**College of Science and Engineering**

School of Computing Science

**Interactive Systems Report,**

**Assessed Exercise II**

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**Contents**

1. Summary of Design Requirements *...................... 3*

* *Personas and Scenarios*

1. *Design Concepts and Prototype ................................ 6*
2. *System Requirements………………………………………...... 7*

Summary of Design Requirements:

The functional requirements of the system are separated into the following categories:

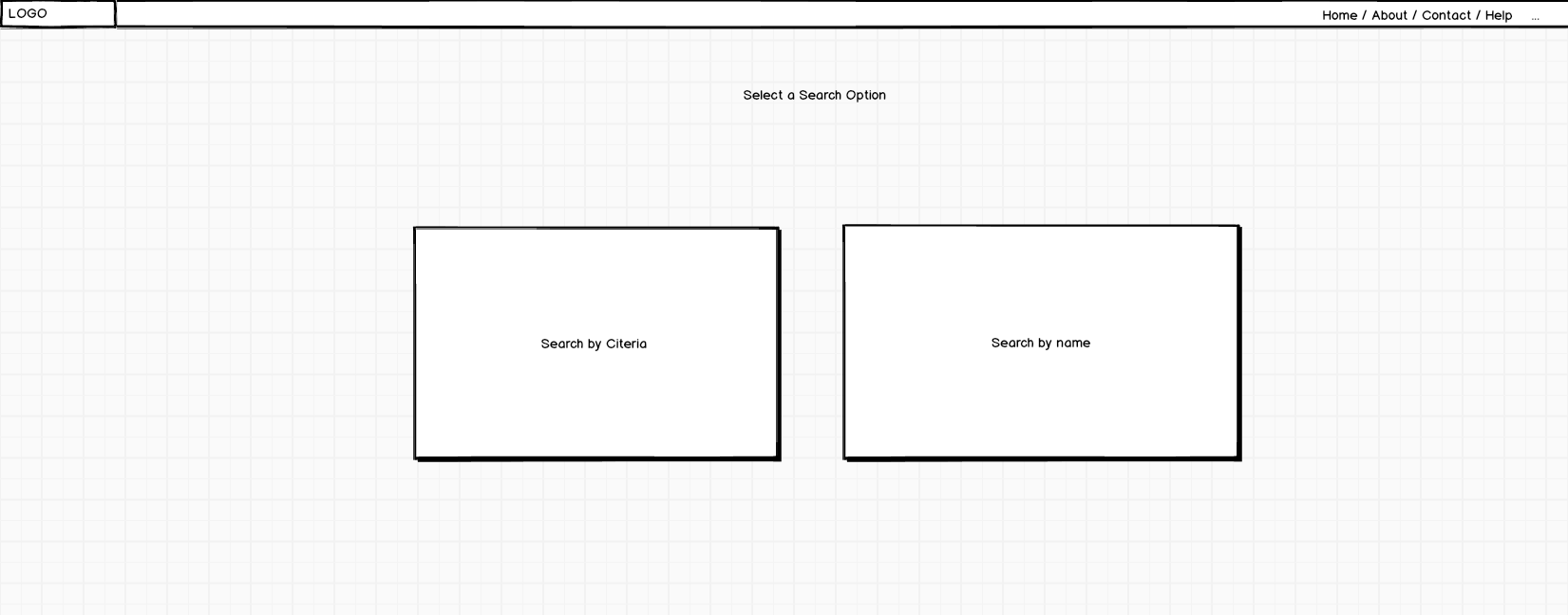
* search criterias - such as cuisine, location/distance, rating, dietary choices (vegan, diet, kosher/halal etc), price range
* restaurant info, such as contact details, address, restaurant category, web page
* map visualizing the result providing interaction for seeing a detailed view of the restaurant – contact details, address etc.
* line graph for visualizing how the restaurant’s rating has been changing over time
* search by name or phrase

Non-Functional Requirements respectively consist of the following:

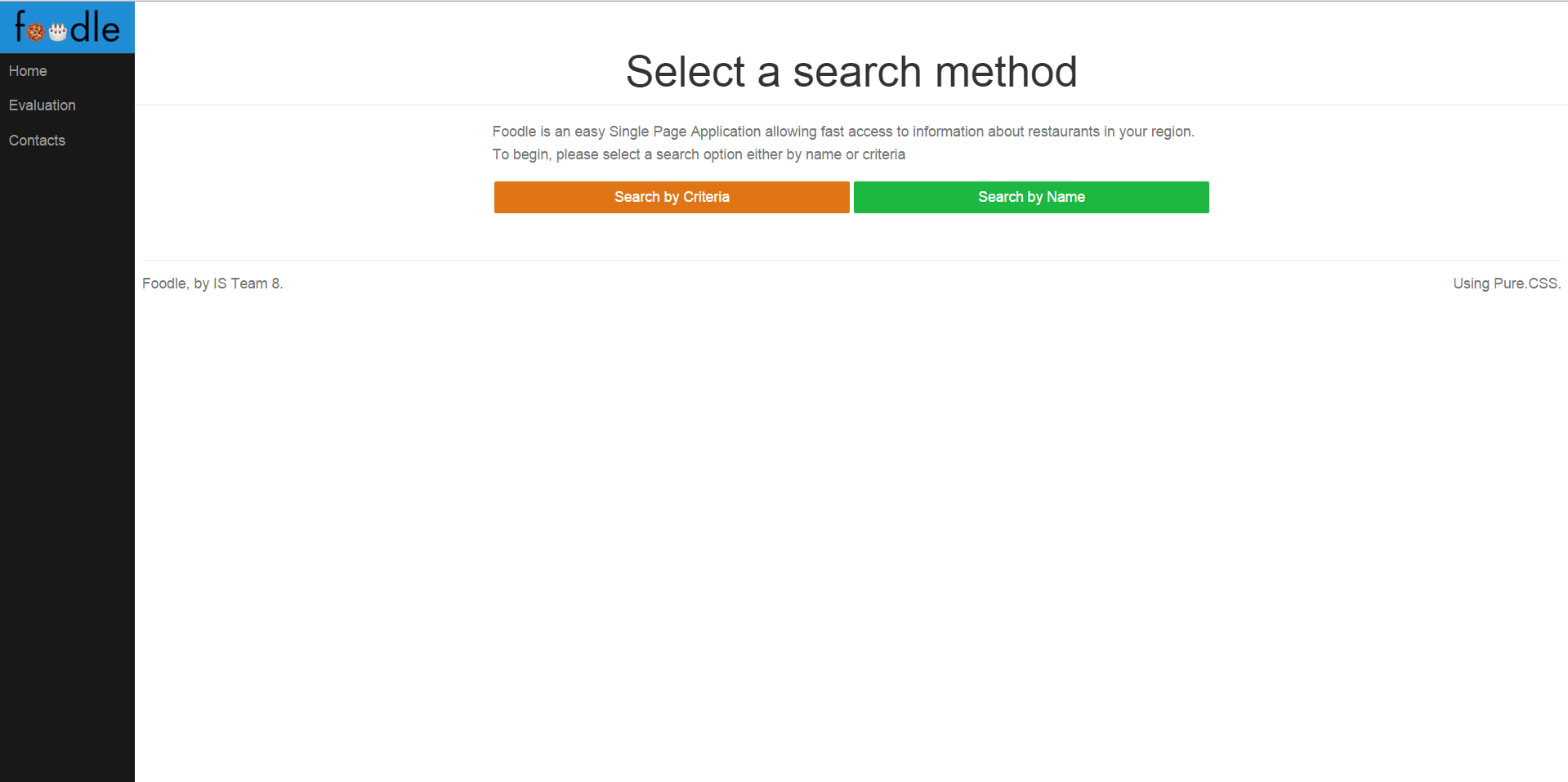
* performance (quick searches)
* geolocation using HTML5
* fetch reviews using APIs

How does the system stem from the paper prototype and requirements are met

The initial page presented in the prototype which looks in the following way (meeting the search by name or criteria requirement):



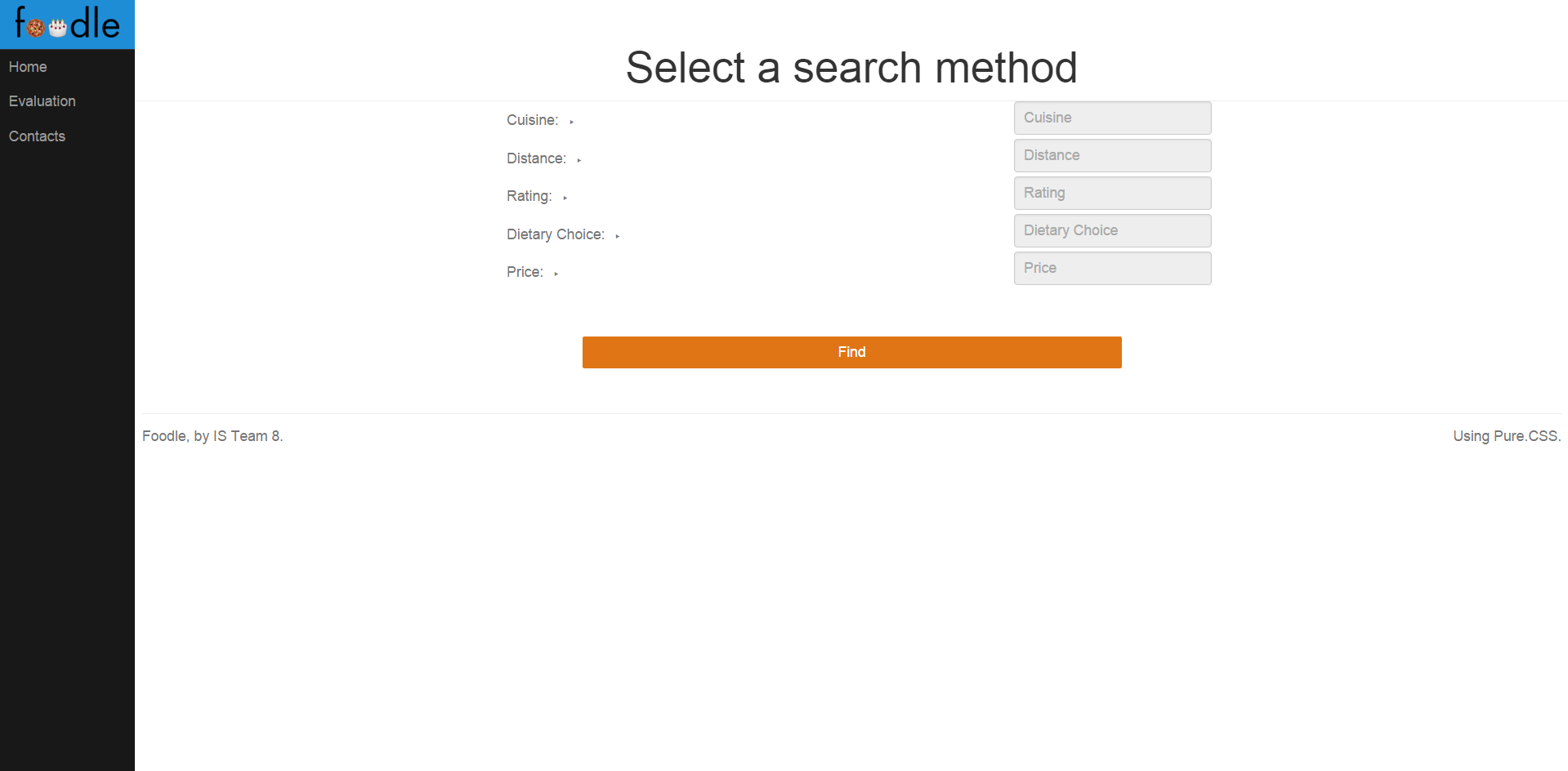
has been used as a basis for the home page. The actual home page presented below:



*Index Page*

shows how the index page looks in production. As you can see the logo and the two buttons search by criteria and search by name are still there. The select a search option is clarified with an extra paragraph providing more information about the two buttons. The nav bar and the links on the left-hand side are slightly changed. As the about and contract linkes are merged in one contact link, the help link is removed and an evaluation link is added to present the analysis of the project.

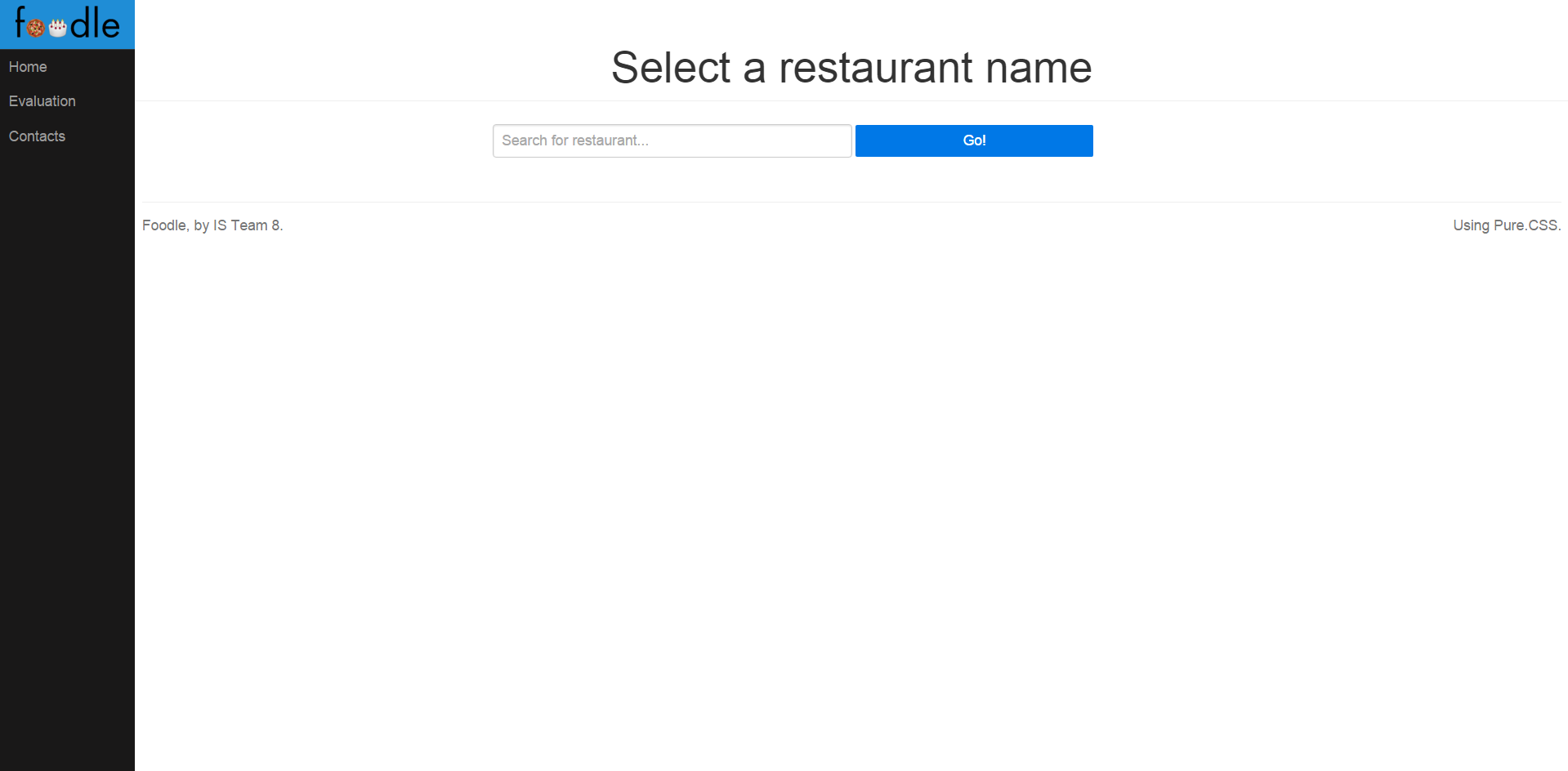
Then we can look at the search by criteria page below satisfing the search criterias requirement:



*Search by Criteria*

As this page is supposed to be quite simple and basic it is not part of the prototype. It simply includes all of the categories and a search button.

The search by name page

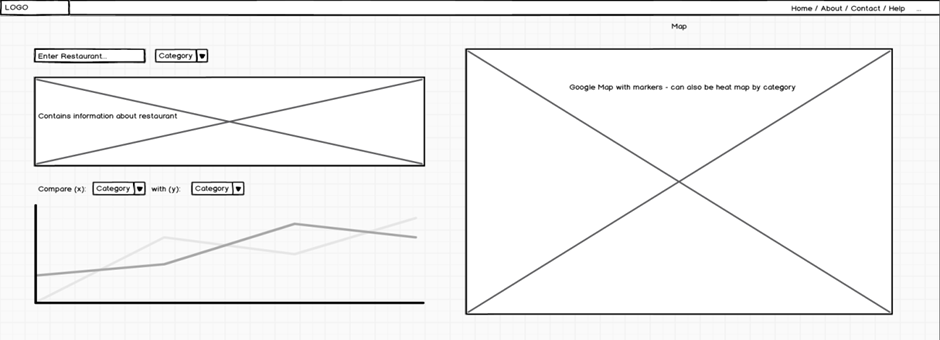


*Search by name*

is similarly not included in the prototype as it is simple enough to be directly developed from sratch. It consists of just one input text field and a search button.

The flow of the application is splitted into these two paths for improved understandability, simplicity and effectiveness. The user either knows exactly where he or she wants to go in which case he/she searches by name, otherwise he/she wants to filter the data in some way to see only the results satisfing his/her desires.

The last page of the system showing the results was innitially planned to look in the following way:



The final page:

----------------------------------Screenshot---------------------------------

is quite similar as the key features we are look to provide here are the following:

* an interactive map /a requirement/ - showing the results making seeing the data in a much easier way boosting the decision making of the user. Using the map he/she can see where exactly each of the restaurants is located and get a detailed information about the place only if the location satisfies her/him instead of looking at a list of restaurant with plenty of information which is most likely not need or wanted.
* restaurant’s information /requirement/ – once a restaurant’s marker is clicked the restaurant’s information will appear.
* line graph /requirement/ – once a restaurant is selected clicking on the restaurant’s marker on the map a line graph in the bottom left-hand corner will show the dependece between the time (x axis) and restaurant’s rating (y axis) – how the rating has been changing over time.
* search by name and criterias – in order to make interaction faster and more enjoyable the search box and criterias dropdowns are also left on the page in case the user wants to search for something else, allowing direct access to the search form instead of going back to the index page and starting the process again. The reason why we do not have only one page (this last page) is that we want to allow the user to gradually familiarize himself/herself with the system going through either the search by name or search by criteria. Once the user is familiar with this options we can show more information on the last page knowing that the user has learned the previous steps and will not find it difficult to navigate on this page.

How are non-functional requirement met ?

There are 3 main non-functional requirements satisfied as follows.

* First, the performance is improved by abstracting the search functionality in the API, in other words instead of processes the request and the data in our server we are sending the request as part of the html Restful get requist allowing the API server to compute the result for us. Similarly the line graph uses an optimized google algorithm provided from the Google Charts API. The google map is also visualized by gathering the data needed for the map ”locally” inside our server and then sending the Google map API for processing.
* Secondly, the geolocation is taken using the HTML5 functionality.

- Finally, the data for the restaurants is taken from the <https://www.yelp.co.uk/developers/documentation/v2/search_api>

Analytic findings

Why this system is best for the job?

System Desciption(marker)