

Cosc345 – Report

1. What are you going to build?

There are currently a proliferation of off-licenses and supermarkets where alcohol can be purchased in New Zealand. These retailers all have differing and inconsistent prices for their products. It can be daunting as a consumer trying to find the best deal for your drink of choice, and most default to their nearest store to make purchases. Retailers are constantly adjusting their prices and offering new specials, so it doesn't make sense to always buy from the same store. Alcohol is already highly taxed in New Zealand and we believe that if people do choose to drink, there is no reason they should not be able to do so cost effectively. Thus, we have decided to create an android app that compares the prices of a given alcohol product across multiple stores in Dunedin and suggests the cheapest place to buy it within a selected area. This app will be especially relevant to students who will nearly always prioritize price and convenience over any other factors when purchasing alcohol.

2. Who are your anarchists?

Sean Moir

I consider myself more of a back-end programmer and less of a UI developer, thus while I will undertake UI work, I will probably opt to take on more of the back-end workload. I have half a decade of personal and academic experience with Java and I personally own an android device. thus my work will be done in Java.

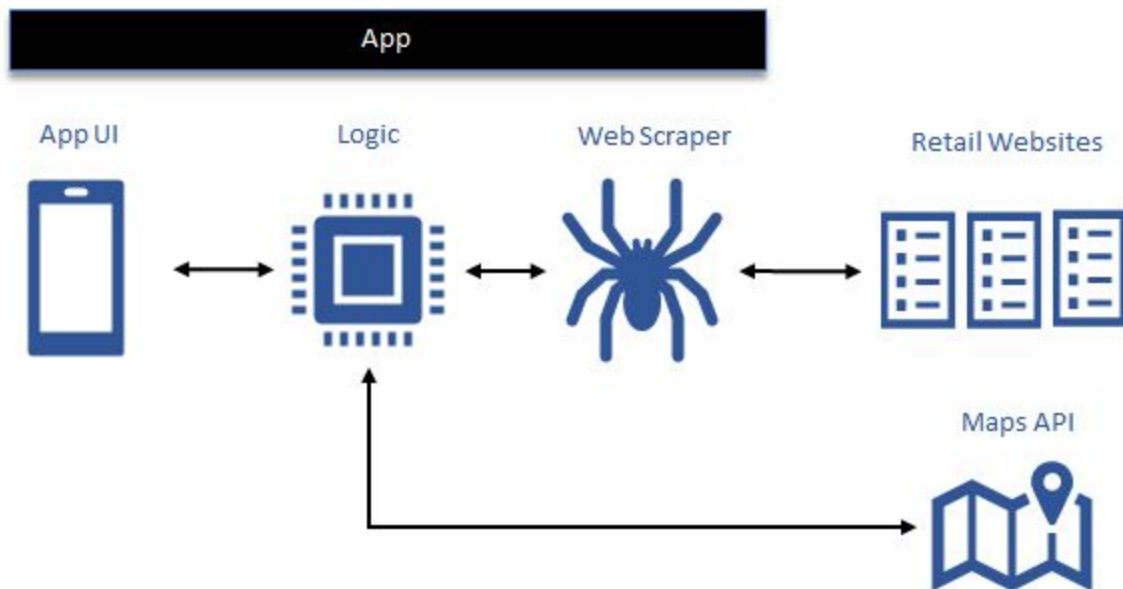
Maclean Standring

I've never participated in a significant coding project before, making it hard to know where my strengths and weaknesses lie. I enjoy writing and design and could see myself doing significant work on the UI for the app. That said, I'm a reasonably confident Java programmer and will be undertaking back-end work also.

Ubaada Altaf

Most of my programming experience has been with Java within university. Java is relevant to this project since we are building an Android app. I've tried my hand on UI before both in my free time and as a part of my university course but that was mostly in HTML/CSS not Android. But I'm moderately familiar with the material design used in Android apps.

3. How are you going to build it?



This application can be split into two easy categories of UI and back-end (logic), all running on the clients smartphone (at this point, performance will be evaluated later), for the UI work we will use the standard android UI library.

Web Scraper:

For the back-end (logic) we will use a web-scraping library (which specific one is yet to be determined), this web-scraping library will allow us to gather price information as not every liquor store site has an API to interact with.

Maps API:

We will also need to use a Map API as the application will allow a selection on what radius to search for stores within, also sorting the results by nearest store may be added to the application. We will most likely use the OpenStreetMaps API to achieve this.

Logic:

The logic part of this app receives the list of nearby stores from the Maps API. The scraper is then instructed to scrap the website of those stores. The Web scraper returns the price listings. The prices are then compared and the result is shown in the UI.

4. How long will it take to build?

We will use until the end of semester 2 to build this application. We will spend semester 1 building and testing an alpha of our application, hopefully having some basic functionality. By the end of semester 1 we hope to have a working alpha for most (if not all) stores in Dunedin. We will spend semester 2 refining, adding features, and debugging our app. Hopefully we will also be able to expand our scope to cover all alcohol retailers in New Zealand.



5. What the establishment already has that your app will do?

Currently, websites like DrinkSpy exist which provide comparisons from a limited number of stores. Student favourites like Liquorland, Henry's and Superliquor are all notably absent, this might be due to DrinkSpy being partnered with certain stores, or just a lack of scope in their design. There are also no dedicated mobile applications for this purpose currently available on android. Regardless, using web-scraping we will be able to cover all major alcohol retailers in New Zealand and bring cheaper alcohol to the masses.

6. How does your app differ from that?

This is a native mobile application, as opposed to a web application which will allow for a richer UI and more responsive design. We also aim to be more performant than the current offerings. Additionally, to set ourselves apart, we've decided to create an automated price by volume calculator. Often, buying a smaller volume of alcohol on special will be cheaper per litre than buying a larger quantity (i.e. a 700mL bottle of spirits as opposed to a 1L Bottle). Calculating which is cheaper is another inconvenience consumers often don't have the time to deal with.

The inclusion of this feature will help our users get the most value for their money without wasting time. This type of calculation is not featured on any competing websites.

There is currently no all-encompassing method to find cheap alcohol in your area, we aim to bring accessibility and a complete catalogue of all major alcohol retailers to our mobile app, that will fill this gap in the market.

7. Who are you going to irritate by building it?

Alcohol retailers will be our primary target. We will also irritate the government, university and healthcare system by encouraging the consumption of alcohol.

8. Why will they be irritated?

With a convenient mobile app, our users will have no reason to give their business to sellers that charge premiums. We hope to irritate retailers by making it plain to see when they are overcharging for their products. Thus, with a simple method of helping alcohol consumers find the cheapest price for their chosen drink, we hope to encourage more competition between retailers. Ideally, this will result in lower alcohol prices across the board.