Priority Based Cab Search Engine Using Rest API

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Abstract:-In last two years, the rapid development of Internet based ride-sharing has brought great changes to travel pattern of residents. By comparing the trip records of OLA and UBER [2][3], two indicators, the distribution characteristics of vehicle volume and the balanced patterns of time, are selected to identify the ride-sharing cars from private cars. REST (Representational State Transfer) which uses Uniform Resource Identifier for web applications and web resources which use HTTP, as it was original which is simpler than SOAP or XML-RPC [4]. This paper in lights the working of comparison of the price, distance and by car selection.

Keywords:-REST, API, JSON, NOSQL, Greedy.

I. INTRODUCTION

With the rapid popularization and development of the Internet/Web technology, all kinds of information resources can be easily obtained from the Internet. People are enjoying the benefits of the Internet, and the Internet is gradually becoming a part of work and life. For example, we search a word "apple" on the search engine, a results list is provided by the search engine according to the correlation between the query and the search results from high to low. Actually, the users are still difficult to find useful information in a short time. One approach to managing large result set is by clustering. Now the question arises how the search engine executes their query and generate effective output. Users can find the information of interest more quickly and accurately. Internet based ride-sharing service has improved the efficiency of both travelers and drivers [5]; on the other hand, several problems could be caused by the rapid growth of the number of Internet based ride-sharing vehicles. First, the platform provides the services to both taxi drivers and private car drivers. Thus more and more "taxis" are running on the road, which could increase the burden of the traffic, especially in the area of CBD, Airport and so on. A test case consists of id, URL, form-data (optional), Header(optional), basic authentication (optional), assertion & scripts. Assertions & scripts are associated with HTTP and each test case is

essential to have one for HTTP package. Every test case needs Functional and Non Functional Test case.Functional Test case focus on the correctness of Rest API test should have objects like status code, header, Response entity format and Resource entity content [4]. Non-Functional focuses on the performance of Rest API it includes objects like Response time & Response Size[4]. REST API testing tools include six validators which are status code, response header, response entity format, response entity content, response time and response size. Each validation of validators is one assertion[4]. Assertions consist of a source, property, comparison, target Value. Cross platform app has several different issues main of seven app issues, i.e., "battery", "crash", "memory", "network", "privacy", "spam", and "UI". Now the question arises how the search engine executes their query and generate effective output.

II. WHAT IS PRIORITY BASED CAB SEARCH ENGINE

Opening multiple cab apps to compare ETA and pricing, and then booking a cab consumes time, especially when you are at a place with weak internet & GPS signals [5]. With our Cab Bookings, we allow users to book their nearest cab in just several seconds by tapping and holding a button on their home screen. Sometimes people want to travel in cheap rates and sometimes in less amount of time so by considering this two factor as a priority we are designing this project.

A. Need of Priority based Cab Search Engine

In this busy world, time and money are two important factor by booking OLA or UBER individually we don't know which cab is nearer to our source location and provide us cheap rate of the journey. So by integrating these two app, we can provide this factor in a single app and user can decide its priority and book the cab.

III. SYSTEM ARCHITECTURE

All required Modules for System architecture for priority based cab search engine are explained below.
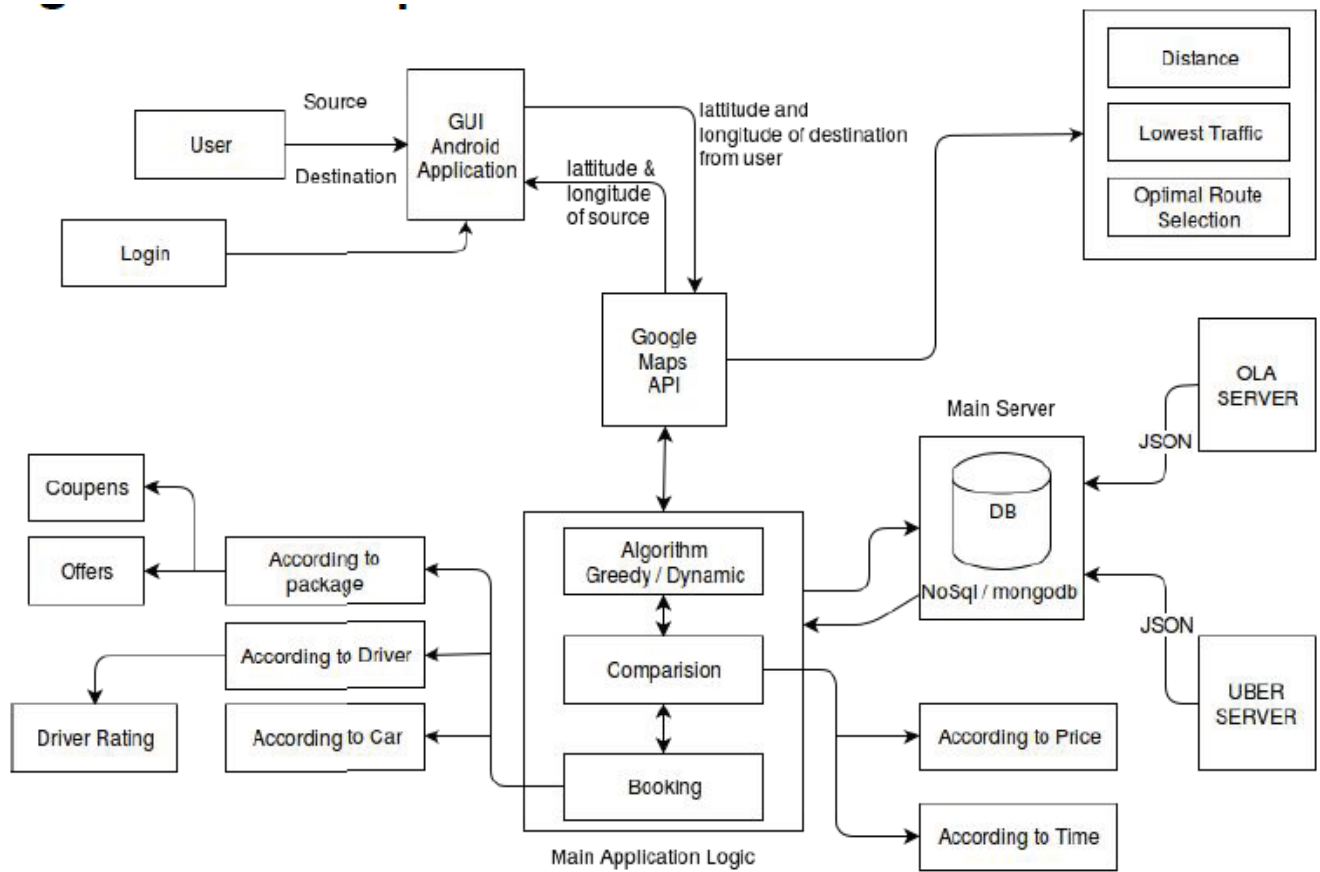
Fig.1: System Architecture

A. User Login

In this login the end user can login into the system via using his/her Google id or Face book id. and the user will be verified by Google and Facebook API respectively. After the verification the user enters into the system and explores the application. This will reduce the load of storing the user information. This is done as everyone now a days have a Facebook and Google id, as this is the basic need in today's world. And they provide the accurate user authentication services.

B. GUI App

The application will be a cross platform application and it will provide a simple interface to user and provide a comparison list of nearby available taxi of OLA and UBER based on time and price as an output and will take source and destination as an input. The UI of the app will be simple so it will not be difficult for a user to interact with it and it will also attract large number of user of different age group.

C. Google Maps

- With Google maps, we can find the most optimal route between two Paths having lowest traffic. The user enters source and destination into the Google map. It finds the source location by using GPS of the mobile and destination by calculating the location and longitude of the position of destination from the map. It provides distance between two routes from source to destination.

D. Main Application Logic

When the user provides the source and destination for the cab ride then the actual processing begins. After fetching the routes, distance and time from the Google map this is provided as the input to the algorithm i.e. to the greedy method algorithm that may be in use in this application. After that the comparison is done between the price and time and the minimal is displayed first in the application. After sorting with this the user allowed to proceed with the booking.

E. Information Service Server

This module is about fetching the information for the cabs from their servers. Here the data that is been fetched is in the JSON format and it is then stored in the database that is of NoSQL or Mongo DB format. From this, the required data for booking is provided as the input to the algorithms for the comparison.

F. Booking Module

After selecting the desired cab for the ride by the user, he further proceeds for the booking of the cab. In this booking part there are option provided to him to select car, driver and the package he wants to travel in. The car is selected as per the no of customer i.e. MINI or MICRO or UBERGO for less than 4 people and so on. The driver rating is also provided that can

select the appropriate driver for the ride. Also, the coupons and packages are provided as the discount to the final amount of the ride.

G. Algorithm

Google maps already have features of comparing OLA and UBER cabs but we are providing an integration of all of these API with comparing according to price and nearby cabs. Google maps do not provide exact Fare value estimation but since we provide it from their own API it will give an exact fare for comparison for the customer. To check the prices of both we have to switch tabs every time. the quality of service, and driver behavior. We see tremendous growth potential in inter-city, one-way Travel. In this project, the comparison algorithm that may be used are Greedy method algorithm i.e. DIJKSTRA'S, A* etc[6].
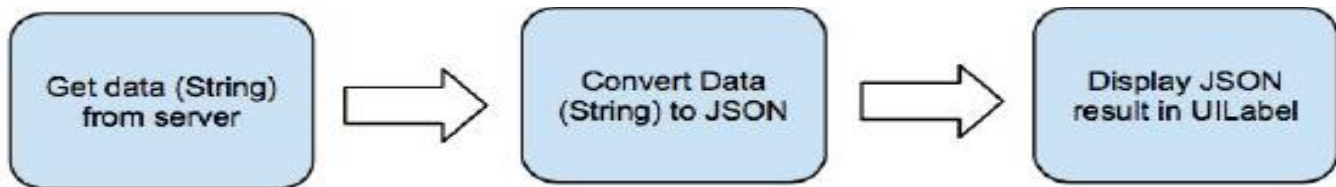

Fig.2: Data Fetching, Storing and Displaying.

IV. CONCLUSIONS

We have selected this topic because as the Market of online cab business is booming and the need of the customer who is willing to go from one place to another considering the factor of time and money and this application integrate all these functions in one and keep them united.

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