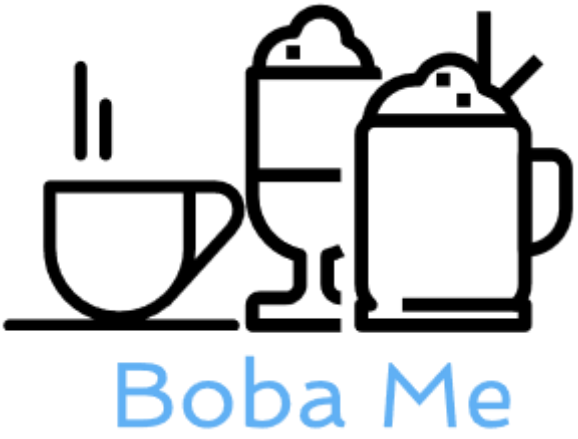
# SENG2021 Requirements and Design Workshop

## Deliverable 1

### Boba Me: A Bubble Tea Awareness Concept




**By The Boba Engineers**

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# Contents

**Part 1 - Problem Statement** ...2

*1.1 Boba Me: Issues Finding Bubble Tea and it's Business Potential* ...2

*1.2 Collation of Mini-Problem Statements* ...3

**Part 2 - Identify and Describe User Stories** ...4

*2.1 Rationalising the Features* ...4

*2.2 User Stories and Features* ...5

**Part 3 - Low-Fidelity Prototype** ...13

*3.1 Storyboard* ..13.

*3.2 UI Components* ...14

**Part 4 - High-Fidelity Prototype** ...16

**References** ...20

# Part 1 - Problem Statement

## 1.1 Boba Me: Issues Finding Bubble Tea and its Business Potential

Bubble tea is a Taiwanese drink which has been surging in popularity within the last decade, and is expected to grow into a $4.3 billion dollar industry by 2027 globally (1).

Although the industry has been growing into western markets like Australia, it has only managed to gain traction in metropolitan areas where there is a high demographic composition of Asian descent and high population density (2). Due to these two factors, an issue arises where there is no local exposure to the general Australian consumer to try out bubble tea, which would allow the industry to expand to become a staple in Australian cuisine.

Discovering bubble tea online has always been a challenge for the general consumer, as there has been no stable platform for the bubble tea industry to comfortably market themselves out to. Even bubble tea followers have a difficult time actually discovering new drinks which are being continually made, and different variations of them, which Google fails to encapsulate with simple searches of “bubble tea near me”.

Boba Me, aims to be a concept web app designed with two purposes. One, to create a platform for the bubble tea industry to market to directly motivate bubble tea’s presence in your local area and connect with existing and new consumers. Two, it’s a platform to educate the general consumer (regardless of age and gender) about bubble tea, and provide a fresh experience for the bubble tea fanatic, to discover more options. Essentially, it’s a platform to expose bubble tea to new and existing consumers, while connecting them to more bubble tea businesses in the most intuitive way.

## 1.2 Collation of Mini-Problem Statements

Down below, is a breakdown of the scope of Boba Me into mini-problem statements, which outline the specific issues which Boba Me aims to resolve. We recognised and generalised

two major target demographics: the general consumer and business owner. Down in the table below is what we describe the nuances of each demographic.

**Table 1. Target Audience Groups**

| Demographic | Nuances | Why |
|---|---|---|
| General Consumer | Age: 20 - 34<br><br>Two types of general bubble tea consumers: inexperienced and experienced. | According to a case study done by Edge Red, most people within this demographic consume the most bubble tea. Although it does delve more into the specific demographics of this age group, we decided to only limit it to the age, as we are aiming to make a generally good experience for people in this demographic, to find out about bubble tea and enjoy Boba Me, as this age group is more likely too.<br><br>We also sought to not only entice the attention of current bubble tea drinkers, but new ones as well. |
| Business Owners/Stakeholders | Bubble Tea franchisees, major bubble tea chains, small bubble tea businesses. | These are mainly the stakeholders which affect the consumer experiences of people buying bubble tea. Designing an app in their interest as well, we can develop beneficial partnerships with these businesses, to keep people on our app, and for them to connect with new customers. |

Considering the audiences we are pitching this product for, we developed the core bite sized problem statements, which Boba Me should focus on.

(1) Google search fails to find me, a person experienced with bubble tea, any new bubble tea places in my area.
(2) Google fails to give me new bubble tea options to try, as a fan of bubble tea.
(3) There is no all-in-platform to explore new bubble tea places.
(4) As a bubble tea business owner, my bubble tea business has a hard time connecting to new consumers to try my product.

(5) Google doesn't provide enough information about the ratings of bubble tea drinks to try.
(6) There is no all-in-one platform to find special deals for all bubble tea shops, as a fanatic.
(7) As a general consumer, I can't easily find out exactly what is in my bubble tea drink, as it takes a couple of web searches
(8) As a general consumer, I cannot find anything new to drink

# Part 2 - Identify and Describe User Stories

## 2.1 Rationalising the Features

From analysing our problem statement, it is clear that the main users of our proposed project are those interested in bubble tea. It is also clear that this audience will need assistance in making a choice of drink as well as directions to where it can be purchased.

Other searching services, especially on the Internet, do assist with providing information about Bubble tea, and it is clear that a feature required from this project would be to present information in a concise format that is easy to understand and accessible for our users with experience with bubble tea.

General users however, can fall into two categories; either they are a user that has had exposure to technology and finds navigating menus trivial, or they find technology difficult to adapt to. Therefore, our project will require a design that is minimalistic. This will require presented pages to have a spacious and uncluttered layout. This implies navigation needs to be designed, so that it minimises the number of total human actions, like clicking, sliding and typing. All this needs to be taken into account while users attempt achieve their aforementioned goals of searching and finding information in our proposed web application design.

Businesses connecting through us to get to our user base are planned through special partnerships that allow for rewards schemes from multiple vendors to collate onto our platform, so we can direct and encourage users to many bubble tea places. However, for

future iterations we may expand our features to allow for some level of marketing features, or better business integration.

Hence the collated high level requirements from an analysis of our problem statement are as followed below. We mainly focus on features which streamline a user on our web app to find their ideal drink, and then connect them to a suitable shop according to what they want. Our features do that below through various means, which account for our two types of main users: people who are inexperienced and those who are experienced with bubble tea.

## 2.2 User Stories and Features

| | |
|---|---|
| Feature ID | 1 |
| Feature | As a client, I should be able to search for boba shops nearby, so I can find boba shops even in places that I am not familiar with. |
| Scenario | Search nearby boba shops according to distance from the client |
| | GIVEN I am on the homepage<br>WHEN I type in a shop name<br>AND I press the “Search” button<br>THEN I should be taken to “result” page<br>THEN I should be able to see shops containing the user input<br>THEN I should be able to see the filter tools on the side<br>AND I can choose to filter the result by distance<br>THEN I should be able to see all nearby shops in ascending distance order in grid style. |

This feature is one of the main solutions for our problem statement. Instead of the user going to generic search engines to locate Bubble tea shops, the user can use our application to not only find shops nearby, but find extra information as well. This feature can help users find shops quickly once they have decided what drink they want, without leaving the application.

| | |
|---|---|
| Feature ID | 2 |

| | |
|---|---|
| Feature | As a client I should be able to view the menu of a particular boba shop, so I can preview what I can get from the shop |
| Scenario | Viewing the drinks offered by a particular shop |
| | GIVEN I am on the “profile” page for the particular shop<br>THEN I should be able to see a list of drinks with prices offered by the shop. |

Having a feature that provides a Bubble tea shop’s menu, gives unique value to our application, that other search engines do not have. Where other applications redirect users to the shop's website, ours will provide everything in one place, which adds another level of convenience and makes researching Bubble tea for new customers more comfortable and takes less effort.

| | |
|---|---|
| Feature ID | 3 |
| Feature | As a Client I should be able view the location and opening information of a specific shop, so that I don’t get lost when I want to go to the shop. |
| Scenario | Viewing the general information by a particular shop |
| | GIVEN I am on the “profile” page for a particular shop<br>THEN I should be able to see a picture of that store.<br>GIVEN I am on the “profile” page for a particular shop<br>THEN I should be able to see the opening times of that store.<br>GIVEN I am on the “profile” page for a particular shop<br>THEN I should be able to see the address of that store. |

| | |
|---|---|
| Feature ID | 4 |
| Feature | As a Client I should be able view the main ingredients of a particular drink, so I have a brief idea what’s inside my drink. |
| Scenario | Viewing the ingredients contained in a particular drink |

| | |
|---|---|
| | GIVEN I am on the “profile” page for a particular drink<br>THEN I should be able to see list of ingredients contained in the particular drink<br>AND I should be told if common allergy ingredients are used<br>AND I also should be warned to contact shop for detail ingredients |

Viewing the main ingredients of a drink provides more value for users that like to prioritise either taste, or health. Users will be able to compare which drink ingredients are sold at which shop, which may affect their choice of shop as well. Users will be saved from the disappointment of turning up at a Bubble tea shop, and finding their ingredient not being sold in the drink.

| | |
|---|---|
| Feature ID | 5 |
| Feature | As a client, I should be able to view the trending/popular drinks among other users, so it can help me to make a decision. |
| Scenario | Viewing the trending drinks among other users when clients can not make a decision |
| | GIVEN I am on the search result page for drinks<br>WHEN I click on “Trending” button in the filters section<br>THEN I should be able to see a list of trending drinks from my search<br>GIVEN I am on the homepage<br>WHEN I scroll to the bottom of the page<br>THEN I should be able to see a list of all trending drinks |

| | |
|---|---|
| Feature ID | 6 |
| Feature | As a client, I should be able to rate a drink out of 5, so I can help other users to make decisions when they are purchasing drinks. |
| Scenario | Clients can rate a drink after they tried it |

| | |
|---|---|
| | GIVEN I am on the “profile page” for a drink<br>THEN I should be able see the rating of the drink<br>WHEN I hover my mouse over the stars<br>THEN I have the options to click and rate the drink myself<br>IF I am logged in<br>THEN the overall ratings should change according to my ratings.<br>OTHERWISE I should be prompted to login before rating |

| | |
|---|---|
| Feature ID | 7 |
| Feature | As a client, I should be able to view the rating for a drink, so I can make a decision based on the ratings. |
| Scenario | Client can view rating of a particular drink in case client is indecisive |
| | GIVEN I am on the search result page for drinks<br>THEN I should be able to see the corresponding ratings next to the search result<br>WHEN I am on the “profile page” for a drink<br>THEN I can see the overall rating for the particular drink |

The above features regarding viewing and making ratings, or being provided a list of the most popular bubble tea flavours, are included to make the decision process for newcomers more convenient. Those who are unsure of the different tastes and types of teas, could use the list of current trending drinks to make choosing seem less daunting. Having a rating system in our design is necessary to distinguish between the quality of teas in several shops. All help the user make an extremely informed choice.

| | |
|---|---|
| Feature ID | 8 |
| Feature | As a client, I should be able to get the website to make a decision for me, so I am not stuck in a dilemma situation. |
| Scenario | Choose a random drink |

| | |
|---|---|
| | GIVEN I am on the “homepage”<br>WHEN I click on a ‘Randomise…’ button<br>THEN the application will choose a drink from it’s many options at random. |

In the event that the newcomer, despite the rating and trending drinks, still cannot make a choice, or the event that a user familiar with Bubble tea simply wants a novelty choice, a randomiser function is provided. The main advantage from having a randomiser function will be to provide exposure to drinks that might seem strange or abnormal to the user.

| | |
|---|---|
| Feature ID | 9 |
| Feature | As a client I should be able to get directions to a particular boba shop, so I can get to the shop when I have made up my mind. |
| Scenario | Find directions to a particular boba shop. |
| | GIVEN I know what Boba shop i want to go to<br>AND I am on the Boba shop’s page<br>WHEN I click on the “directions” button of the Boba shop<br>THEN I should be redirected to google map with destination filled in for me. |

Once the decision has been made, the user will inevitably need a route to the Bubble tea shop. Instead of forcing the user to leave the application and find another service for this, we see value in integrating a routing service into our own application for convenience. The user will have everything they need in only a few clicks.

| | |
|---|---|
| Feature ID | 10 |
| Feature | As a client, I should be able to see the response from the website within 3 seconds after I addressed a command, so I can carry out my tasks more efficiently. |
| Scenario | Navigating through the website as a general user |
| | GIVEN I am on ANY page<br>WHEN I click on ANY button/link |

| | |
|---|---|
| | THEN I should see the effect of the button/link within 3 seconds |

This performance feature is a non-functional requirement, and ensures the user does not experience frustration in waiting for results of any command. The utility of the application decreases proportionally with increased delays in time taken to carry out functions.

| | |
|---|---|
| Feature ID | 11 |
| Feature | As a client, I should be able to see the price for any given drinks, so I know how much I am paying. |
| Scenario | Client can check for price before they commit to it |
| | GIVEN I am on the search result page for drinks<br>THEN I should be able to see the corresponding price for each drinks<br>GIVEN I am on the profile page for a drink<br>THEN I should be able to see the price of the drink for each shop<br>GIVEN I am on the profile page for a shop<br>THEN I should be able to see the corresponding price for each drinks |

Providing the prices to users is very important to avoid other frustrating experiences. When a user chooses a drink, they will need to turn up face to face to receive. If however, the price is a shock to them, for example if it is too high, the user may feel annoyed that this information was not provided before they committed to travelling to the shop. To avoid these types of experiences, it is clear that providing them with the price of a drink early on, will help create a positive experience for the user.

| | |
|---|---|
| Feature ID | 12 |
| Feature | As a client, I should be able to see the range of toppings offered by the shop, so I can make my unique drink to enrich my drinking experience. |
| Scenario | Client can view the list of toppings offer by the shops to make their own drinks |

| | |
|---|---|
| | GIVEN I am on profile page for a shop<br>THEN I should be able to see all the topping options offered by the particular shop. |

A particularly popular selling point of Bubble tea is its assortment of toppings. Without any information on toppings, the user is missing out on a key part of what Bubble tea is; the 'Bubble' part of the name refers to chewy Tapioca balls which is the advertised aesthetic of many shops. Hence the project would be incomplete without providing information to the user regarding toppings.

| | |
|---|---|
| Feature ID | 13 |
| Feature | As a client, I should be able to login using google accounts so I can utilise the full potential of the website. |
| Scenario | Client can login using google accounts to rate drinks and perform other actions |
| | GIVEN I am on ANY page on the web<br>WHEN I click on the "login" button<br>THEN I should be able to see a "login" prompt<br>WHEN I click the "login through google" button<br>THEN I should be logged in |

Allowing users to login to the website using google accounts can help users be better identified by other users. Implementing personal accounts for users not only increases the reliability of the rating system, it also allows the website to keep track of user actions and provide the option for them to review their previous actions.

| | |
|---|---|
| Feature ID | 14 |
| Feature | As a client, I should be able to logout from an account so I can login as other users. |
| Scenario | Clients can logout from the current account if they wish to. |

| | |
|---|---|
| | GIVEN I am on ANY page on the web<br>AND I am logged in<br>THEN I should be able to see the “logout” button in the top right corner<br>WHEN I click on the “logout” button<br>THEN I should be see a logout prompt<br>WHEN I click “YES”<br>THEN I should be logged out<br>IF instead I click “NO”<br>THEN I should remain logged in<br>AND the prompt should disappear |

| | |
|---|---|
| Feature ID | 15 |
| Feature | As a client, I should be rewarded for using the website, so I can be convinced to be a long term user for the website |
| Scenario | Logged in users can be rewarded with free drinks or discount vouchers after they reviewed a certain amount of drink for each month. |
| | GIVEN I am on “home” page<br>AND I am logged in<br>THEN I should be able to see a ‘My Rewards’ button at the top of the page<br>WHEN I click on the “My Rewards“ button<br>THEN I should see a “Personal coupons” box<br>AND I should see “Redeem Coupon” button<br>AND I should see an “Enter Raffle” button<br>WHEN I click on Enter Raffle button<br>AND I have reviewed 5 drinks this month<br>THEN I should be in the draw pool for a chance to get free drinks or a discount voucher.<br>WHEN I select a coupon inside the “Personal Coupons” box<br>AND I also click on the “Redeem Coupon” button<br>THEN I should be sent a code to my google email for my coupon<br>AND the coupon should disappear from “Personal Coupons” |

In order to retain users as our long-term customers, we implemented a rewards system. Such a system will keep track of the user's rating history. Once a user is eligible for a reward (e.g. discounts, free drinks, etc.) they can choose to enter the draw pool for the chance to win additional prizes.

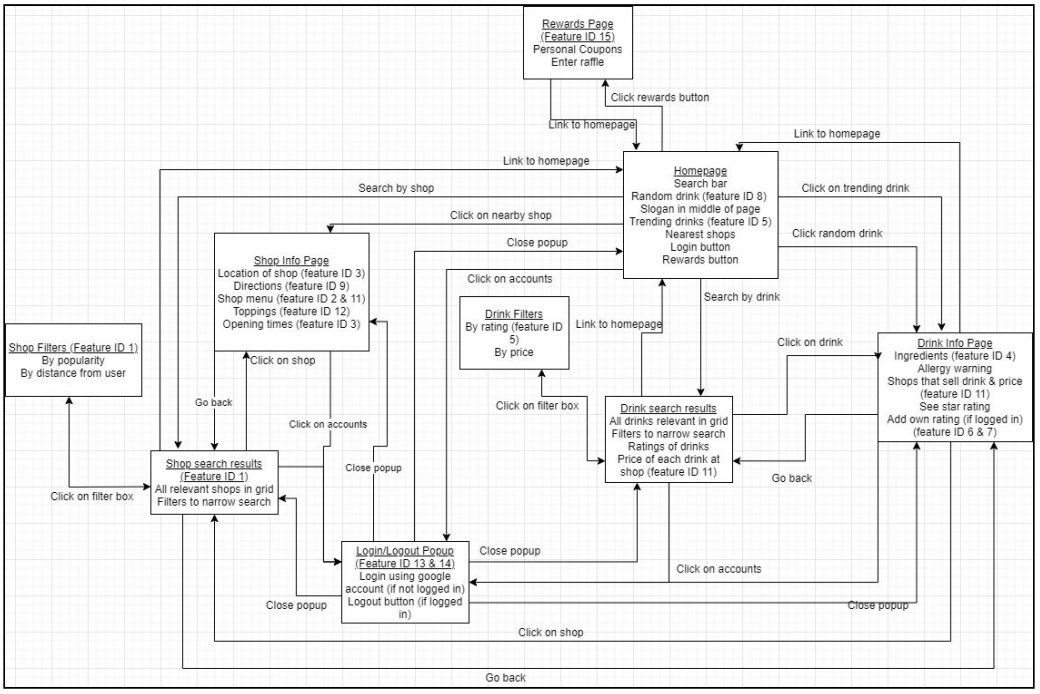
# Part 3 - Low-fidelity Prototype

After developing and confirming the user stories, we moved onto experimenting with how our application would implement and tie our proposed features together. To achieve this, we started with a basic storyboard to avoid overcomplicating our designs. The storyboard technique assisted in avoiding redundancy and frustration in developing hi fi prototypes in later stages.

## 3.1 Storyboard

Below we provide the finished storyboard of how we intend to link our features together. The storyboard starts from the homepage. It outlines how our high level design concepts flow from choosing a drink, either by the randomiser function, by clicking on a trending drink to arrive at our information page regarding the choice of drink. Alternatively, the storyboard shows the user can search for a drink and arrive at a page that displays search results. These search results can also be filtered down by rating or price, by choosing a filter box.

Instead of choosing a drink, the homepage page also provides a mechanism to access pages related to information for shops. This can be done by clicking on a nearby shop, or searching for shops and choosing from a query’s results. Additionally the results can also be filtered. The storyboard also demonstrates that from pages relating to drink information, there is a direct pathway to find related information for shops the drinks are sold at.

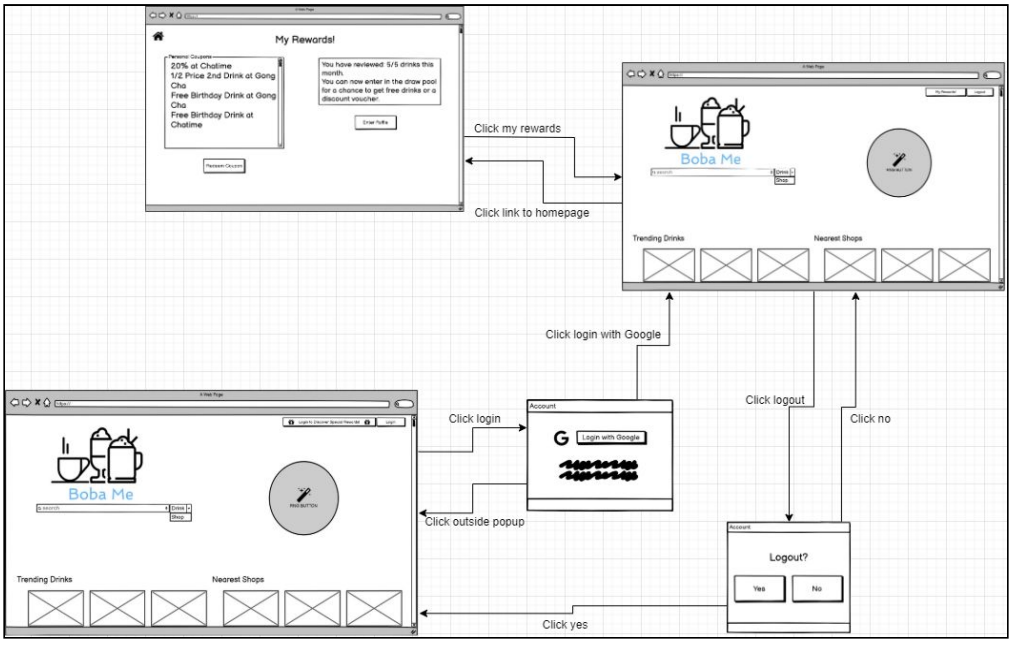



**click on image to expand*

## 3.2 UI Components

### Login

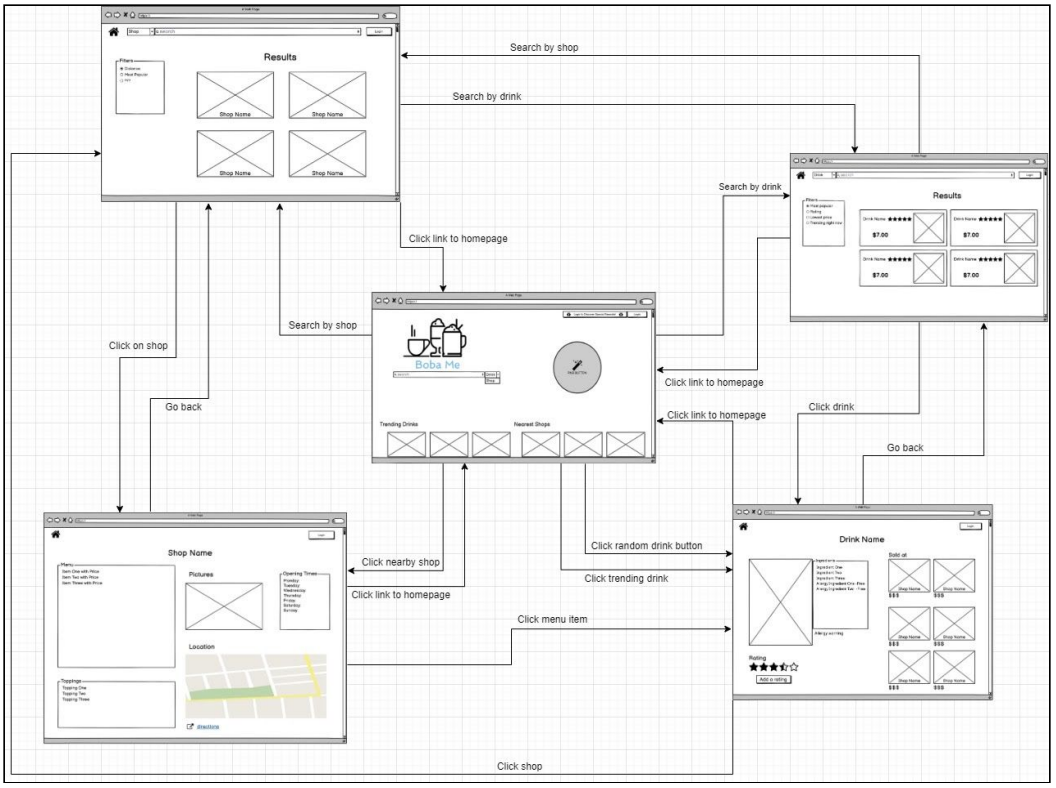
Part of our low fidelity prototyping process involved designing the sequence of actions our user interface would follow when logging in or out of the Boba Me website, as well as accessing our Rewards Page for the user. These components help clearing our doubts before getting into wireframing, coding, and high fidelity prototyping, for features 13, 14 and 15.




**click image to expand*

**Pages**

Below we also draw our impressions of the user interface regarding features relating to searching for shops, drinks, choosing drinks, information for both, as well as the remainder of our features.



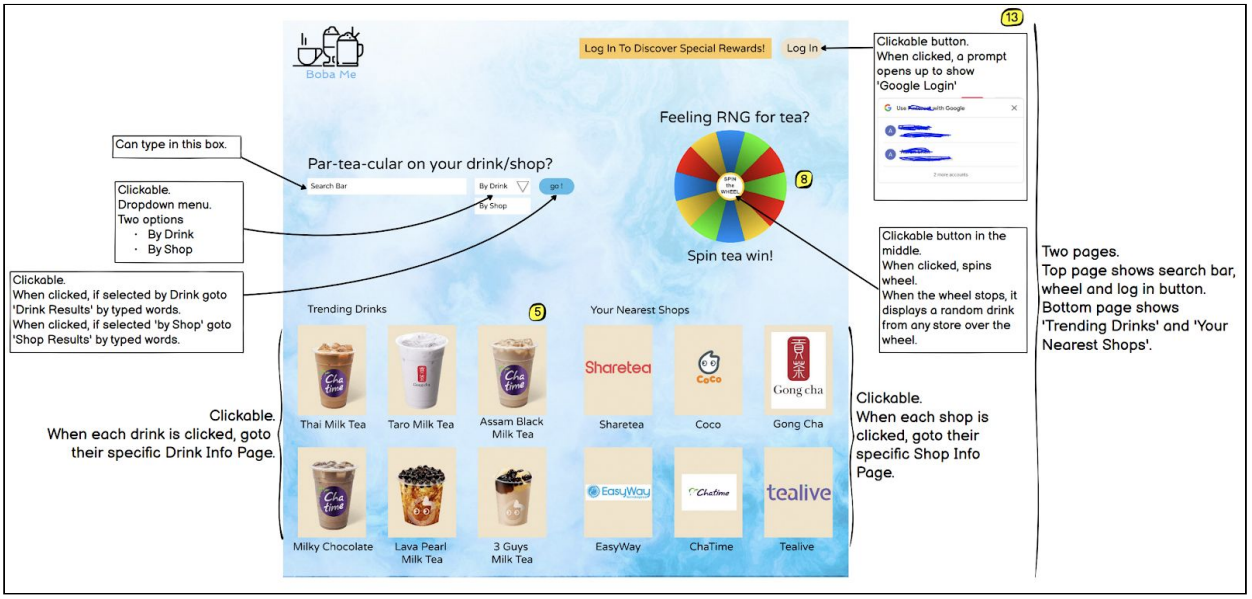

**click image to expand*

# Part 4 - High-fidelity Prototype

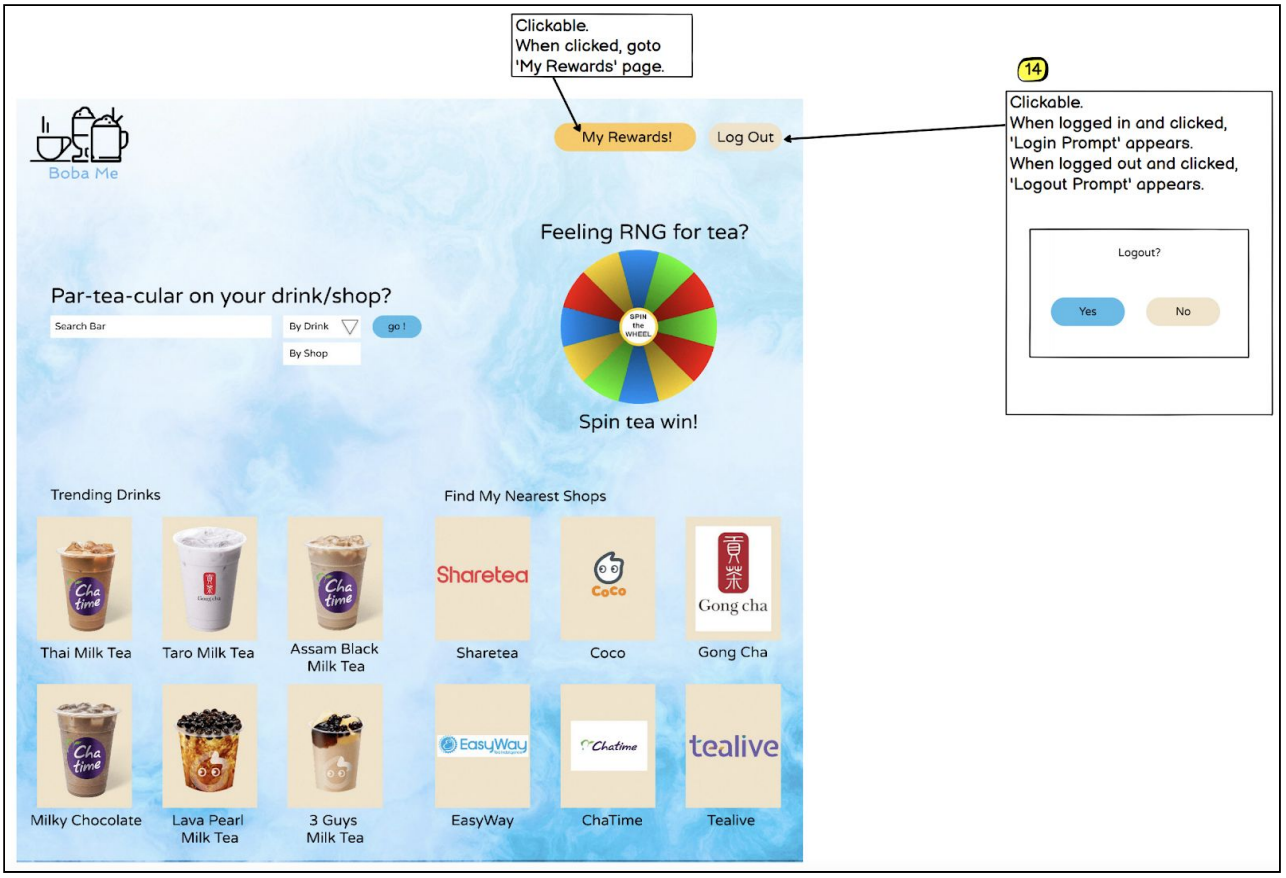
For our high fidelity prototype, we have created a mockup of a website which best integrates our features, and best represents our low fidelity prototype. To showcase how Boba Me UI and UX may work, we have labelled and annotated every interaction for a typical user interacting with our page in different situations. Additionally, there has been an inclusion of small yellow highlights with numbers. These highlighted yellow circles (feature IDs), represent which feature is present in the high fidelity prototype.

In summary, we intend our UI and UX to be intuitive and simple, although our target demographic for this product are adults ranging in ages from 20 - 34, for a more enjoyable experience for any user, keeping it simple and letting information reveal itself when a user explores our website, rather than providing a platform dense with information, allows for a user to stay on our website, rather than leave. This is what we have taken into consideration in designing the overall possible UI for Boba Me, to ensure a simple but fun experience.

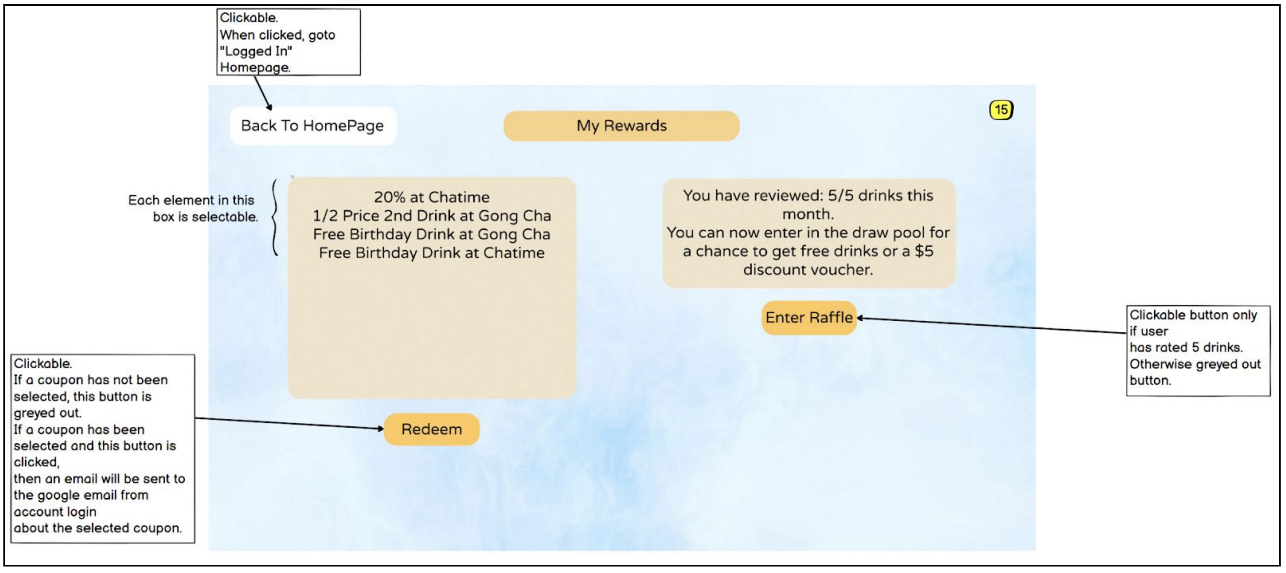
**Home Page (Logged Out)** ***(Click Image to Expand)***



## Home Page (Logged In) (*Click on Image to Expand)*

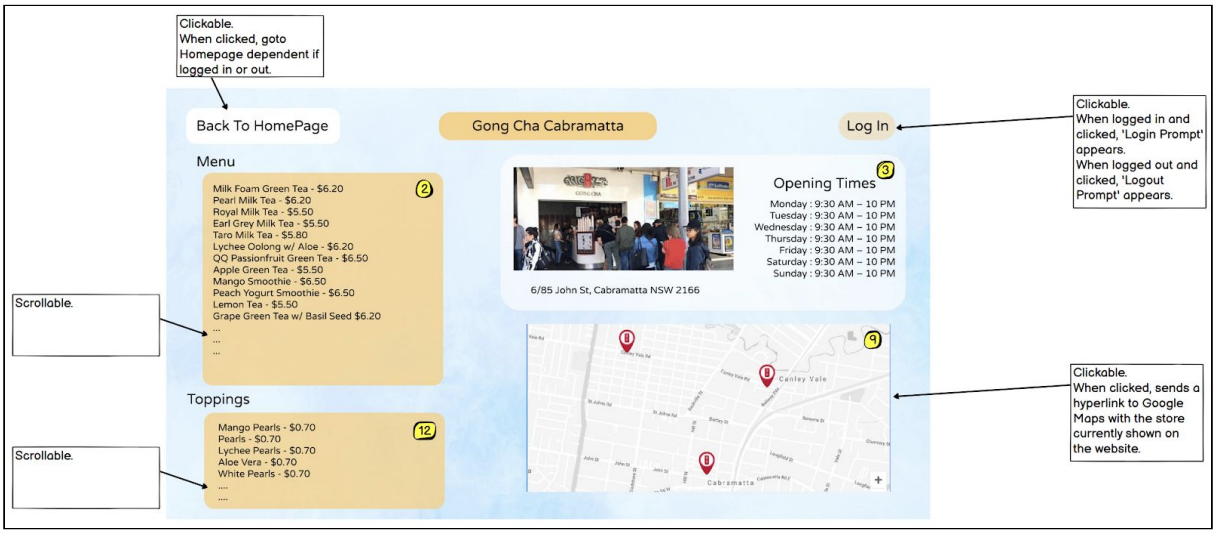



## My Rewards Page (*Click on Image to Expand)*



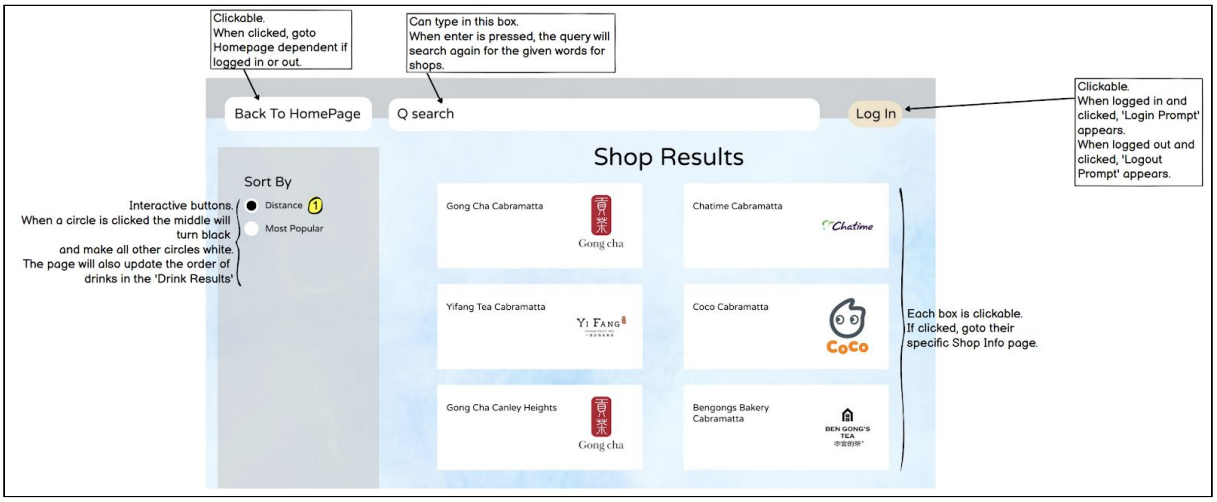
## Personal Drink Info Page (*Click on Image to Expand)*

## Personal Shop Info Page (*Click on Image to Expand)*



## Drink Filters Page (*Click on Image to Expand)*

## Shop Filters Page *(Click on Image to Expand)*



# References


(1) https://edition.cnn.com/travel/article/taiwan-bubble-tea-origins/index.html

(2) https://www.edgered.com.au/post/who-drinks-bubble-tea#:~:text=Age%20bracket%3A%2020%2D34%20years&text=This%20graph%20shows%20that%20mostly,bubble%20tea%20shops%20per%20person