

**HMART: Michelle Lo, Annabel Zhang, Rachel Xiao, Tina Nguyen (PHK, Mang, Mooana, Lola)**  
**SoftDev**  
**P02 -- Four Toppings | Design Doc**  
**2022-03-11**

## **Project Description:**

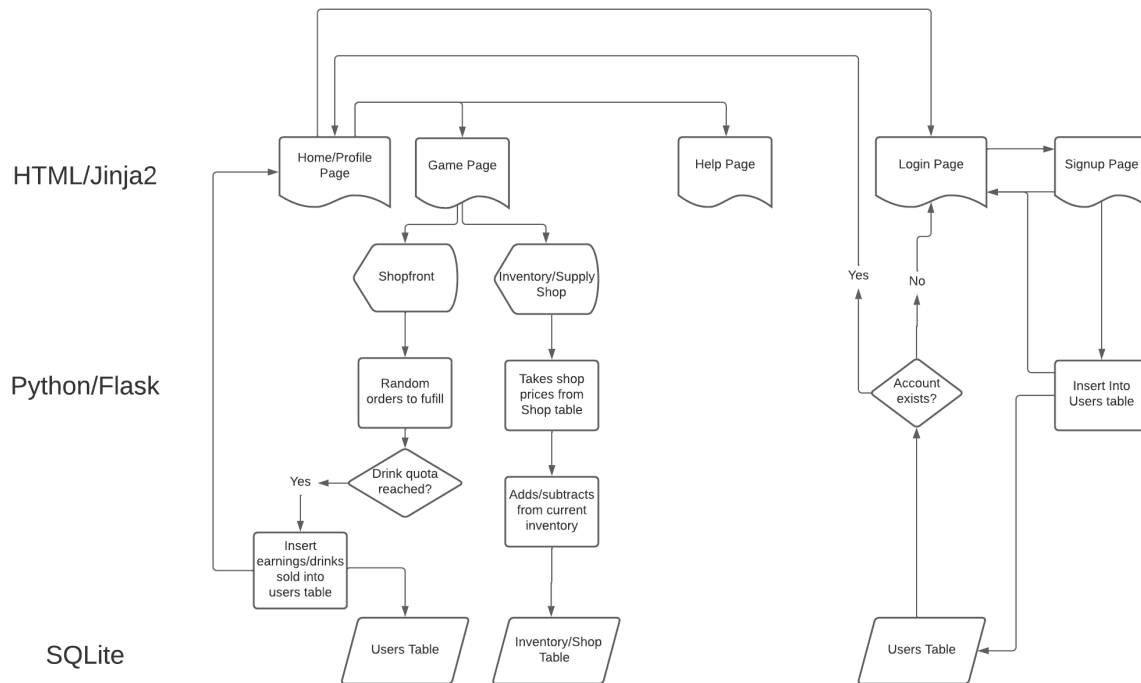
Welcome to Four Toppings, a virtual boba shop to quench your boba cravings 🧋 ! In this game, users will simulate what it's like to run their own boba shop: brewing boba, selling boba to customers, managing the shop's inventory, and more!

## **Program Components:**

- Jinja2
  - Create a layout for web pages the user will interact with
  - Renders templates to populate the website with some user specific information such as user's inventory or level
  - Will load a different canvas with personalized and update user data based on the user's input of what they clicked on
- Flask
  - Uses Jinja2 and HTML templates to create the web pages that the user will see and interact with
  - Pulls data from the database in order to populate each webpage
  - Will get username and passwords from the front end when a user logs in or registers
  - Will create sessions for each user when they are logged in
  - Will retrieve user's input when they buy from the shop
- SQL Database
  - Keeps track of login user information
  - Stores user's progress on an order
  - Stores shop items(prices and items are static and will not be changed)
  - Obtains user inputs from Flask
  - Stores user's balance
- Javascript
  - Utilizes canvas to draw out our shopfront and other game environments with the use of custom-drawn items
- Features
  - Taking a customer's order
  - Creating a customer's order by adding toppings and making the tea by buying ingredients from the shop during the cooking process (up to one drink on hand at a time)

- Selling to customer only if the order is exactly right (otherwise the game won't let you continue)
- Beating a level means to meet the quota of serving a certain amount of customers
- Tracking the number of drinks sold
- Shop cooldown (maybe)
- There is no way for you to lose the game (balance can never drop to zero)

### Component Map:



(Credits to Noakai for component map templating from P01)

### Database Organization:

Users:

id (integer primary key)	username (text)	password (text)	balance (float)	total drinks sold (int)
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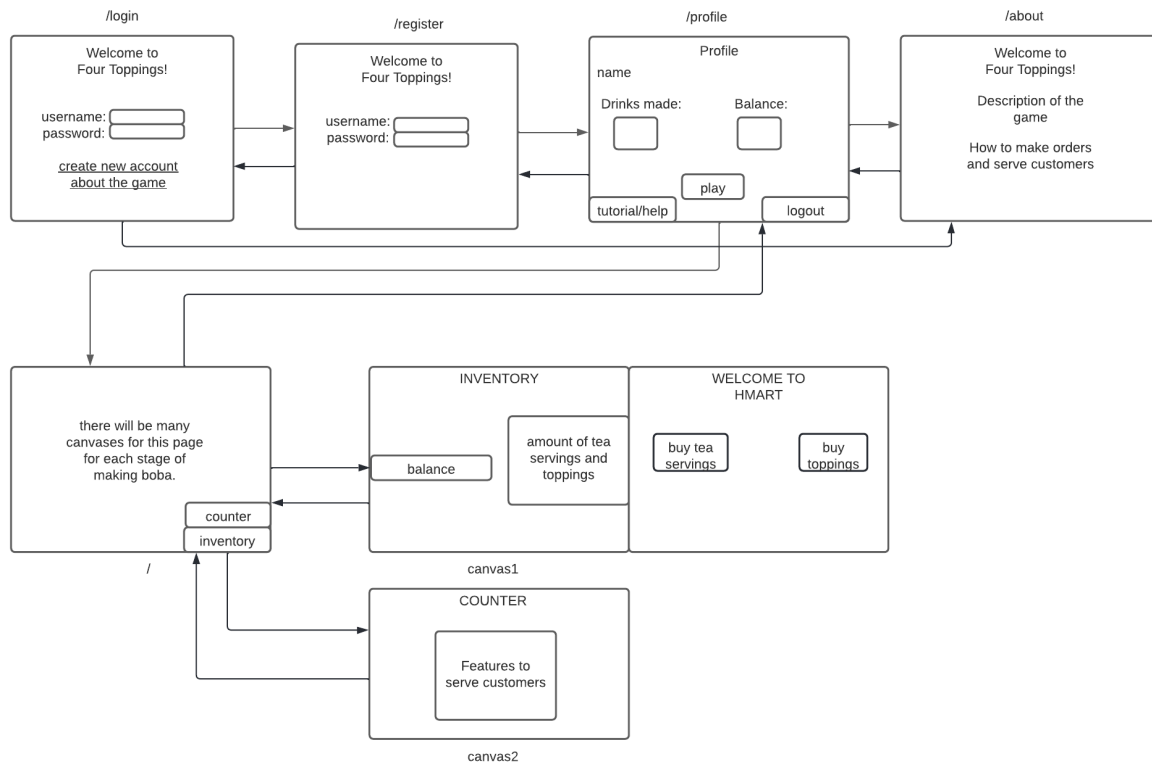
Inventory/Shop:

user_id (integer)	name of item (text)	quantity (int)	price of one unit (float)
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Menu:

name of menu item (text) <ul style="list-style-type: none"> <li>- Drinks</li> <li>- Toppings and other add ons*</li> </ul>	price of one unit (float)
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## Site Map:



### Pages:

- Welcome page
- Login/signup page
- About page
- Profile page with shop nap
- Tutorial/Help page
- Game: Taking care of an order (each has its own canvas)
  - Pour boba in cup
  - Pour tea (has different choices of tea)
  - Adding toppings (also has different choices)
  - Serving the customer
  - Inventory and shop


### Canvases:

- Orders/counter
- Kitchen

- Inventory/shop

## Templates:

Login Page



Welcome to  
Four Toppings!

Sponsored by HMART


Username:

Password:

[About the Game](#)

[Create New Account](#)

Register page



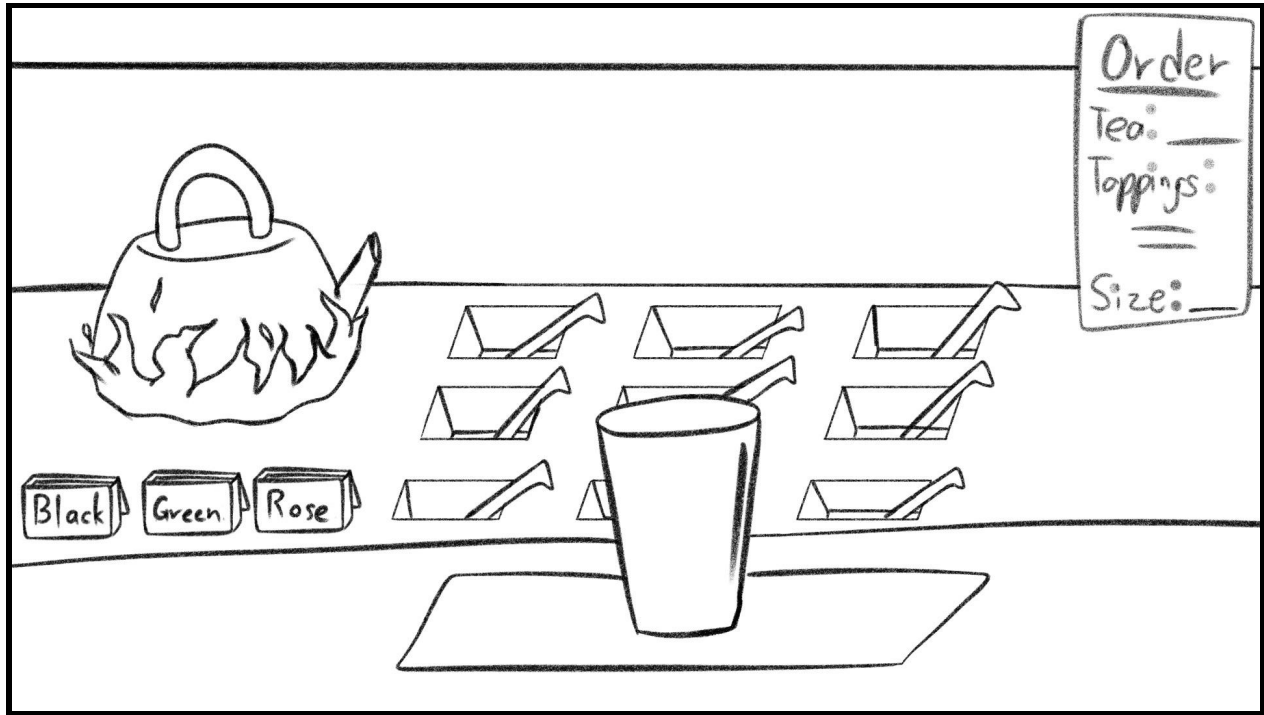
Four Toppings

Register here:

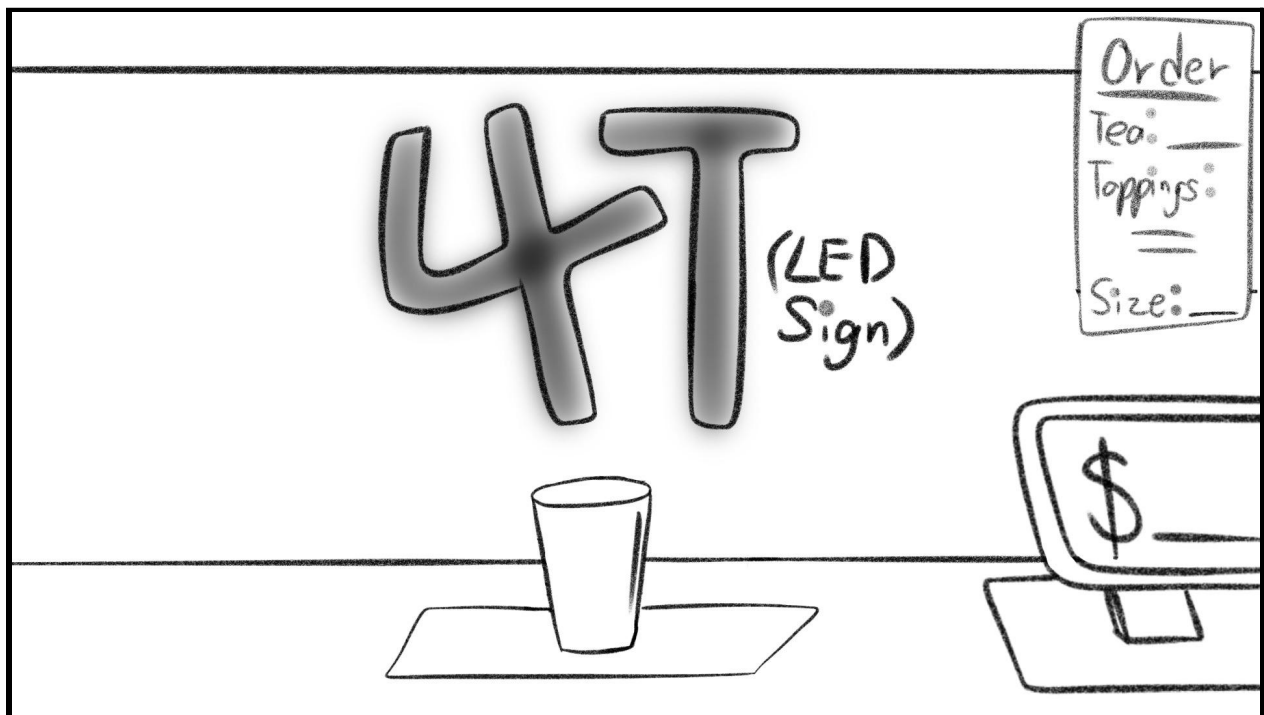
Username:

Password:

Kitchen



Counter



### Frontend Framework: Bootstrap

- Bootstrap features are easier to implement
- Default CSS (rounded buttons/rectangles) is more visually appealing and clean to users
- Has a lot more documentation because of its popularity

- Different colored buttons for going to different canvases or creating animations
- Charts for tutorial page

## Task Division:

User management: (Rachel)

- ☐ Login/Logout/Sign-up Functions
- ☐ Creating a user profile (money tracker, fun stats such as number of drinks sold (additional features))
- ☐ Creating the templates for different pages (login/signup, game, help, profile)
- ☐ Help page: “We reserve the right to refuse service to anyone.”

Level Management: (Michelle)

- ☐ Managing and creating (randomized) customer orders.
  - ☐ Price: Tea + Toppings
- ☐ Different levels/days with different customer orders (additional feature).

Shop-front: (Michelle)

- ☐ Button to skip an order
- ☐ Tracking sales in a database

Kitchen: Brewing boba tea (Tina)

- ☐ Add buttons for each boba tea component (teas, toppings)
- ☐ A virtual boba tea image will update with each addition
  - ☐ Switching canvases
  - ☐ Different tea variations (additional feature)
    - ☐ Milk tea (default choice)
    - ☐ Green tea
    - ☐ Oolong tea
    - ☐ Taro tea
  - ☐ Different topping variations (additional feature)
    - ☐ Milk foam (default feature)
    - ☐ Boba
    - ☐ Grass jelly
    - ☐ Lychee jelly
    - ☐ Red bean
- ☐ Restocking + Cooking drink components (after using up 3 units of boba, the user must wait ~30 seconds until using it again) (additional feature)

### Inventory Management + Shop (Annabel)

- ☐ User may view the number of units they have available
- ☐ Databases for users, inventory (boba, tea, etc.), shop (for buying supplies)
  - ☐ Users may buy supplies during each round.

**Target Ship Date:** March 23, 2022