CS1013 Project Report: Group 11

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Preparation and Organisation

We met once to twice a week for an hour outside of the lab. These meet up sessions were used for three purposes. First and foremost, to work out a general plan for what we as a team wanted to achieve for that week. Once a goal was established, we would then break it down into four separate sub-tasks, one task for each member of the group. Secondly, to work together on any more difficult issues that presented themselves during the previous week. And then finally, to organise the next meeting. For increased communication in the meantime we created a group chat on FaceBook Messenger. This allowed for things like: if there were any more minor issues to be worked on or, if clarification was needed on particular section of code written by another team member etc.

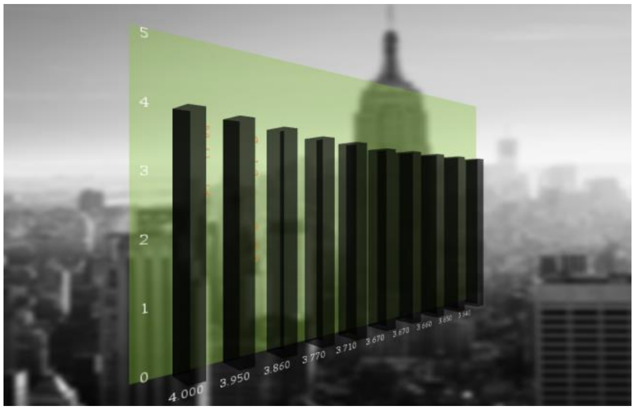
Claire Mc Namara

Backend:

I worked primarily on the backend code and worked closely with Tom to write the various different sort functions needed to organise the data in such a way as so it could be represented in an understandable fashion. Many of the functions I wrote in terms of sorting the data specifically related to my other main role – data visualisation.

Data visualistation:

My role in creating data visualisations involved employing a mixture of bar chart, pie charts, and line charts. In order to the make the information more visually appealing and interactive, I made all the bar charts and line charts three dimensional and animated the bars. All graphs and animations were written by me using the basic processing library however the ability to rotate the graphs was implemented using the PeasyCam library. Having established a way of drawing animated 3D bars, I was then able to work on Tom's map visual to display the average star ratings of the top twenty businesses at their locations and add in a colour coded key. Using my visualisation of the data functions and sort functions I was able to write a piece of code that would display a reviewer's profile at the bottom of a review on the business page. This included things like, the average star rating they give to businesses and how many reviews they wrote.



3D bar chart display

Design:

In terms of the overall project- I also worked on keeping consistency throughout the site by way of things like implementing a visually pleasing colour scheme, and making sure that there was a sense of continuity between the home, business and leader board pages. In order to make the homepage more interesting I added the "stats for nerds" animation. This made bubbles rise up the centre of the screen containing various facts gained from the information given. I also made the business links work on the homepage and added in a hover function that would display the type of reviewer the author of one of the most recent reviews on the home page is when the mouse is hovered over their name by way of a piechart.

Issues I had:

The main issue that arose for me came about as a result of both the Processing IDE and processing as a language. As we are in an IDE that is only based on Java and complies a language that reflects this, many of the commands that work in other fully functional Java IDEs that implement the actual Java language didn't work for me. This greatly hindered and eventually stopped me from implementing a link to the website Yelp itself as I simply was unable to use any of the normal commands I would have used in order to do the same thing in another fully Java based IDE. The same occurrence happened with regard to linking our program to Twitter also. This was frustrating as had we been in another IDE I would have been able add this extra feature.

KAMIL PRZEPIÓROWSKI

What I did

Before we started working, we decided who would work on which section of the project. Me and Ruairi were to work on the 'front-end' side of things. I worked on most of the buttons and clickable interactions, and the different screens. Basically a user interface and making user experience pleasant.

Bar at top of the screen:

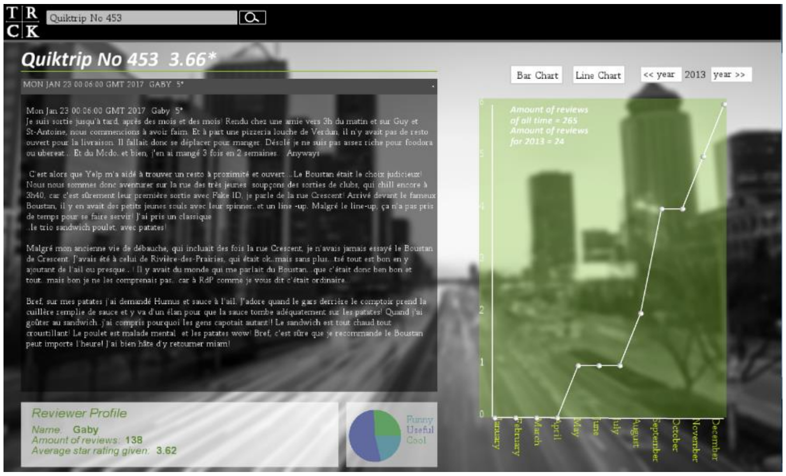
After some sketching and ideas, we settled on having a black bar across the width of the screen, at the top of the display. The bar contained the search bar, which takes user input, a search button, which acts the same as pressing ENTER, as well as a home button; which contains our logo, 'TRCK'. I came up with the design but Tom proposed we switch the letters around in an attempt to spell truck, and so it stuck as our team name. The home button brings you back to the home page once pressed.

Different Screens:

It was obvious we will require more than one screen for our project, and I took on the responsibility of creating the different screens and some sort of user interaction which would allow you to go to the screen you wanted. We ended up with 3 screens, home page, leaderboards page, and business page. I added in backgrounds to the screens with an image the team decided on.

Leaderboards:
Early in development we decided we wanted to have a leaderboard, where we compared businesses against each other. To go to the leaderboards screen, I added in a button on the home screen which brings you to the leaderboards when clicked. In the end, we ended up with the categories for highest rated and most reviewed businesses ,as well as funniest, coolest and most useful reviewers. I added in the buttons for these, which display different graphs when clicked. (Claire wrote the graphs) Later, I added in a list for the top twenty reviewed business, to make it a scrollable list and not just plain text I used the controlP5 library. I also added in the ability to click into any one of the businesses which brought you to the business page of that business.

Business screen:
We needed some sort of visualisation for the information we were given, and so I decided to make a business page. To reach this screen you can enter a name to the search bar (nonexistent businesses display an error message), you can also select a business from the top twenty list, or click on one of the business names from the home screen widgets.
It prints the business name and average star rating as the title. Under which there is another controlP5 list, which holds the headers for each review given to the business. (the header consists of: date/reviewer name/ rating given) If you click onto one of the headers it closes the list and prints the full text of the review in the given area.



Quiktrip No 453 3.66*

MON JAN 23 00:06:00 GMT 2017 GABY 5*

Mon Jan 23 00:06:00 GMT 2017 Gaby 5*
Je suis sortie jusqu'à tard, après des mois et des mois! Rendu chez une amie vers 3h du matin et sur Guy et St-Antoine, nous commencions à avoir faim. Et à part une pizzeria louche de Verdun, il n'y avait pas de resto ouvert pour la livraison. Il fallait donc se déplacer pour manger. Désolé je ne suis pas assez riche pour foodora ou ubereat... Et du Mcdo, et bien, j'en ai mangé 3 fois en 2 semaines... Anyways!

C'est alors que Yelp m'a aidé à trouver un resto à proximité et ouvert....Le Boustan était le choix judicieux! Nous nous sommes donc aventurer sur la rue des très jeunes, soupçons des sorties de clubs, qui chill encore à 3h40, car c'est sûrement leur première sortie avec Fake ID, je parle de la rue Crescent! Arrivé devant le fameux Boustan, il y en avait des petits jeunes souls avec leur spinner..et un line -up. Malgré le line-up, ça n'a pas pris de temps pour se faire servir! J'ai pris un classique
..le trio sandwich poulet, avec patates!

Malgré mon ancienne vie de débauche, qui incluait des fois la rue Crescent, je n'avais jamais essayé le Boustan de Crescent. J'avais été à celui de Rivière-des-Prairies, qui était ok..mais sans plus...tsé tout est bon en y ajoutant de l'ail ou presque...! Il y avait du monde qui me parlait du Boustan...que c'était donc ben bon et tout...mais bon je ne les comprenais pas...car à RdP comme je vous dit c'était ordinaire...

Bref, sur mes patates j'ai demandé Humus et sauce à l'ail. J'adore quand le gars derrière le comptoir prend la cuillère remplie de sauce et y va d'un élan pour que la sauce tombe adéquatement sur les patates! Quand j'ai goûter au sandwich..j'ai compris pourquoi les gens capotait autant!! Le sandwich est tout chaud tout croustillant! Le poulet est malade mental, et les patates wow! Bref, c'est sûre que je recommande le Boustan peut importe l'heure! J'ai bien hâte d'y retourner miam!

Reviewer Profile
Name: Gaby
Amount of reviews: 138
Average star rating given: 3.62

Amount of reviews of all time = 265
Amount of reviews for 2013 = 24

Business page

On the right hand side we have a graphical visualisation. There are two buttons which allow you to switch between the graphs. “Graph chart” which shows how many reviews the business got per star rating. “Line chart” which shows the amount of reviews per month throughout the year; there are also buttons which allow you change the year for the graph.

Issues I had

Some issues with working with other people’s code simply due to lack of experience.

RUAIRÍ GIELTY

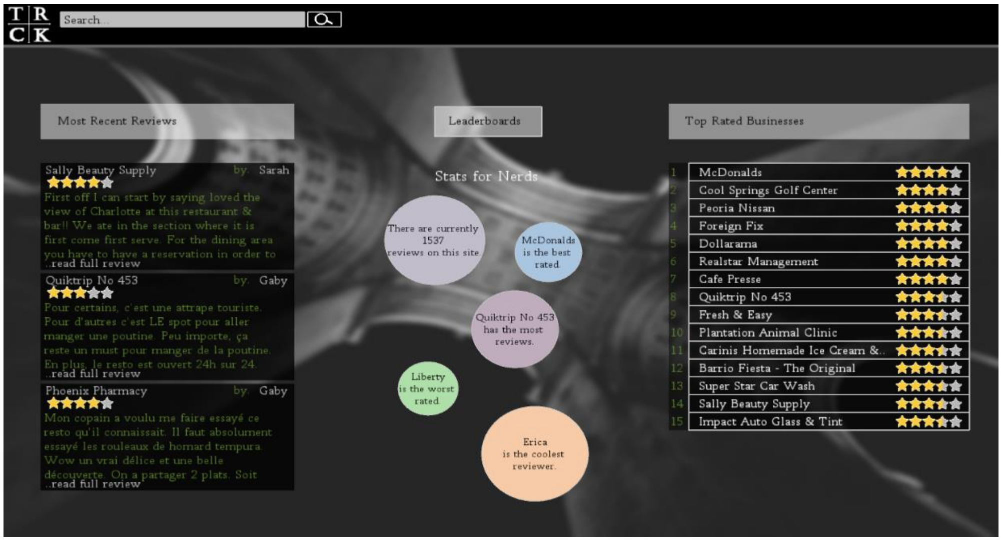
I was primarily in charge of homepage design and implementation.

The homepage is the first thing a user would see if they open our application, so their first impression is quite important. A good user interface should allow any user to reach whatever destination they want with as few clicks as possible, so I wanted to make sure that whatever appeared on our homepage was useful while not being in any way overwhelming.

I decided that the best things to display would be a list of the top 15 businesses, as well as some 'review boxes', which display a few of the most recent reviews, and includes a summary of the review, the rating given by the reviewer displayed as star images, and a link to the business page. The homepage also includes a link to the leaderboards page.

The top businesses table is an arraylist of LeadersTable objects. Each leadersTable object acts as a rung in the list, containing the placement of the current rung (eg.1st,4th), a DisplayStars object that prints the average stars of the business as star images, and a business name widget (which if clicked brings the user to the business page). The most recent review boxes is an arraylist of ReviewBox objects each of which is passed a review (the reviews are previously sorted in order of most recent). Each review box contains; a business name widget, who's event brings the user to the business page, a reviewer name widget, who's event displays a pie chart of useful, funny, cool ratings of that reviewer, a summary of the review in a text box, and the rating given by the reviewer as a DisplayStars object.

The DisplayStars class is used to display a rating out of five graphically. The rating is passed to the constructor of this object along with images of yellow, half, and grey stars. The initDisplayStars method then calculates how many yellow, half or grey stars must be placed in the array to suitably represent the rating (eg. if rating passed is 4.43, array must contain 4 yellow stars and a half star).



Sally Beauty Supply by: Sarah
★★★★☆
First off I can start by saying loved the view of Charlotte at this restaurant & bar!! We ate in the section where it is first come first serve. For the dining area you have to have a reservation in order to
..read full review

Quiktrip No 453 by: Gaby
★★★☆☆
Pour certains, c'est une attrape touriste. Pour d'autres c'est LE spot pour aller manger une poutine. Peu importe, ça reste un must pour manger de la poutine. En plus, le resto est ouvert 24h sur 24.
..read full review

Phoenix Pharmacy by: Gaby
★★★★☆
Mon copain a voulu me faire essayé ce resto qu'il connaissait. Il faut absolument essayé les rouleaux de homard tempura. Wow un vrai délice et une belle découverte. On a partager 2 plats. Soit
..read full review

There are currently 1537 reviews on this site.

McDonalds is the best rated.

Quiktrip No 453 has the most reviews.

Liberty is the worst rated.

Erica is the coolest reviewer.

1	McDonalds	★★★★☆
2	Cool Springs Golf Center	★★★★☆
3	Peoria Nissan	★★★★☆
4	Foreign Fix	★★★★☆
5	Dollarama	★★★★☆
6	Realstar Management	★★★★☆
7	Cafe Presse	★★★★☆
8	Quiktrip No 453	★★★⯪☆
9	Fresh & Easy	★★★⯪☆
10	Plantation Animal Clinic	★★★⯪☆
11	Carinis Homemade Ice Cream &..	★★★⯪☆
12	Barrio Fiesta - The Original	★★★⯪☆
13	Super Star Car Wash	★★★⯪☆
14	Sally Beauty Supply	★★★⯪☆
15	Impact Auto Glass & Tint	★★★⯪☆

Home Page

TOM MORAN

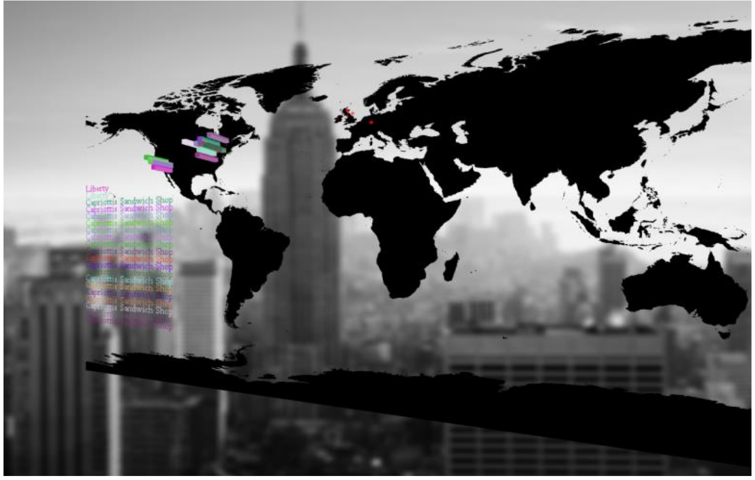
Backend:
My main responsibilities in the project were dealing with the dataset, searching and sorting through the data, implementing a map visualisation of the data and adding an autocomplete feature for use in the search bar.

Dealing with the data set included deciding out how to best store the data, i.e. what data structures to use and figuring out what I could change in the dataset to improve the program. In our case, this meant taking the geographic coordinates of the businesses from the large dataset and adding them to ours. Deciding how to store data gave us some problems as we were stuck between using the large data set and moving to a database, or continuing with what we had and trying to add in some aspects of the larger dataset.

Searching and sorting involved creating custom comparators to sort through the array lists, hash maps and tree maps we decided to use. It was important to create an efficient amount of data structures so finding and loading the data in would be quick and not too taxing.

Map Visual:
Implementing a map was not as simple as plotting the latitude and longitude onto an image of a world map. Firstly, the map image had to be an accurate one. I found an equirectangular map so the points plotted would line up correctly. It was also preferable to find an .svg file so that the image would be scalable. Transferring the latitude and longitude to a 2D Cartesian plane was done using the map() function in Processing which also took the max and min x and y coordinates of the world map (which were -90, 90, -180 and 180 as a full world map was used). Drawing the graphs onto the map was done by Claire but caused us both some problems as the graphs used elsewhere in the program could not simply be implemented in the map.

Autocomplete Function:
The autocomplete function searched through the business names for the user entered prefix and then pushed the full business name to the search bar when selected. This made searching, quicker, easier and more user-friendly. Having a more sophisticated autocomplete function working which used weighting of terms, but not being able to transfer it to Processing caused some headache. However, the simpler version worked well in our program.



Map Visual