Product Availability Checker

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Abstract- *It is usual for a consumer to search a product based on its category and go to a related kind of shop to buy a product, e.g. food in a supermarket, a pencil from a stationary shop, etc. While it is not uncommon nowadays for a shop to sell various categories of goods at the same time, like a newspaper stand does sell toys, an accessory shop has stationery. However, consumers may not easily notice and purchase these goods, especially if they are in a hurry or not familiar with the shops nearby. With the emergence and popularity of many shopping searches, we can actually provide a better matching between the consumer and seller. In this paper, we developed an application system (Product Finder) on smartphones that can search and filter the nearby shops which sell the desired products. Detailed information of related product and shops are displayed in the result, together with a navigation map showing the best route to the target shops*

Keywords- Filtering Location, Geo-locations, Ground work

I. INTRODUCTION

Day to day life activity we gave more importance for shopping, by taking this as an advantage so many online website are hosted in network for the shopping but so many peoples are preferring traditional shopping. Why because, they may have fear about security on online. Coming to online shopping in most of the locations they are unable to provide their services efficiently, we have to wait for the booking product delivery, and some of the situation we have to pay the shipping charges also. This makes the customer has extra burden. There is no guarantee that the delivery product properly works, if it is not working at the delivery time we have consult the service provider of the particular product. These all things make some difficulties to the customer. Instead of this buying the product in near location is better. So we are concentrate on the traditional shopping problems. General problems on traditional shopping are lack of knowledge on the store location and availability of product in particular store. So in our Ground Work for a product in nearby location project we try to overcome some of these problems by providing information about the user needed products, and it's availability in nearest store and also we gave the route map to the store from customer near location.

1.1 Related Word

There are also some applications like" places" in Google maps by which we can know the nearest store, hotels, reservation centers to the present location and also shows the route map for that nearest store. But it is not possible to show whether the products are available or not in the nearest stores. Whereas on using this application we lost our valuable time and money in our day-to-day life. This is the main drawback of this related work. The main disadvantage of this existed system is to waste of time and expenses. And also we didn't know whether the product is available or not in the store.

1.2 Proposed Work

Nowadays every individual has a good knowledge about mobile and web applications. If an application is developed to search for a product in a nearby Geolocation it will be easy for a user to get that product and its quantity within a less time span. If the application is a mobile application, we can get the Geo-locations values of the current location by using GPS (Global Positioning System). If the application is a web based application, we can get the Geo-locations values of the current location by using Geocoding. Geocoding is the process of finding associated geographic coordinates (often expressed as latitude and longitude) from other geographic data, such as street addresses, or ZIP codes (postal codes). With geographic coordinates of both the address (which user enters) and the nearest store obtained.

This application is applicable for various fields, like homely goods stores, medical stores, hospitals, blood donors as per the user needs which will prevent major damages.

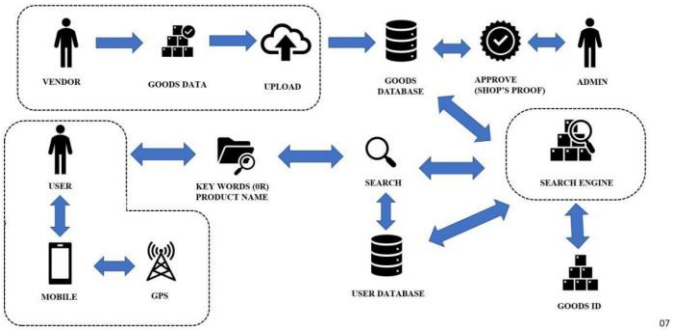
The main advantage of this proposed system is to reduce time and expenses. We can also get the exact route to the store where the product is available. Quantity of the product available in the store can also be obtained. In order to achieve this we use php and My-Sql. But it does not provide the results very fast and also it is difficult to maintain the database of all the stores in My-Sql. Because every shop maintains its own database.

In order to overcome above drawbacks we shifted to MongoDB, as it is a No-SQL database.

To get quick results. We shifted to python language for easy connection to Mongodb. We are designing 6 modules for this application. They are

- login/signup,
- Map integration,
- Getting user location,
- Live product availability,
- Search product,
- Filtering of shop nearby locations.

1.3 PROJECT DESIGN



A System Architecture is the conceptual model that denies the structure, behavior, and more views of a system, and architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and Assistant architecture can comprise system components, the extremely visible properties of those components, the relationship i.e., the behavior between them. It can provide a platform in which systems can be procured, and systems developed, that will work together to implement the overall system.

This proposed system consists of the following ways customer can find the availability of the product :

1) REGISTRATION: The admin will register the valid user by verifying the required details of the user and will enter the user data in the database and will provide the user with login credentials.

2) LOGIN: After successful registration, the user can log in to the application by the registered user id and password. On successful login, the user will be again validated by the database.

3) SEARCHING THE PRODUCT: After the login the user needs to search for the product by using the product name.
4) SHOWING THE RESULT: After the product name search it directs to the database and it gets searched and it will show the shop name based on filtering the nearby shop availability of the product.

II. MODULE DESCRIPTION

In this session we are going to give complete information about the different which we are using in our application. This contains five modules, they are

1. Login/Signup Modules
2. Map Integration
3. Getting User Location
3. Live Product Availability
4. Search Product And
5. Filtering Of Shop Nearby Locations

2.1 LOGIN/SIGNUP MODULE

Every user who wants to use this application must first register their details in the application. This module mainly focuses on security. If any user uses this application for first time he/she wants to register with the details like Name, Password, E-mail, phone number. Those details with which the user register are stored in the 'Users' collection. If the registered user uses this application once again he/she can directly login into the application by using Email and password. We can also add confirmation messages or mail to the email or phone number entered during the registration process.

2.2 MAP INTEGRATIONS

Geocoding is the procedure of discovering particular geographic directions (regularly communicated as scope and longitude) from other geographic information, for example, road addresses, or ZIP codes (postal codes). With geographic directions the characteristics might be mapped and entered into Geographic Information Systems, or the directions could be installed into media, for example, computerized photos through geo tagging. A geocoder is a bit of programming or a (web) benefit that aids in this procedure.

2.3 GETTING USER LOCATIONS

A basic technique for geocoding is location insertion. This system makes utilization of information from a road geographic data framework where the road system is as of now mapped inside the geographic direction space. Every road

portion is ascribed with location ranges (e.g. house numbers starting with one portion then onto the next). Geocoding takes a location, matches it to a road and particular fragment, (for example, a square, in towns that utilize the "piece" assembly). Geocoding then interjects the position of the location inside the reach along the section The customer searches the product. Then the nearest stores with searched products are shown on the navigation map. The geo-location feature of the app turns GPS navigation to guide the users to a specific location as shown in fig 3. The location data isn't always precise, so the fused locations are used by API which allows setting the time and distance at which the location data is updated.

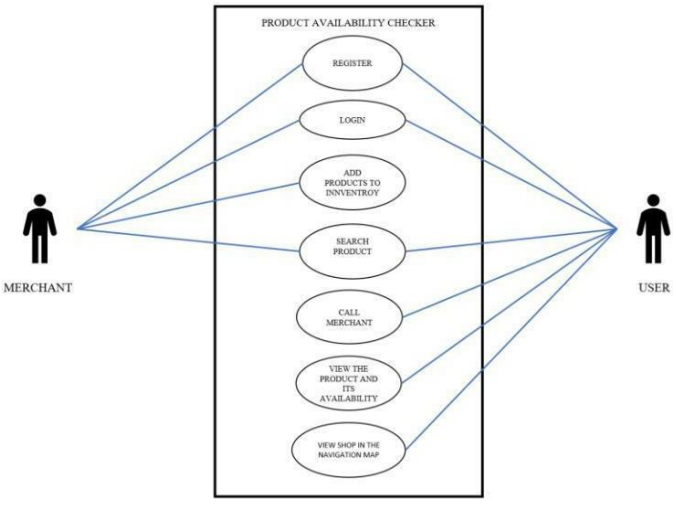
2.4 LIVE PRODUCT AVAILABLE

Database of the stores is the backbone of this application. To know whether the product is available or not in the store it is compulsory for every store to maintain a database. First we must approach the shopkeepers and get permissions on their local database. After obtaining the permission of the database of those particular stores it is stored in the server. The server is built in such a way that the local database of the shop is updated automatically to the server for every 10 or 15 minutes. The attributes of the store database on which this application mainly focuses are store name, product name, product quantity, geo locations, and product code

2.5 SEARCH PRODUCT

Product-wise search helps the user to view the products with its availability, which the user needs to buy readily. It also provides other options that escalate the customer experience and app engagement. The customer searches for the product then the nearest stores with searched product are shown on the navigation map

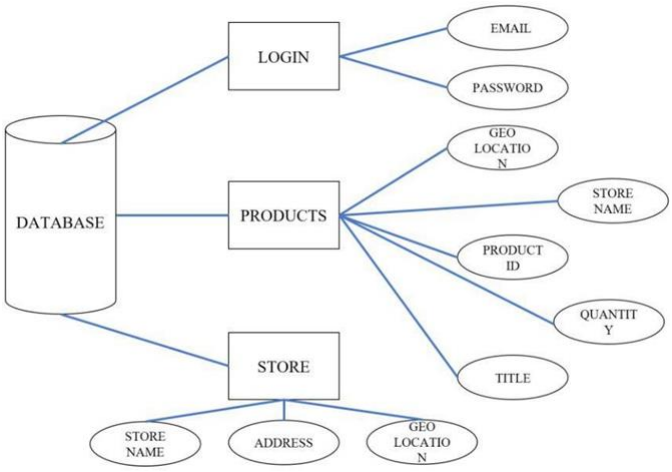
III. DATABASE STRUCTURE



This is the complete use-case structure we are using in our application. It will show the relationship between the merchant and the user.

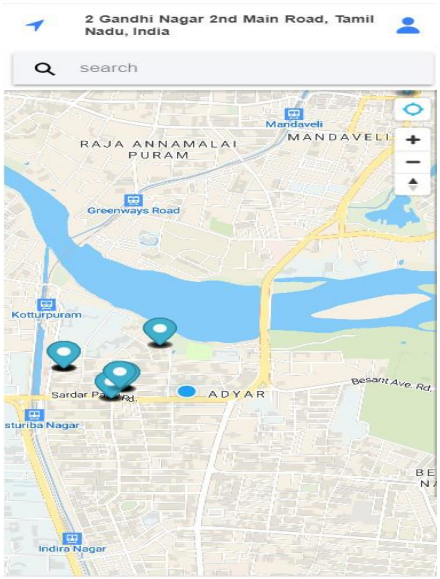
3.2 DATABASESTRUCTURE

This is the complete database structure we are using in our application. In this Super is the main database and it contains three collections: login, products, store. Each has different its own entities

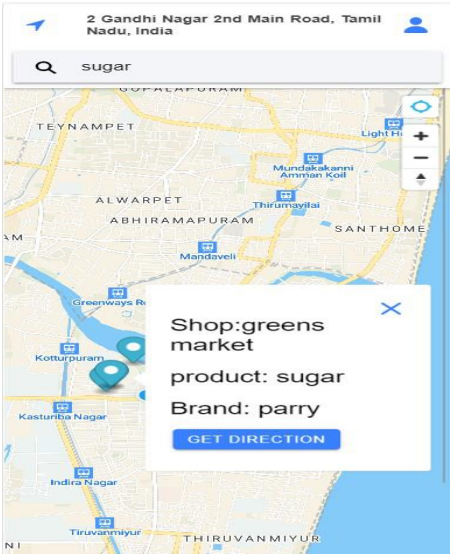


3.3 DATAFLOWSTRUCTURE

Flow description above is first start from the home page. It asks user login details. If the user details is already existed his/her directly redirect to search pages if the details correct otherwise it goes to login page and display an authenticated error. If the user does not exist he has to register by using registration page.

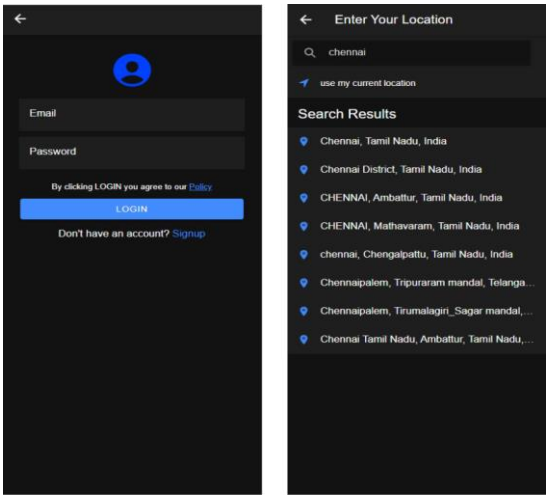


For existed and correct authenticated user have rights to search for the product in search page. It asks the details about the product name and location of the user if it is a GPRS supported device it automatically retrieves the location of the user after user clicks the search button it displays top 10 nearest item located shops with quantity of that product. In this he has a option to choose any one of the 10 results. Suppose any one of the list it gives the GEO-graphic location and path from present location of user.



IV. RESULT

To show the result we take a small example .we are searching a product name “Clink shampoo” from user location then it will shows the nearest shop address with route map for that product like this image.and risk in searching for the product, expenses involved in the vehicles. The main advantage of the proposed system is that we can not only know the product availability in the store but also the available.



V. CONCLUSION

This is one of the best applications to find the user required items in nearest location. We can overcome the drawbacks of existing system like time and risk in searching for the product, expenses involved in the vehicles. The main advantage of the proposed system is that we can not only know the product availability in the store but also the available quantity of that product and also the route-map for allthe stores wherever the product is available along with distance. This application feels the user very comfort to the user.

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