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SoftDev
P02 -- Four Toppings | Design Doc
2021-03-07

Project Description:

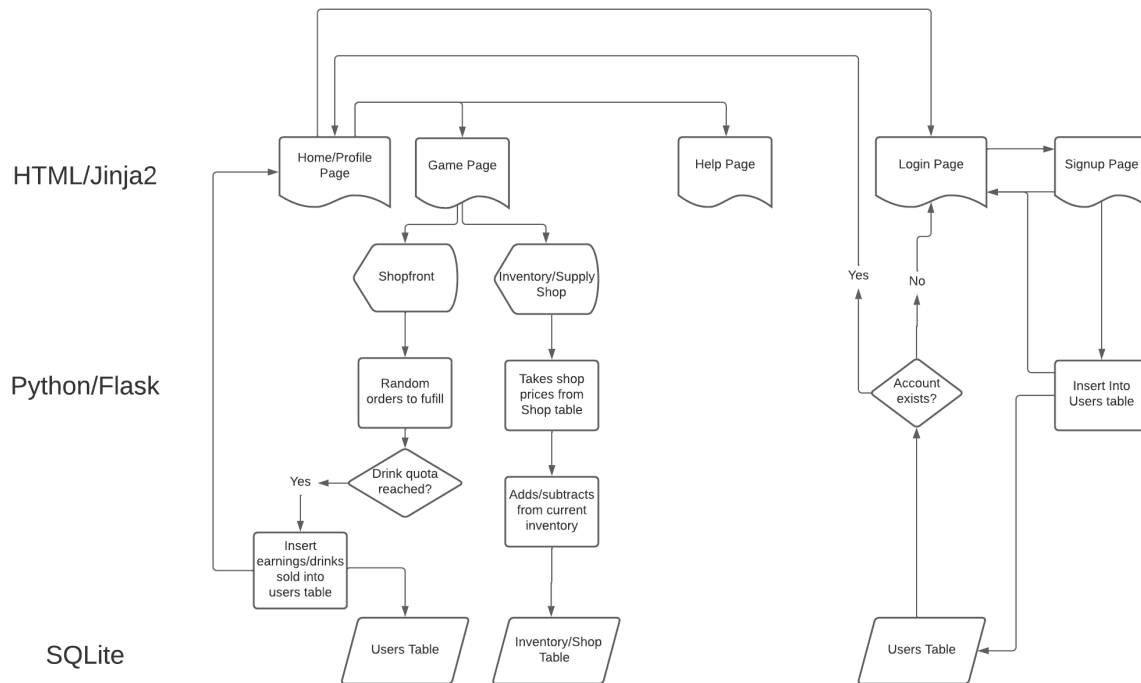
Welcome to Four Toppings, a virtual boba shop to quench your boba cravings 🧋 ! In this game, users will simulate what it's like to run their own boba shop: brewing boba, selling boba to customers, managing the shop's inventory, and more!

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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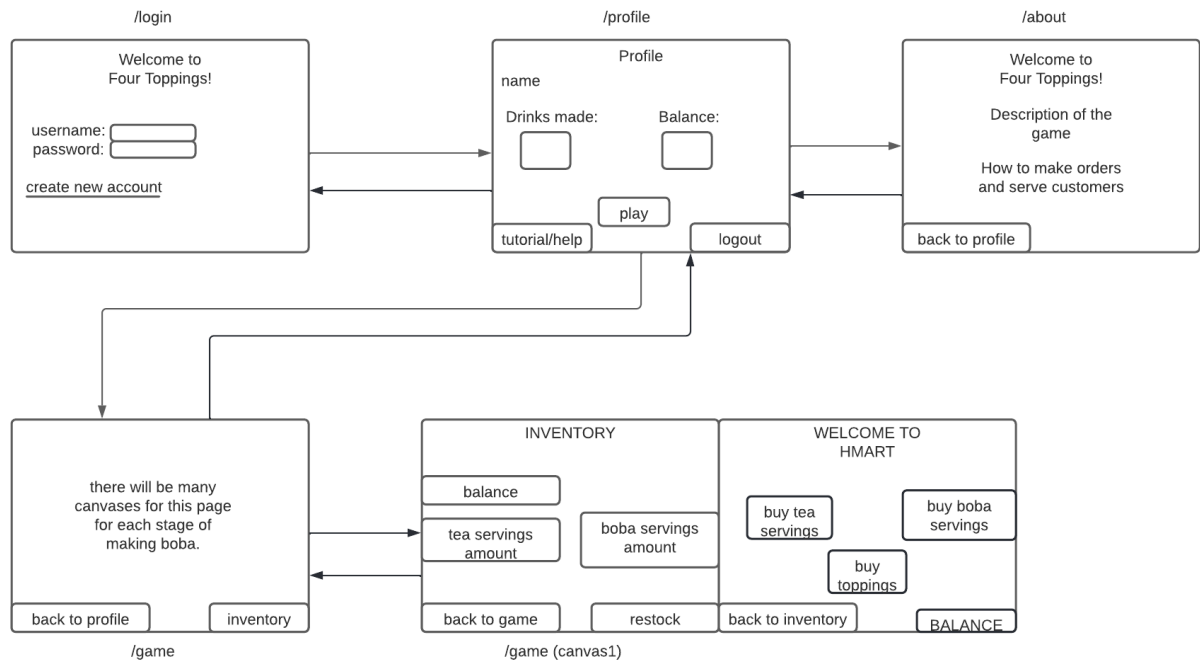
Inventory/Shop:

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

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

Site Map:



Pages:

- Welcome page
- Login/signup 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/shopfront
- Kitchen

Templates:

~More to come later~

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)

- ☐ Each level/day has a randomized number of customer orders (also randomly generated).
- ☐ Managing and creating (randomized) customer orders.
 - ☐ Price: Tea + Toppings

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)
 - ☐ 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 31, 2022