Course: CS-GY 6063

Semester: Fall 2016

Advisor: Professor Fred Strauss

Project Team C8

Project Name: Go Shopper

Team members:

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**Project Motivation:**

From our past experiences, coming to New York from India, we faced many difficulties in finding groceries and other day to day utilities like detergent, tissues, etc for an economical price. The pricing system in US is variable and very unpredictable when compared to the pricing system in India where the MRP (Maximum Retail Price) of a product is fixed. The price of a same commodity/item is different at different grocery stores too here in U.S.

For example, the bread which is available for $2 at one store is also available for $3 in another nearby store. Thus people who buy the $3 bread will end up losing $1 on a single purchase. Being from an Indian background, we are fond of several spices and food items that are not available everywhere. Commodities of this type are vary greatly from one store to the next.

It has become a laborious task to search for economical goods. Thus we feel that there is a need of an application that could tell a layman where they can find a particular grocery store and at the same time it could tell product availability and pricing. By doing this, people can save money and time. Further, we often are unable to find all the groceries at the same place. Thus there is a need for an application that could tell based on the list of items that we need, that all this stuff is available at particular stores and also at the same time it could list their prices. That way people could select which store they should be visiting for economical purchases. There are quite a few services and apps like gasbuddy, google express and other grocery store specific website which allow people to go through their list of items and buy them. Google express helps in delivering the items too. This application will be streamlined to use those services as well as develop an algorithm in this application for economical purchases.

**Proposed Project:**

This project is based on an application that makes shopping of grocery items and other day to day items hassle free by finding and delivering the most economically priced products in the nearby grocery stores by just few swipes and clicks.

The user will be able to download the app and sign up for this application when he starts using it for the first time. He will be asked to enter desired username, email id and password. The user will then create a profile for himself where he enters the basic information of him and also his home address. This application will determine the user’s location by using his GPS coordinates. By using the GPS coordinates of the user, this application will try to sort out the nearby grocery stores of the user from pool of all the grocery stores in the database.

The user will then be able to select a particular grocery store from the list of stores shown on the screen in the order of increasing distances from the user’s location. The selected grocery store will display the user all the items sold by that particular grocery store. If the user is interested to buy any item, he can add the item directly into the cart. After adding all of his interested items into the cart, he will be given a option to checkout (for premium users) or to navigate him to that desired store to pick up his items.

The premium customers will be asked to choose to which location the items are to be delivered. Then, he will be directed to a secured payment gateway to enter his/her credit card number. The delivery of goods are done by company employed delivery men. This application will also have a separate tab which contains any special discounts on products which are listed by the nearby grocery stores through this application.

Another major feature of this application is to intelligently list the desired items of the user from different grocery stores nearby to minimize the overall cost of the all the products put together. The list of items wanted by the user is written in a specific page of the application by the user. When the user is interested to buy those products, this application runs an algorithm which compares the rates of all the items provided by the user and shows the items that are present in different stores with the minimum cost.

For example, if a user wants to buy ten items, this application will list the items that cost the least in one particular store and the other items on his list that cost the least in other stores. This application will then give the location of those stores and also provide navigation to that store to buy items. The algorithm in this feature will try to minimize the total cost, total number of stores, and the distance to be travelled by the customer based on which parameter is more important. The user can also use the door delivery service which is available to premium customers.

For this application to work efficiently, all the participating stores should be sharing their information of all the items present in their stores along with their prices. The databases of these stores have to be actively updated periodically with the latest prices and any offers or discounts provided with the items. Thus that way a potential user of this app can get the best prices possible.

**Project Deliverables:**

Project proposal: 6th October, 2016

Project Business Requirements: 20th October, 2016

Project Requirements: 10th November, 2016

Project Analysis: 1st December, 2016

Presentation: 8th December, 2016