CSCI342 GROUP ASSIGNMENT - FBAS

sey872 ()
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Guidelines
The students are required to develop an Android Application from idea to design to code and present their work to the class at the end of semester.

Marked on
• User Interface and User Experience Design
• Use of platform/s
• Web service integration and/or implementation of similar difficulty
• Innovation and creativity
• Presentation

User Interface and User Experience Design

Application Definition Statement

Purpose

The purpose of our application is to transform current technologies of ‘Fatties Burger Society’ (an online burger review Facebook group) of their Google Maps API embedded into Facebook to an Android application as users struggle with finding burger places with the current technology.

Audience

Sydney predominantly as we currently don’t plan to implement our app outside of Sydney as a testing phase. The target audience will be people aged 18-30that love burgers and want to find the best burgers in Sydney. As we are creating an application that is used for a Facebook group we inherit an audience which is a great start to our project.

How They Use It

The application users will use the application while out and about as it is a means of finding the closest burger restaurants near you but it doesn’t mean that they won’t use it at home as they may want to research Sydney’s best burger restaurants for future planning.

Core Functionality

Load up current location, download closest restaurants (within range given?), display closest restaurants (possibly site and menu)

Platform consistency

Our application works in both horizontal and vertical layouts allowing for Core Application Quality Guidelines to be met and to increase the options of use for our Application. Our application is consistent with the guidelines set by Android and it is designed for ease of access for the user and simple GUI features. Current implementation isn’t fancy but is simple and neat. Across our code we were consistent with our style.

Context of when a user would use the application

Various members having trouble using the Google Maps API implemented on the Facebook group ultimately leading to the development of an application for ease of access of each member.

[redacted] ▶ **The Fatties burger appreciation society**

May 17 at 6:46pm · Carlingford ·

Someone should make an app for fatties reviews/autosave to a map on a database

14 12 Comments

Like Comment

[redacted] Off you go then

Like · Reply · May 17 at 6:55pm

[redacted] Fantastic idea. Get a prototype together and message me, or one of the other admins and we'll even help you promote it , if it's good

Like · Reply · 5 · May 17 at 7:19pm · Edited

[redacted] Funny cunt!

Like · Reply · May 17 at 11:30pm

[redacted] I'm serious. We're not going to do it for you, but we'll sponsor it if it's decent. There must be some talented mobile designers out there for whom the prospect of exposure to an audience of 60k is appealing. 🙂

Like · Reply · 1 · May 18 at 1:17pm

View more replies

Write a reply...

[redacted] #explainqueryplanselect

Like · Reply · May 17 at 7:19pm

[redacted] We should also have flying cars, but you don't see them zooming around do you?

Like · Reply · 1 · May 17 at 8:17pm

[redacted] #######

Like · Reply · May 17 at 9:29pm

[redacted] Apps are expensive ;(

Like · Reply · 1 · May 17 at 9:32pm

[redacted] But I want one

Like · Reply · 1 · May 17 at 9:32pm

[redacted] Developer here. Can build.

Like · Reply · 4 · May 17 at 10:25pm

[redacted] Yeah should be

Like · Reply · May 18 at 12:06am

[redacted] The admins have forever been saying that an app was in development, don't know whatever happened to that

Like · Reply · 1 · May 18 at 12:22am

[redacted] Isn't there a search function on this page????????

Like · Reply · May 18 at 8:04am

[redacted] Yea but I've seen a lot of posts about ppl complaining the reviews not being done properly making searching harder. Anyway was just throwing ideas around

Like · Reply · May 18 at 12:52pm

[redacted] Fair enough. Maybe a rating system instead?

Explanation

As you can see the need and want for this application is huge within the Facebook group of 60,922 members with the talk of a mobile application running over the course of the Facebook group. Due to various users struggling to find the maps in the Facebook group as they have to go into the group's information to find the link to the groups Google Maps they instead create posts to find out information on burger joints. With our application we remove the need to post to find burgers near you as it will automatically load all the closest burger places. As previously described in 'How They Will Use It', users will predominantly use this application for finding the best burgers in Sydney although it can be used for various other reasons such as finding a burger late at night or just organising an event with friends.



Evidently by the above photos, one should not have context when it comes to why they should be using this application as we select the best burger restaurants in Sydney to visit.

Structure of the application

Application of structure follows:

Main View (List View)

- Map View Button
- List of burger restaurants
- //Search Bar

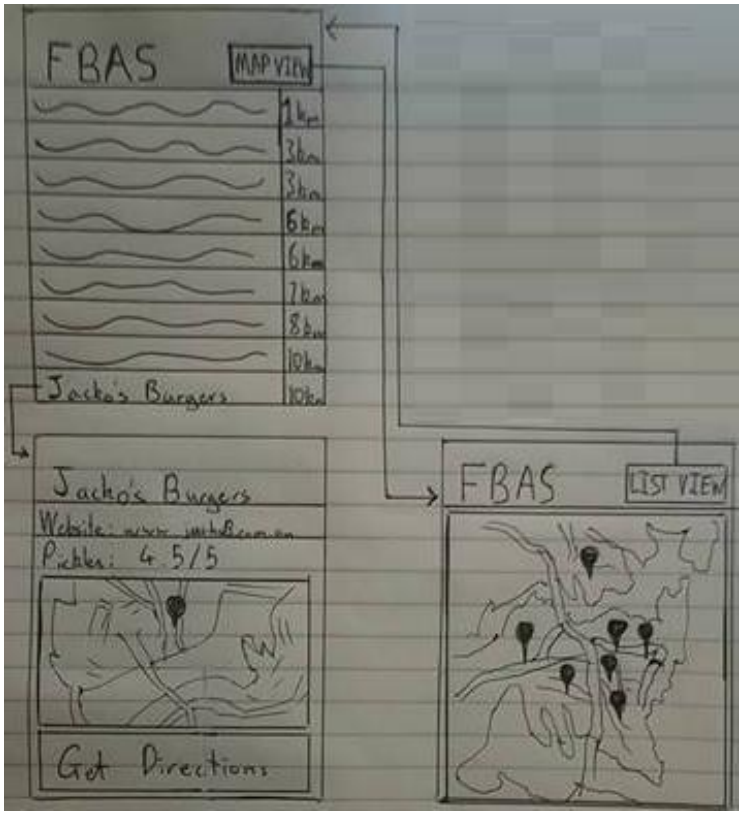
Map View

- List View Button
- Map of pinned restaurants

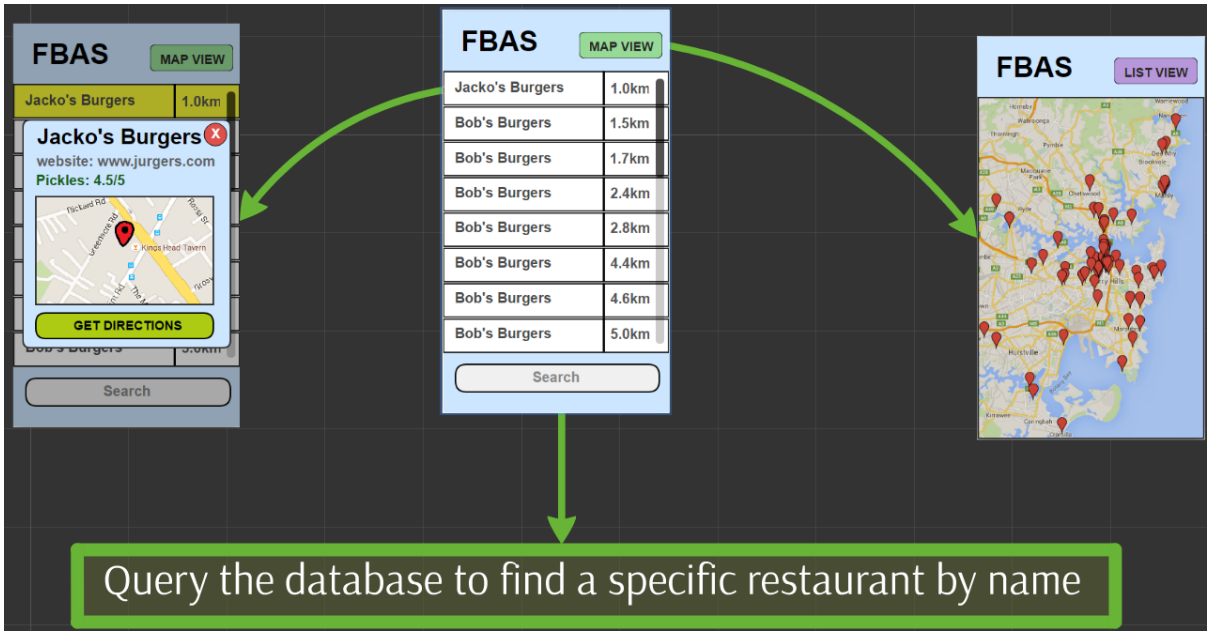
Burger Restaurant Pop-up

- Title of restaurant
- Website
- Rating
- Static-map
- Get Directions

User experience and user interface design



Storyboard Draft



The design process for the User Interface was to allow simplicity with easy locations for buttons and a basic list view for ease of access for each user. Using a list view it will display the closest restaurants which each can be clicked on to be bring up their respective individual details and a map view to display all the pinned burger restaurants within Sydney.

We decided to use static maps for each individual shop popup as loading an entire map interface is too expensive on resources and not needed for a simple popup.

Feedback to the user

In our future implementation of our application it will allow the users to review the burger restaurants we are able to gain feedback from the user in order to utilise for methods such as priority queuing by rating or categories by rating. Other functionality such as reviewing burger restaurants can be implemented to gain feedback from the user to utilise in deciding burger restaurants and possibly removing burgers restaurants from the list.

Use of platform/s

The usefulness of your group's application on a mobile device

As our group's application has been long needed for in the FBAS (Fatties Burger Society Group) as members of the group have continuously complained about out-dated Google Maps and difficulty with finding restaurants using it, with our application it removes the need for it and adds convenience to it as it uses your current location automatically. The application currently can add reviews to burger restaurants and by doing this we have already implemented an easier functionality then the current technologies available for FBAS as they post to review burgers with no storage of review.

In future implementations we hope to add user reviews to the application including photo uploads with the review as FBAS currently does it, but it is not technically needed.

Using native hardware and software

By utilising Google Maps API we indirectly utilise the GPS and internet services for Android phones, satisfying the requirement of hardware and software libraries being utilised. We attempted to utilise polylines for accurate drawings of route but in the end the implementation was faulty so we left it out as a separate java file called 'DirectionsAttempt.java'. Through implementing various methods of Google Maps (Static Maps, Non-static maps) we demonstrated the use of software libraries as well as the use of JSON for pull and post requests.

Further implementations could include camera in order to write reviews of the burgers in which users could then read all the reviews for a given restaurant and base their decision through this.

Model View Presenter (MVP) is utilised as the view is responsible for rendering UI elements, while being loosely coupled to its presenters for its view, interactions between view and model handled by the Presenter as the presenter retrieves data to present from the interface. Java standards were enforced for naming of variables and simple function names to ensure both of us could read each other's work.

Core Application Guidelines

Visual Design and User Interaction

Area	ID	Description
Standard design	UX-B1	App follows Android Design guidelines and uses common UI patterns and icons: a. App does not redefine the expected function of a system icon (such as the Back button). b. App does not replace a system icon with a completely different icon if it triggers the standard UI behavior. c. If the app provides a customized version of a standard system icon, the icon strongly resembles the system icon and triggers the standard system behavior. d. App does not redefine or misuse Android UI patterns, such that icons or behaviors could be misleading or confusing to users.
Navigation	UX-N1	App supports standard system Back button navigation and does not make use of any custom, on-screen "Back button" prompts.
	UX-N2	All dialogs are dismissable using the Back button.
	UX-N3	Pressing the Home button at any point navigates to the Home screen of the device.
Notifications	UX-S1	Notifications follow Android Design guidelines. In particular: a. Multiple notifications are stacked into a single notification object, where possible. b. Notifications are persistent only if related to ongoing events (such as music playback or a phone call). c. Notifications do not contain advertising or content unrelated to the core function of the app, unless the user has opted in.
	UX-S2	App uses notifications only to: a. Indicate a change in context relating to the user personally (such as an incoming message), or b. Expose information/controls relating to an ongoing event (such as music playback or a phone call).

UX-B1	**DONE**
UX-N1	**DONE**
UX-N2	**DONE?**
UX-N3	**DONE**
UX-S1	**N/A**
UX-S2	**N/A**

Functionality

Area	ID	Description
Permissions	FN-P1	App requests only the *absolute minimum* permissions that it needs to support core functionality.
	FN-P2	App does not request permissions to access sensitive data (such as Contacts or the System Log) or services that can cost the user money (such as the Dialer or SMS), unless related to a core capability of the app.
Install location	FN-L1	App functions normally when installed on SD card (if supported by app). Supporting installation to SD card is recommended for most large apps (10MB+). See the App Install Location developer guide for information about which types of apps should support installation to SD card.
Audio	FN-A1	Audio does not play when the screen is off, unless this is a core feature (for example, the app is a music player).
	FN-A2	Audio does not play behind the lock screen, unless this is a core feature.
	FN-A3	Audio does not play on the home screen or over another app, unless this is a core feature.
	FN-A4	Audio resumes when the app returns to the foreground, or indicates to the user that playback is in a paused state.
UI and Graphics	FN-U1	App supports both landscape and portrait orientations (if possible). Orientations expose largely the same features and actions and preserve functional parity. Minor changes in content or views are acceptable.
	FN-U2	App uses the whole screen in both orientations and does not letterbox to account for orientation changes. Minor letterboxing to compensate for small variations in screen geometry is acceptable.
	FN-U3	App correctly handles rapid transitions between display orientations without rendering problems.
User/app state	FN-S1	App should not leave any services running when the app is in the background, unless related to a core capability of the app. For example, the app should not leave services running to maintain a network connection for notifications, to maintain a Bluetooth connection, or to keep the GPS powered-on.
	FN-S2	App correctly preserves and restores user or app state. App preserves user or app state when leaving the foreground and prevents accidental data loss due to back-navigation and other state changes. When returning to the foreground, the app must restore the preserved state and any significant stateful transaction that was pending, such as changes to editable fields, game progress, menus, videos, and other sections of the app or game. a. When the app is resumed from the Recents app switcher, the app returns the user to the exact state in which it was last used. b. When the app is resumed after the device wakes from sleep (locked) state, the app returns the user to the exact state in which it was last used. c. When the app is relaunched from Home or All Apps, the app restores the app state as closely as possible to the previous state. d. On Back keypresses, the app gives the user the option of saving any app or user state that would otherwise be lost on back-navigation.

FN-P1	**DONE**
FN-P2	**DONE**
FN-L1	**N/A**
FN-A1	**N/A**
FN-A2	**N/A**
FN-A3	**N/A**
FN-A4	**N/A**
FN-U1	**DONE**
FN-U2	**DONE**
FN-U3	**DONE**
FN-S1	**DONE**
FN-S2	**DONE / N/A**

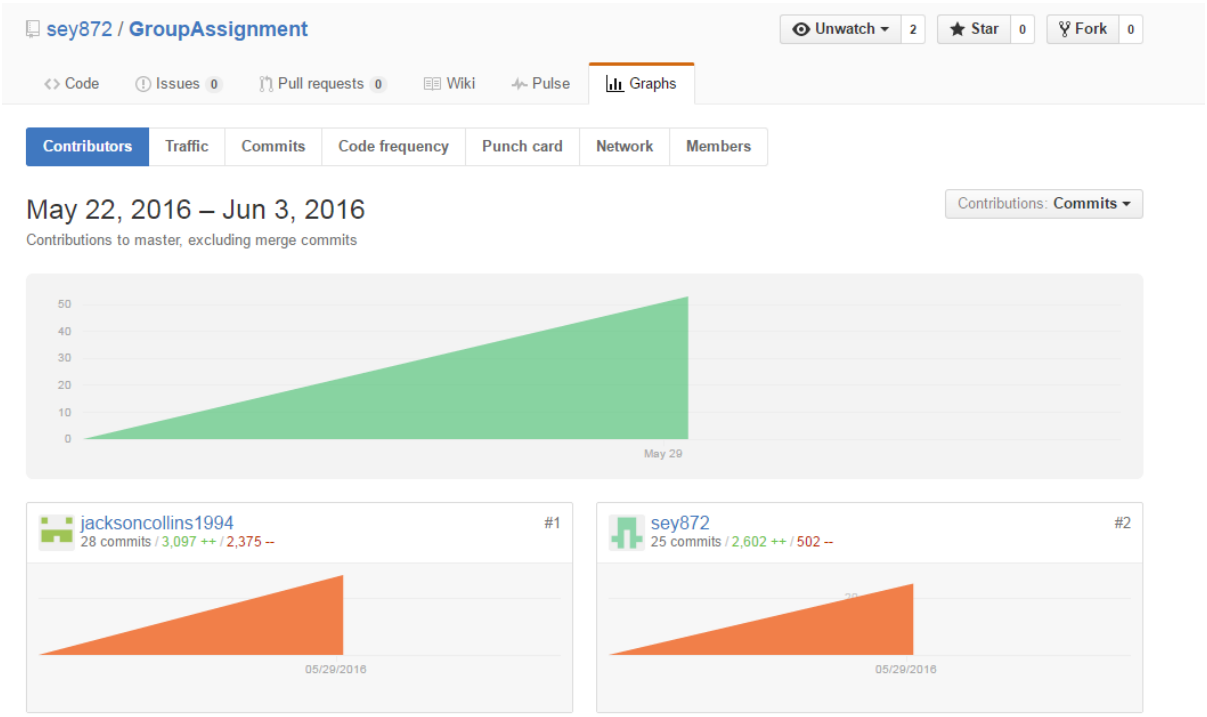
Performance and Stability

Area	ID	Description
Stability	PS-S1	App does not crash, force close, freeze, or otherwise function abnormally on any targeted device.
Performance	PS-P1	App loads quickly or provides onscreen feedback to the user (a progress indicator or similar cue) if the app takes longer than two seconds to load.
	PS-P2	With StrictMode enabled (see StrictMode Testing, below), no red flashes (performance warnings from StrictMode) are visible when exercising the app, including during game play, animations and UI transitions, and any other part of the app.
Battery	PS-B1	App supports power management features in Android 6.0+ (Doze and App Standby) properly. In the case where core functionality is disrupted by power management, only qualified apps may request an exemption.
Media	PS-M1	Music and video playback is smooth, without crackle, stutter, or other artifacts, during normal app usage and load.
Visual quality	PS-V1	App displays graphics, text, images, and other UI elements without noticeable distortion, blurring, or pixelation. a. App provides high-quality graphics for all targeted screen sizes and form factors, including for larger-screen devices such as tablets. b. No aliasing at the edges of menus, buttons, and other UI elements is visible.
	PS-V2	App displays text and text blocks in an acceptable manner. a. Composition is acceptable in all supported form factors, including for larger-screen devices such as tablets. b. No cut-off letters or words are visible. c. No improper word wraps within buttons or icons are visible. d. Sufficient spacing between text and surrounding elements.

PS-S1	**DONE**
PS-P1	**DONE**
PS-P2	**TESTING NOT TESTED**
PS-B1	**DONE**
PS-M1	**N/A**
PS-V1	**DONE**
PS-V2	**DONE**

GIT

As we fiddled with Google Maps API we tried to add it to our existing project and we were unable to get it working for a couple of weeks of trying to then find out that genymotion was the problem all along but due to this we ended up deleting a previous git repository as the libraries loaded for testing were too difficult to be unloaded and restarted a new git repository with the files from the project used. We uploaded our new Git project we started to display our work.

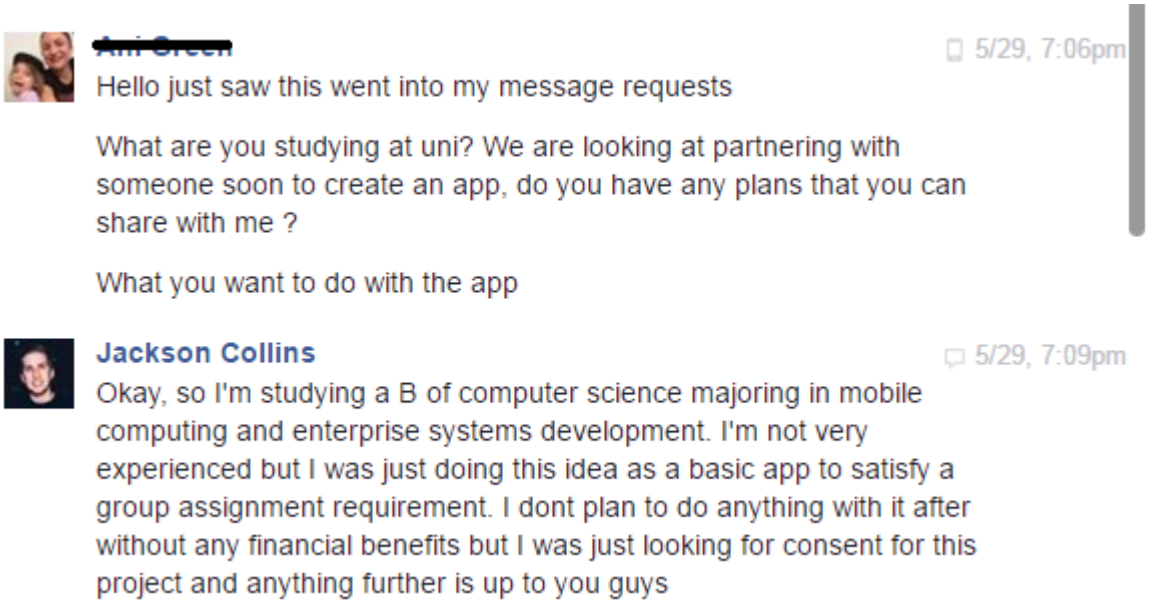


Web service integration and/or implementation of similar difficulty

We have currently implemented a third party API namely Google Maps API and our restaurant rating data is utilised through JSON currently we don't have any implementation for accepting reviews but we have the overlay in order to do it, just processing the data hasn't been installed. We could have set this up locally but we feel the assignment guidelines require it to have push and pull requests done to an online server which is why we implemented retrieving reviews through an online JSON host. We considered using MySQL but we found external implementations to be unnecessary in comparison to JSON for our current project.

Innovation and creativity

Evidently our application is very innovative as it innovates on the current technologies available for Fatties Burger Appreciation Society which is currently lacking and causing stress in the members. As our execution involved implementing a different take on FBAS we indirectly innovated on possible application designs focusing primarily on our idea of distance to the shop from current location. Our application idea focuses on innovation and creativity and that's where our target market is primarily as we inherited an audience and further innovative ideas such as being able to see special deals of a given burger restaurant allows our application to display it's possible profits.



This leads to future prospects of the Application as the founder is invested into the idea of an application. As she can help innovate on the application ideas it leads to a much more successful application execution.

END CHECK LIST

Make sure the git repository is committed.

The group leader is required to submit a compressed file of the following:

• The group project source	DONE
• Design documents and explanations	DONE
• The project should contain the git repository with data demonstrating when the group started the project, and all commits by different people throughout the course of the project. One commit is not an acceptable solution.	DONE
• Copy of the presentation slides	DONE
• If the application is an Android application – the .apk file must be submitted.	DONE
• Notes regarding application quality (based on the HIG or the Core App Quality Guidelines)	DONE
• Time log and tally of hours completed for each student. This will not be assessed, but it is useful for information gathering for the lecturer and for the students.	As the original Git repository was deleted due to redundant libraries it was impossible to get a log but our git commits have been included into the current report.
• A readme.txt outlining how to run the program on the lab machines, and a quick class description detailing each class's function and its source (whether the group wrote it or if it is from a third-party website). Your readme should also document who is in the group with student numbers and email addresses. The group leader should be noted, as the lecturer may need to contact him during marking.	DONE

Extra Information

```
Mary's,zomato.com/sydney/marys-1-cbd,-33.872148,151.209535
Stitch,stitchbar.com/bar/,-33.867461,151.205654
Bare Grill,baregrillandcafe.com/,-33.987955,151.232722
Hotel Chambers,hotelchambers.com.au/,-33.867935,151.210907
Moo Gourmet Burgers,moogourmetburgers.com.au/,-33.895581,151.181946
B L Burgers,blburgers.com.au/,-33.880225,151.215766
Bonarche Burgers,bonarche.com/,-33.8875,151.157254
Paul's Famous Hamburgers,paulsfamoushamburgers.com.au/,-34.006772,151.112478
Jack's Newtown,jacksnewtown.com/,-33.89321,151.183433
Lord Wolseley Hotel,lordwolseleyhotel.com.au/,-33.876596,151.196677
Burgers by Josh,burgersbyjosh.com/,-33.840565,151.207851
Vic's Meat Market,vicsmeatmarket.com.au/,-33.870426,151.190186
GoodTime Burgers,theeastern.com.au/goodtimeburgers,-33.891039,151.248469
Dean's Diner,facebook.com/deansdinernewtown/,-33.899512,151.177589
Grill'd,grilld.com.au/,-33.817627,151.002145
The Burger Joint,theburgerjoint.com.au/,-33.878397,151.221076
Soul Burger,soulburger.com.au/,-33.919929,151.242926
The Hub House Diner,thehubhousediner.com.au/,-33.903676,151.142109
Miss America's Pop-up Diner,https://facebook.com/Miss-Americas-Pop-up-Diner-1508631979414581/,-33.952416,151.052318
BenBry Burgers,benbryburgersmanly.com/,-33.797279,151.286732
Oxford Tavern,theoxfordtavern.com.au/,-33.895448,151.156704
Beejay's,https://facebook.com/beejayscafebar/,-33.915156,151.152046
BurgerFuel,au.burgerfuel.com/,-33.894183,151.183115
Rocks Brewing Company,rocksbrewing.com,-33.916087,151.191458
Milky Lane,https://facebook.com/milkylanebondi/,-33.889123,151.274181
{
    "store" : [
    {
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    ]
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    {
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```

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{
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    {
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        {
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        {
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        }
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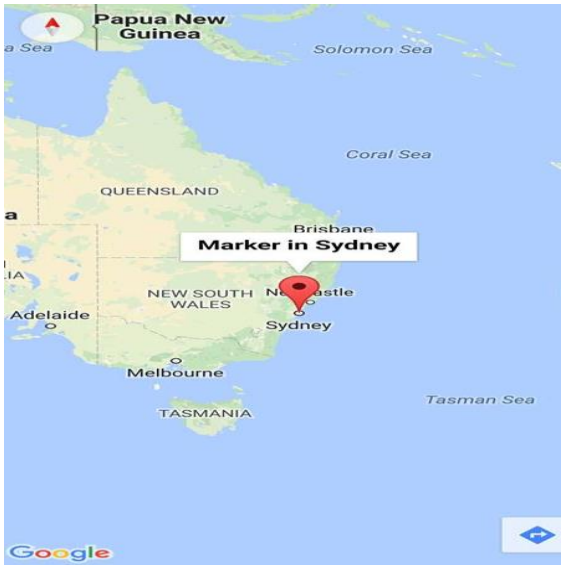
    },
    {
```


Converted text file input of restaurants to JSON arrays to satisfy assignment requirements. We then made the JSON file able to hold multiple review inputs for future implementations of user feedback through reviews.

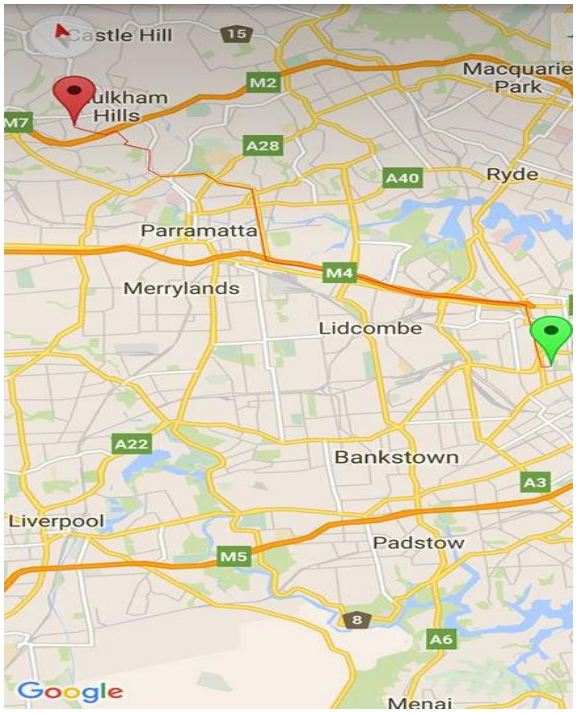
We questioned the idea of a ‘pickles’ rating system as it may throw off people who aren’t members of the Fatties Burger Appreciation Society as it is commonly used there.



On first success with Google Maps we were able to correctly pinpoint Sydney and zoom to it. With future implementations we were then able to pinpoint a restaurant and display its website using a second descriptor.

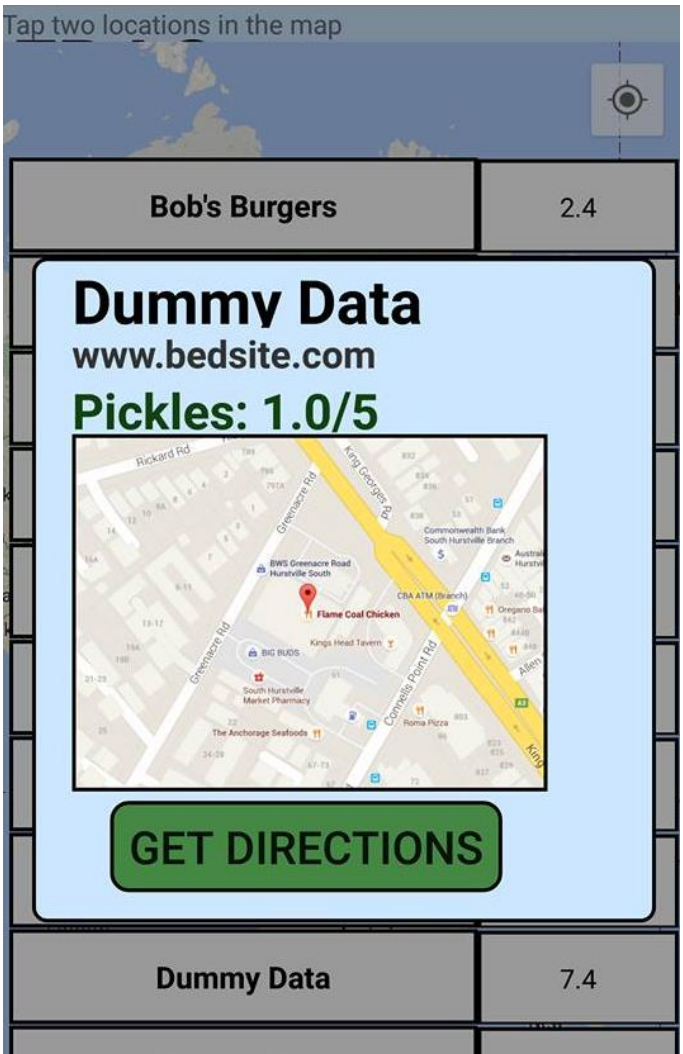
Attempted static maps for directions with:
http://maps.googleapis.com/maps/api/staticmap?sensor=false&markers=size%3Amid%7C40.737102%2C-73.990318%7C40.755823%2C-73.986397&size=600x600&zoom=12&path=color%3A0x0000ff%7Cweight%3A5%7C40.737102%2C-73.990318%7C40.749825%2C-73.987963%7C40.752946%2C-73.987384%7C40.755823%2C-73.986397

Although it didn't give a path rather a straight line to the place that assumes users can walk through walls.

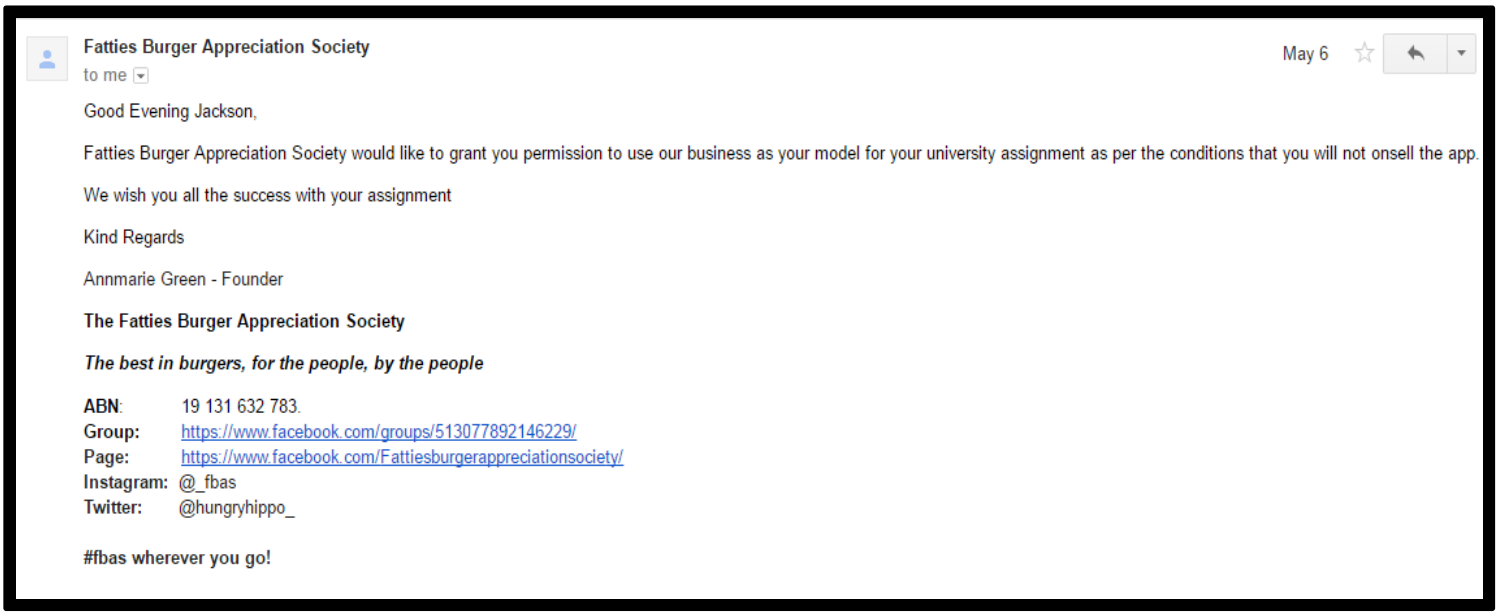


As static maps weren't an option we decided to implement a tutorial shown in the bibliography which allowed us to find a correct path to two locations tapped which we could then implement current location and future location (burger restaurant) as the second point for directions. In the end this wasn't viable for us to implement as it was too hard to implement with the current system implementation and instead we wrote it into a file just for acknowledging an attempt.

After testing that directions works between two tapped places, we tried to implement the system into our current application and we had trouble managing layouts after clicking the get directions button so we decided to leave it as a future implementation until we get the core implementations done.



Written consent from the founder of Fatties Burgers Appreciation Society



Fatties Burger Appreciation Society May 6

to me

Good Evening Jackson,

Fatties Burger Appreciation Society would like to grant you permission to use our business as your model for your university assignment as per the conditions that you will not onsell the app.

We wish you all the success with your assignment

Kind Regards

Annmarie Green - Founder

The Fatties Burger Appreciation Society

The best in burgers, for the people, by the people

ABN: 19 131 632 783.
Group: https://www.facebook.com/groups/513077892146229/
Page: https://www.facebook.com/Fattiesburgerappreciationsociety/
Instagram: @_fbas
Twitter: @hungryhippo_

#fbas wherever you go!

BIBLIOGRAPHY

http://www.wptrafficanalyzer.in/blog/drawing-driving-route-directions-between-two-locations-using-google-directions-in-google-map-android-api-v2/
But unused ^