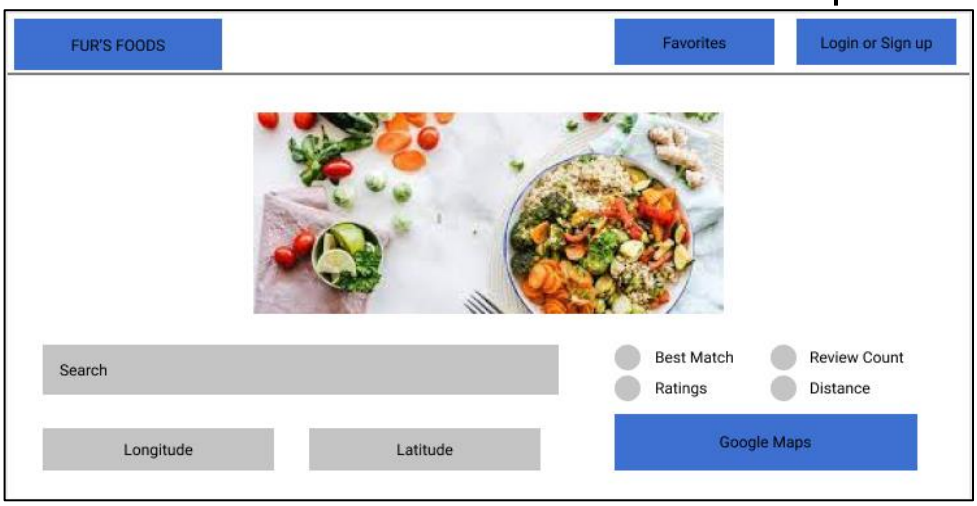
Criteria B: Design

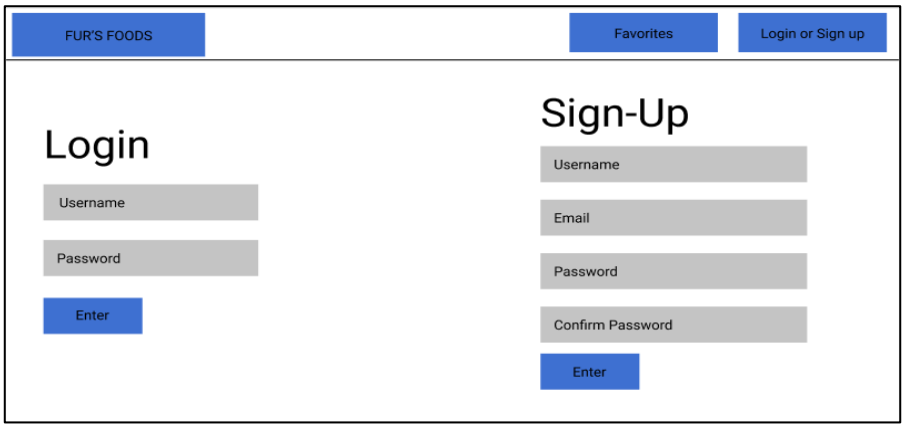
UI design

Figure 1.1: Login/Sign-up page



Home Page

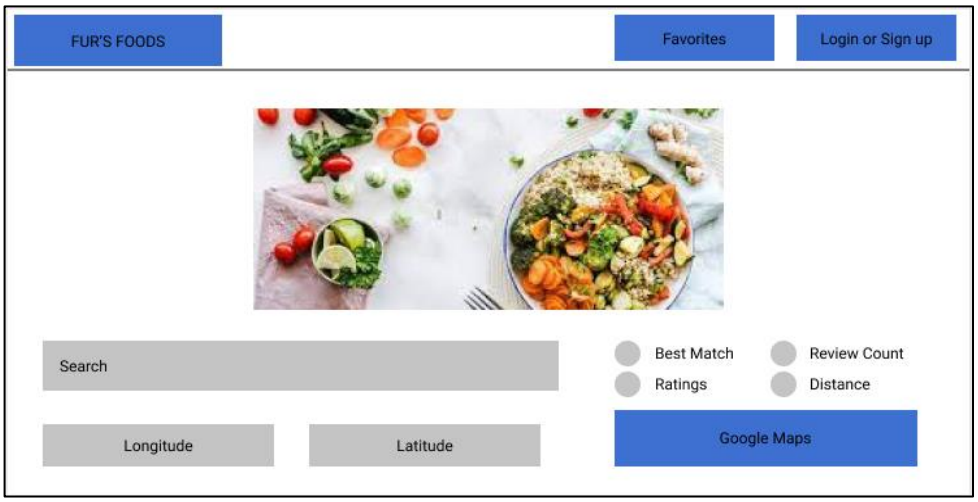
After signing up, the user information can be entered here to login to the user's account. Data will be verified from the database.



Login/Sign-up Page

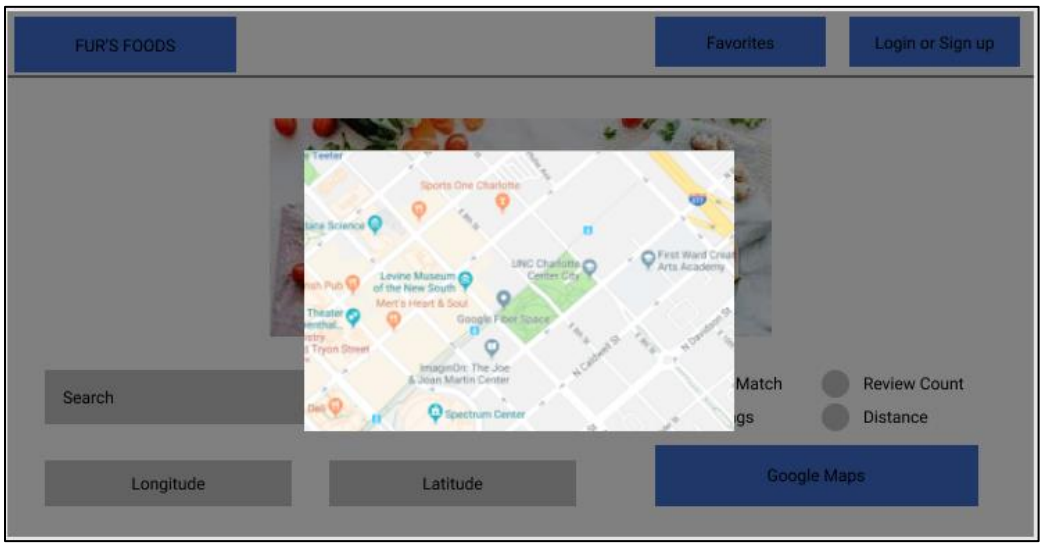
Here is where the new users can sign up and create their account. Their entered information will be stored in a local database.

Figure 1.2: Map Pop-up page



Home Page

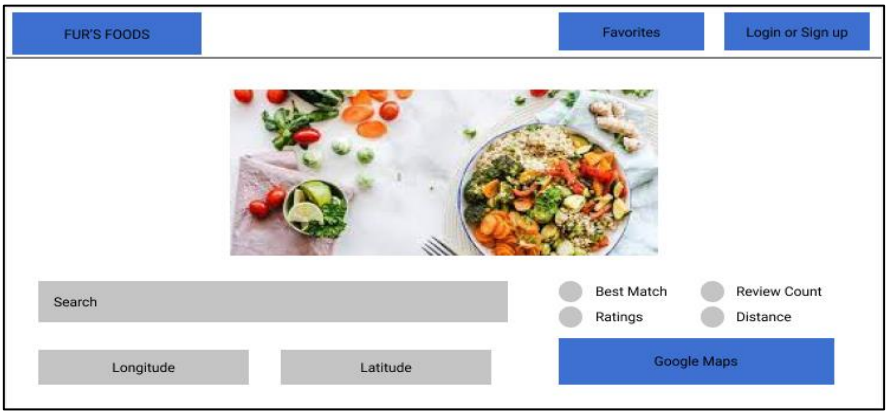
The "Google Maps" button will open the Map pop-up for the user to pin point their location. The latitude and longitude values will be taken from here



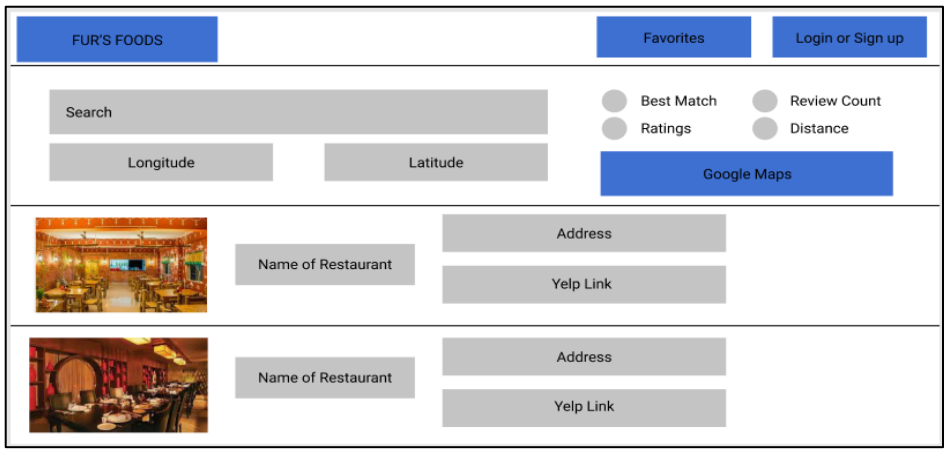
Map Shortcut Page

Figure 1.3: Search page

By searching something with a sorting option and a particular location pin-pointed, the search list is displayed with restaurants from the Yelp API.

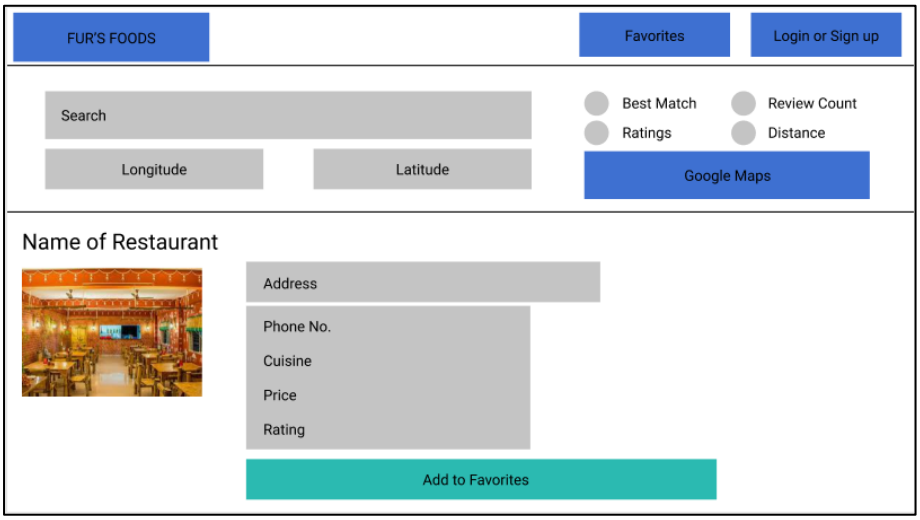


Home Page



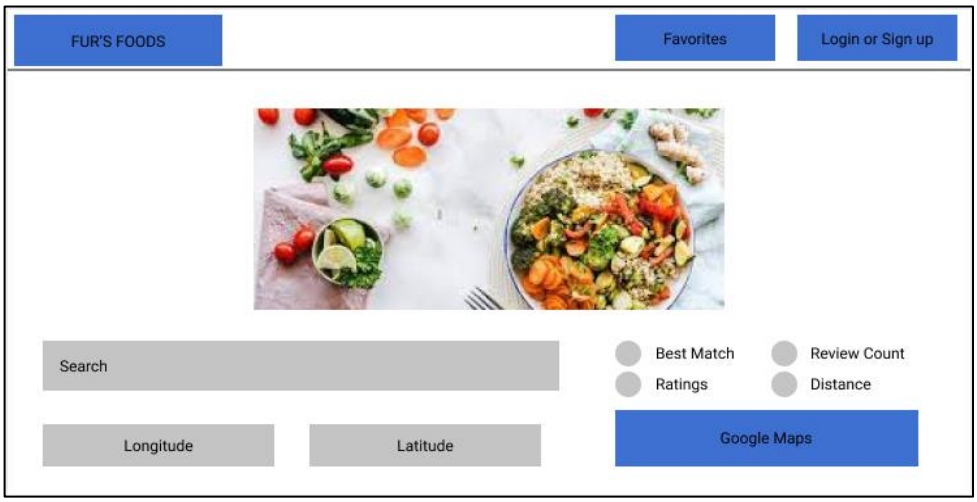
Search List Page

When a restaurant is clicked, it will show more information from the Yelp API of the restaurant. The "add to favorite button" will be here as well.



Restaurant display Page

Figure 1.4: Favorite's page



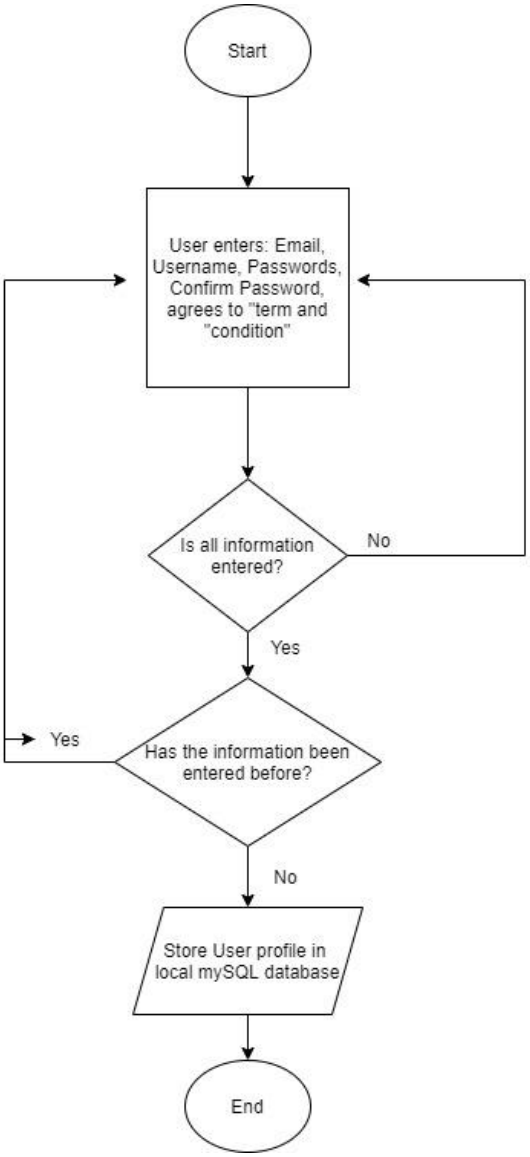
Home Page

When restaurants are added from the restaurant display page, the restaurants are added to a favorites list which is displayed on this page. A sorting option lets the favorites list be sorted.

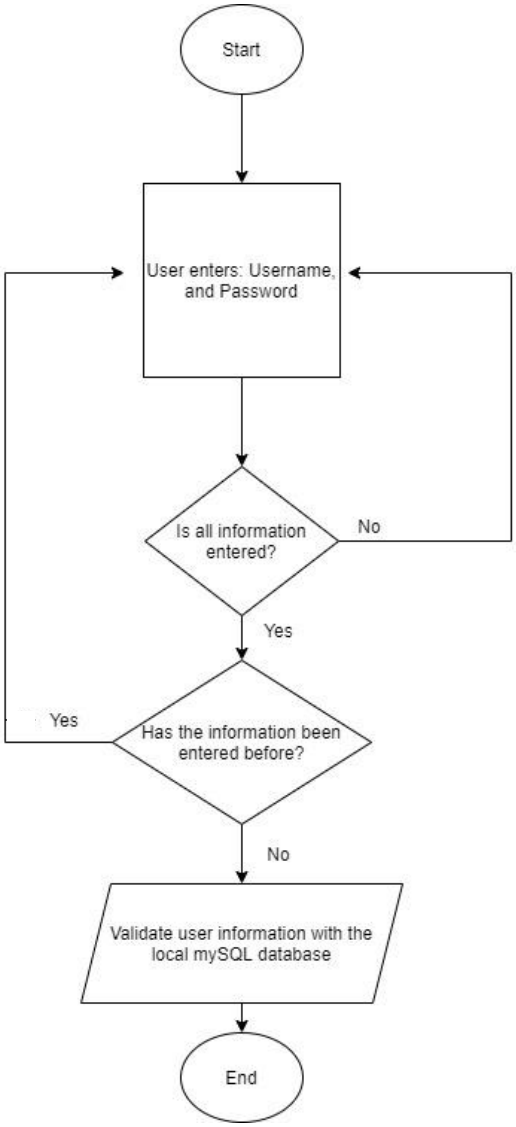
Favorites Page

Flowcharts: Process description

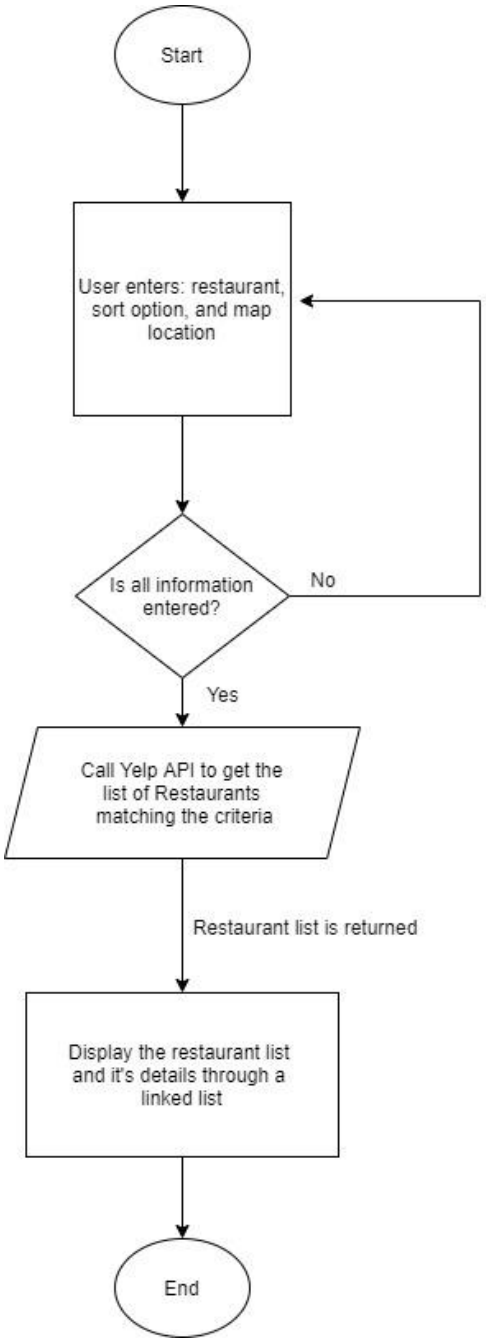
Sign-Up:



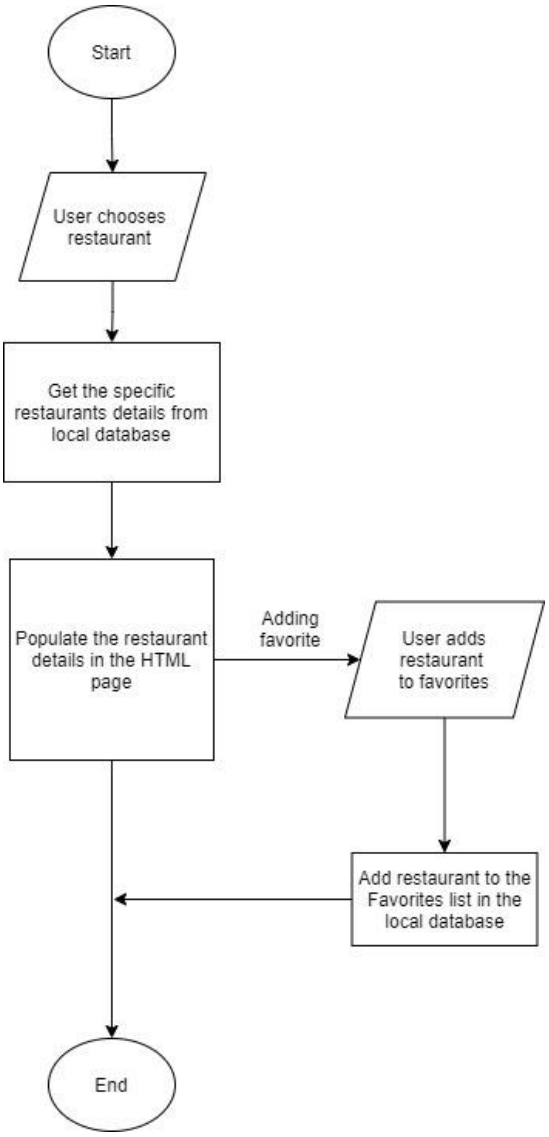
Login:



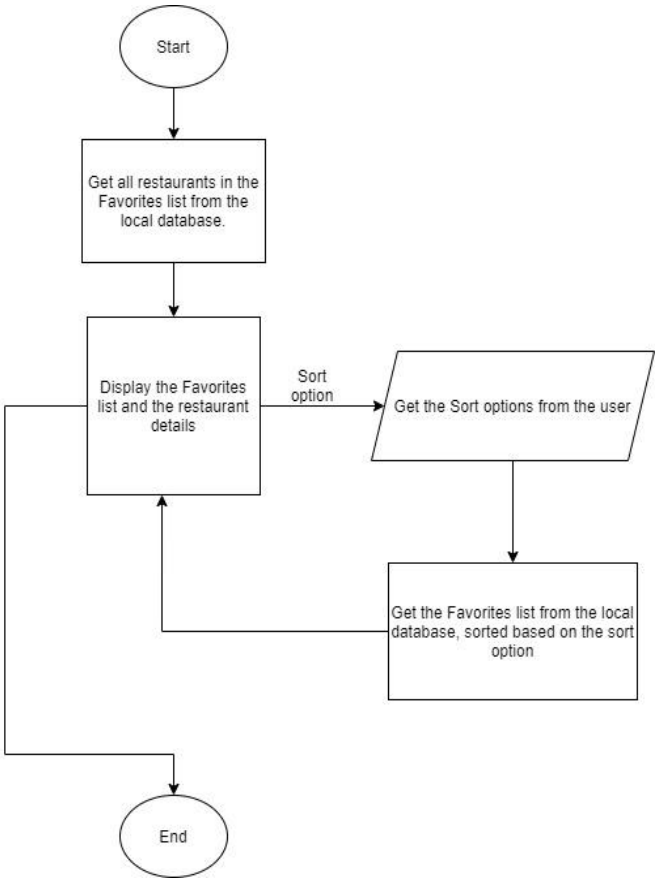
Searching for Restaurants:



Restaurant Display:

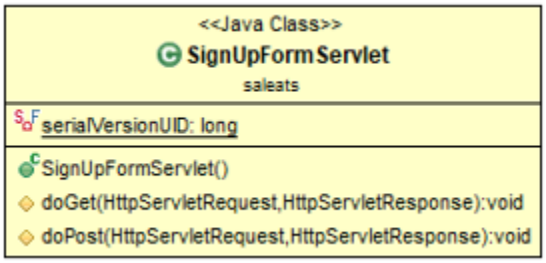


Favorites:



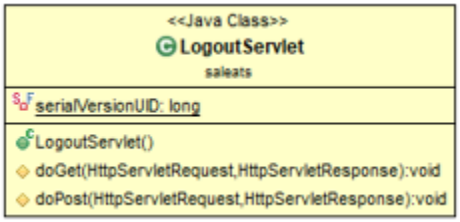
Functionalities of the various classes

1. SignUpFormServlet.java: This class allows the user to sign-up a new account by adding the user information to a local database.

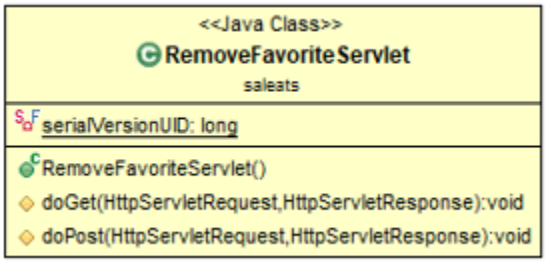


2. LoginFormServlet.java: This class allows the user to login to their account by verifying the user input to the sign-up information.

3. LogoutServlet.java: This class is used to logout of the user's account.

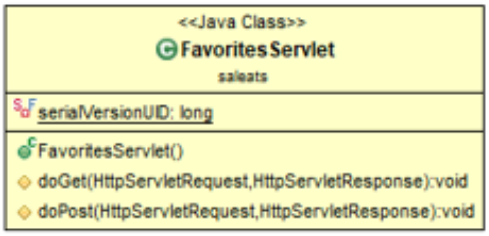


4. RemoveFavoriteServlet.java : This class allows the user to remove a restaurant from their favorites list.



5. AddFavoriteServlet.java: This class allows the user to add a restaurant to their favorites list.

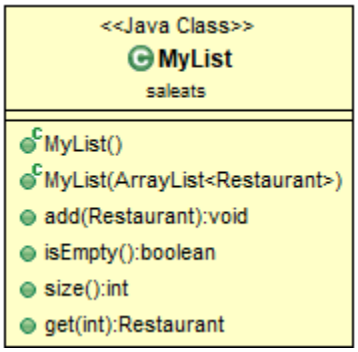
6. FavoriteServlet.java: This class is where the restaurants from the database are retrireved and displayed in the favorites list.



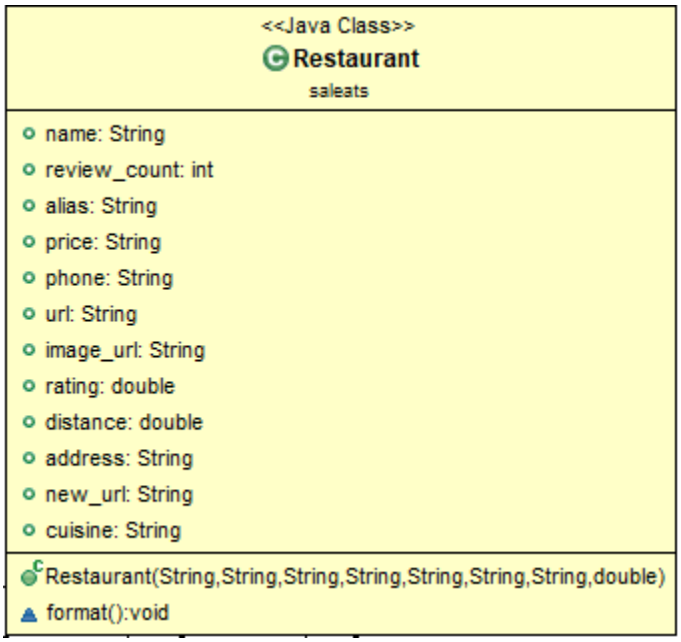
7. Util.java: This class contains utility methods that are used throughout the code. These methods are used in the login , sign up, favorite, and other functionalities of this product.

8. SearchFormServlet.java: This class is where the searching mechanism is defined.

9. MyList.java: This class includes the implementation of a linked list that displays the list of restaurants when searched.

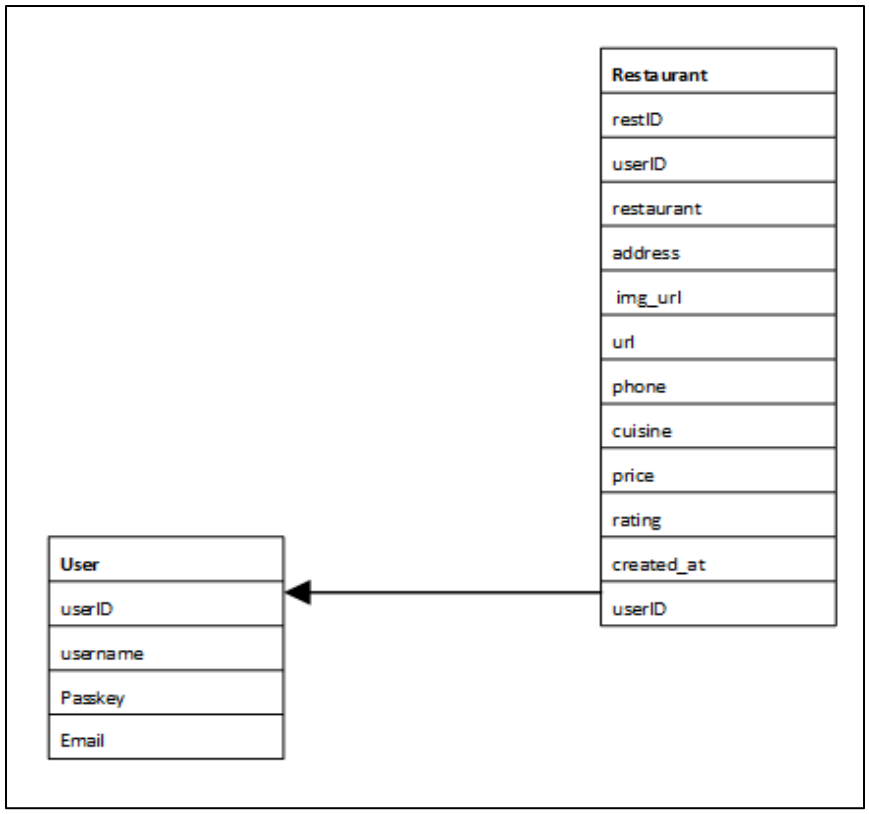


10. Restaurant.java: This class is where the restaurant class is defined which include the properties such as, cuisine, distance, address, etc. This class is instantiated through the code.



Database Design

This is the local mySQL database design. There are two tables in this database, the user and the restaurant table with their respective fields. The two tables are linked through the User ID as shown below. Throughout this product, this database is required for most mechanisms and is integral to the functionality.



Database Tables

Test Plan

S. No	Action to Test	Method of Testing	Result
1	All buttons are functioning properly	Run the program multiple times and check the functionalities of the buttons on each page.	The buttons on each page are functioning
2	Users are able to sign up an account	Set up the user credentials in the sign-up feature, then try to use the same information to sign up.	The repeated information will not be accepted, and the user will not be able to create the account
3	Users are able to login to their account	After setting up the user credentials in the sign-up feature,	The false information should not be accepted, and the

		use false information to try and log into the account.	user will not be able to access any sensitive information.
4	Check if the map pop-up is functional	Click the map button and see whether the user is able to pin-point their location with the longitude and latitude values showing up in the search mechanism.	When the user clicks their map location, the correct longitude and latitude values are entered.
5	Check if the user is able to search for restaurants	Use different sorting options, longitudes and latitudes, and different restaurant names to see whether the searching mechanism works.	The user is able to search for restaurants around them and a restaurant list is displayed
6	Check if the Favoriting mechanism works	By adding and removing various restaurants to see if they are displayed in the favorite's list.	The favorites list will include all the restaurants that the user favorited.
7	Check the favorite sorting feature	Interacting with each sort option to see whether the favorite list is able to sort restaurants based on all options.	The favorite list is able to be sorted by all options.

Word count: 219