, police station, bank send input GPS co-ordination to the server.
- Server performs computation of algorithm and results.



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- Only display the set of particular region to show the result like nearest nearest hotels, picnic spot, hospital, ATM, police station, bank shown as output after computation.
- It can also provide the train, bus time table to the user and also provide the auto-fare in kilometer wise.
- It also provides the emergency services numbers to the user like ambulance, blood bank, hospital, fire brigade.

B. Description of the Algorithm:

The Haversine formula is an equation important in navigation, giving great-circle distances between two points on a sphere from their longitudes and latitudes. It is a special case of a more general formula in spherical trigonometry, the law of Haversine, relating the sides and angles of spherical triangles.

Formula for **Haversine** algorithm:

$$a = \sin^2(\Delta\text{lat}/2) + \cos(\text{lat}1) \cdot \cos(\text{lat}2) \cdot \sin^2(\Delta\text{long}2)$$

$$C = 2 \cdot a \cdot \tan^2(\sqrt{a}, \sqrt{1-a})$$

$$d = R * C$$

Where,

$\Delta \text{ lat} = \text{lat}1 - \text{lat}2$ (difference of latitude)

$\Delta \text{ long} = \text{long}1 - \text{long}2$ (difference of longitude)

R= Radius of Earth (6371 KM or 3961 miles)

d= Distance computed between two points

C. Searching Algorithm:

This algorithm are used for to find the bus train time table when user the enter the source and destination. This algorithm can be find the bus and train time by using the current time and display the time table.

D. Sorting algorithm:

This algorithm are used for to sort out the database when the user can be enter source and destination. This algorithm can be sort out the data in database and display the result.

E. Description of Application Working:

CLIENT SIDE WORKING:

- 1] Client will fill basic details like source and destination form through android application GUI.
- 2] Selection source and destination choice and submit.
- 3] View output of current time table in application.
- 4] also user can be click the module like hotels, picnic spot, hospital, ATM, police station, bank it will display the result to already set the particular boundary or region.

SERVER SIDE WORKING:

- 1] Create database of Train and time table.
- 2] Write Searching and Sorting algorithm and store the database in time-table format.
- 3] When input is send from client side, the server performs searching and sorting algorithm on input data and sends the result back to client through android application GUI.
- 4] Server admin can add, update, and delete records in database.

IV. CONCLUSION AND FUTURE WORK

This proposed system is designed and implement location based mobile services by using GPS and navigation mechanism by using Haversine algorithms taken into consideration of various and limited input values or parameter. Proposed system is concluding that methods of searching is very efficient for new user in city that will shows proper information about hotels, picnic spot, hospital, ATM, Police station, bank which are nearby the users and display schedule for bus ,train. Today the smart phones and tablets are widely used so it is very important for users to be able to operate their devices without input commands by hand. Through our system, we will confirm that the proposed system



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can significantly improve the search accuracy. User gets accurate reviews of previous users and gets guaranteed excellent services regarding tourist points, restaurants and other services through this proposed application.

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