Tea Recommendation System

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What is your Project?

Tea Recommendation System

- A system that provides the user a recommended type depending on their imputed preferences.
- The system contains a field for the user's name, and two drop-down menus that allow the user to choose their preferences from a designated list.
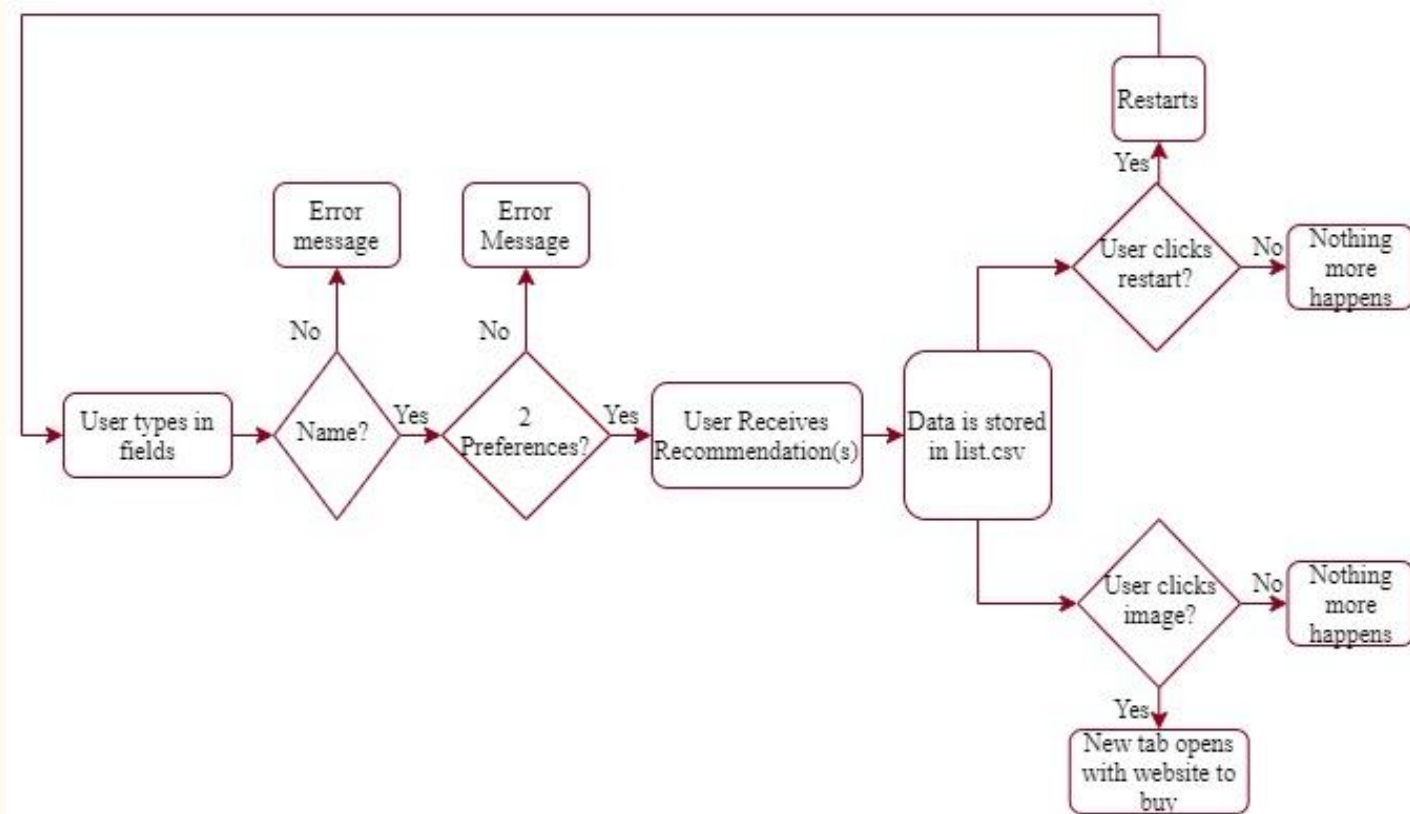
Why this project?

Motivation

- I enjoy tea
- Was simple enough to categorize
- Easily transferable to other topics (i.e. music, restaurants, friends)

Inspirations

- Movie Recommendation System
- Firstleaf: A wine recommendation company
- 08.ConcertRSVPJavaScript
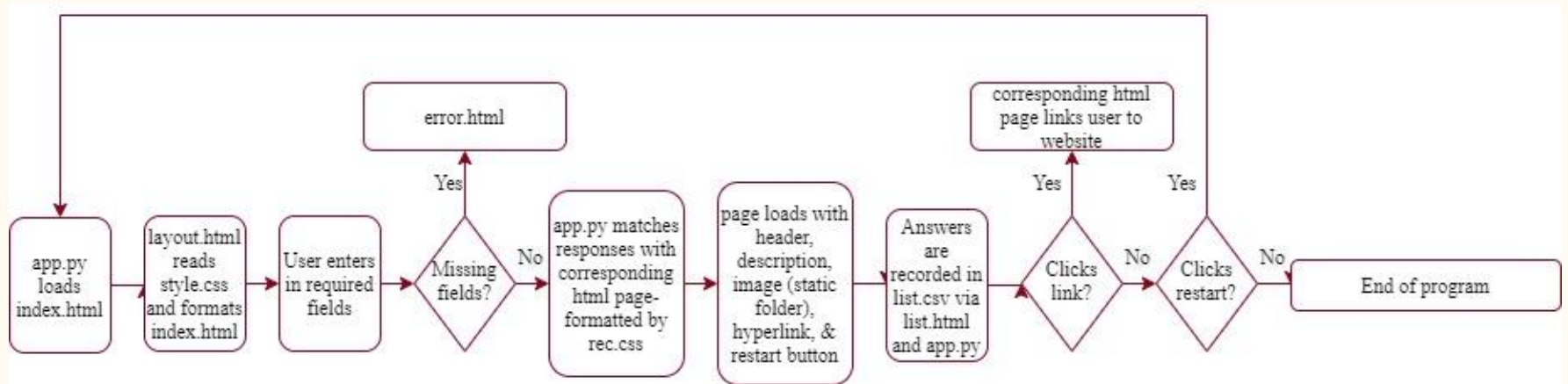- Was recommended to me

How does it work?

Physical Diagram

Software Diagram

| app.py loads index.html | → | layout.html reads style.css and formats index.html | → | User enters in required fields | → | Missing fields? | Yes → error.html | No → | app.py matches responses with corresponding html page-formatted by rec.css | → | page loads with header, description, image (static folder), hyperlink, & restart button | → | Answers are recorded in list.csv via list.html and app.py | → | Clicks link? | Yes → corresponding html page links user to website | No → | Clicks restart? | Yes ↑ | No → | End of program |

Software Description

1. Mapping: Initial Categorization & Flow Chart
2. Setup:
   - Files
   - Folders
   - Virtual Environment
1. app.py
2. list.csv
3. HTML pages:
   - Layout
   - Index
   - Error
   - Recommendation Pages
1. Static File: Images & CSS
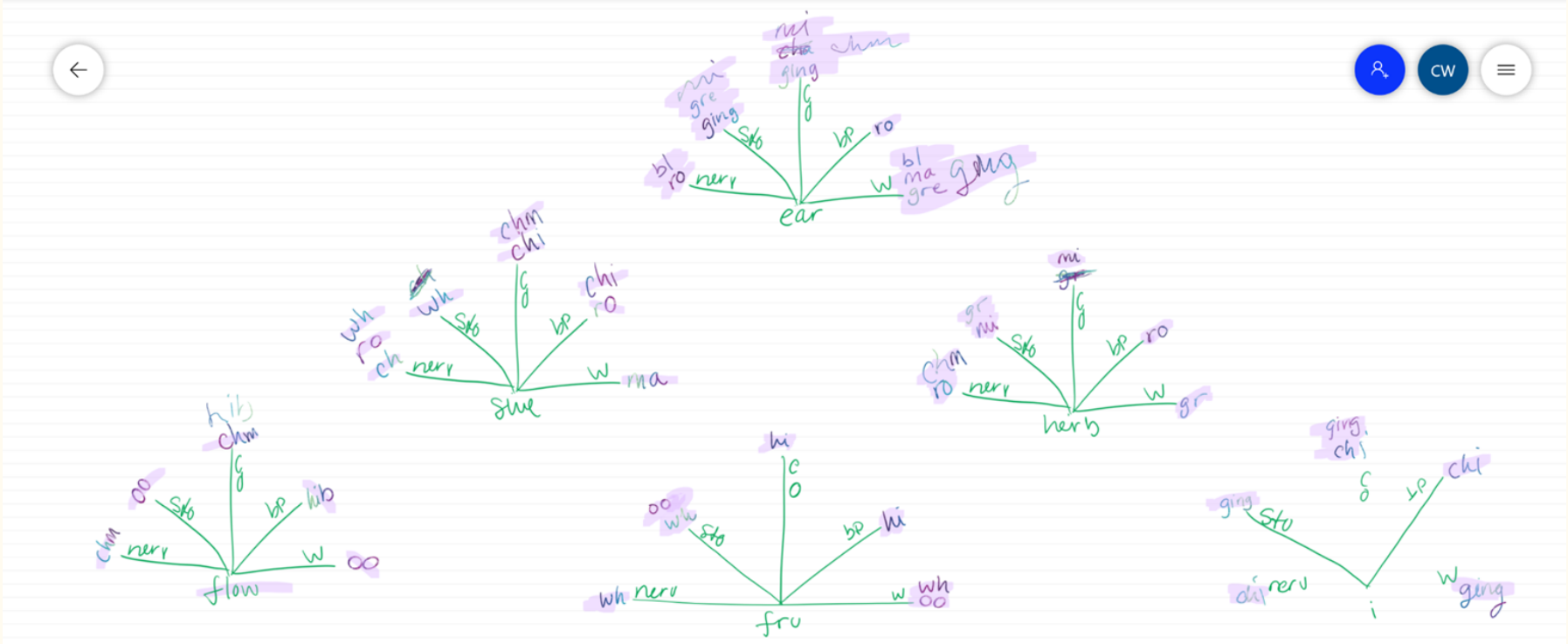2. Flask run
3. Recommendation System!

```
├── app.py
├── static
└── templates
```

```python
from flask import Flask, render_template, request
import csv

app = Flask(__name__)

if __name__ == "__main__":
    app.run()

app.static_folder= 'static'

@app.route("/")
def index():
    return render_template("index.html")


@app.route("/preferences", methods=["POST"])
def register():
    if not request.form.get("name") or not request.form.get("taste") or not request.form.get("effect"):
        return render_template("error.html")
    file = open("list.csv", "a")
    writer = csv.writer(file)
    writer.writerow((request.form.get("name"), request.form.get("taste"), request.form.get("effect")))
    file.close()
```

Software Description

```
{% extends "layout.html" %}

{% block body %}
    <h1>Previous Responses</h1>
    <ul>
        {% for preferences in preferencesR %}
            <li>{{ preferences[1] }} from {{ preferences[0] }}</li>
        {% endfor %}
    </ul>
{% endblock %}
```

1. list.html

Christen,Spicy,Stomach
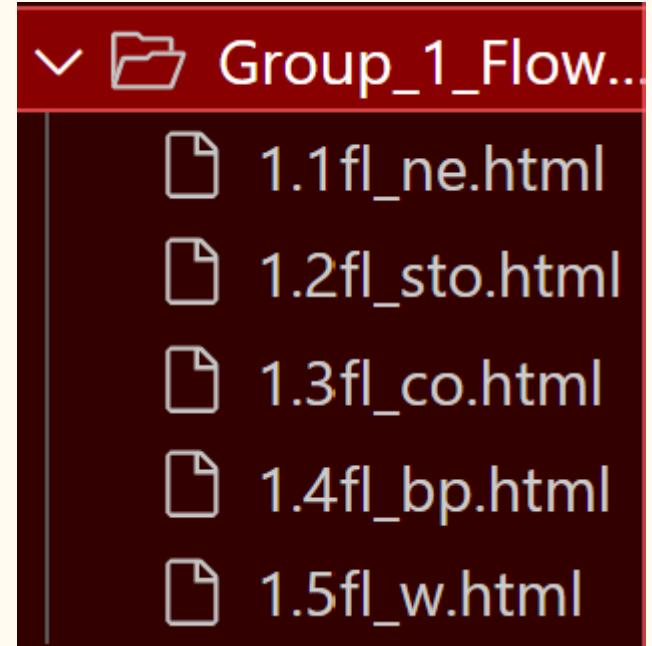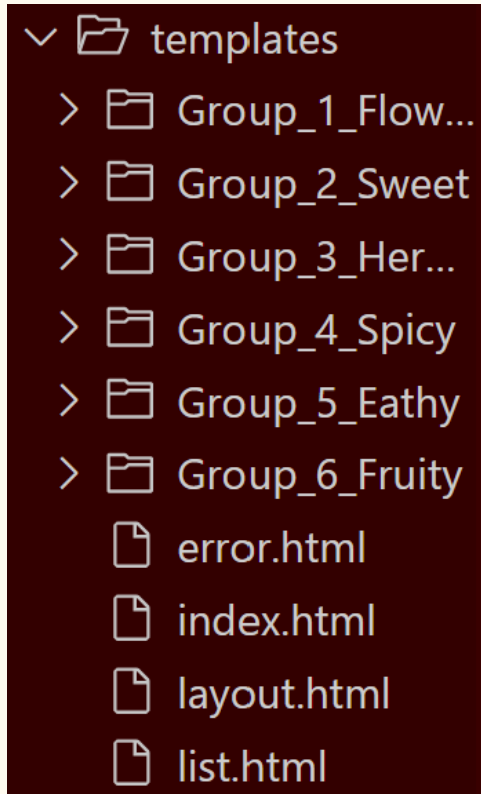
Penelope,Earthy,Stomach

3. list.csv

```
@app.route("/preferences")
def rsvped():
    file = open("list.csv", "r")
    reader = csv.reader(file)
    rsvps = list(reader)
    file.close()
    return render_template("list.html", preferencesR=preferences)
```

2. app.py

Software Description

6. templates/everything else

```html
<!DOCTYPE html>

<html lang="en">
    <head>
        <link href="{{ url_for('static',filename='styles/res.css') }}" rel="stylesheet" media="screen">
        <title>Recommendation</title>
    </head>
    <body>
        <div class="header" id="header">
            <h1>Recommendation: Flowery-Nerves</h1>
        </div>

        <h1>Chamomile Tea<h1>
        <h2>Caffeine-Free</h3>
        <h3>Chamomile tea is a caffeine-free, light tea that has a mild flowery, herbal, and sweet taste.
            <br>This drink is great for sleep, relieving cold symptoms, and combatting nerves and anxiety.
            <br><br>Click on the image to purchase.
        </h3>
        <div class="content">
            <div class="column">
                <a href="https://www.teaforte.com/store/gourmet-tea/lemon-lavender/" target="_blank">
                    <img src="{{url_for('static', filename='chamomile.jpg')}}"
                    alt="chamomile tea" style="height:257px;width:300px;" /></a>
            </div>
        </div>
        <p align="center"><a href=back ><button class=grey
            style="height:25px;width:75px; background-color:☐rgb(107, 29, 16); color: ◼white;">Restart
        </button></a></p>

        <script>
            window.onscroll = function() {myFunction()};

            var header = document.getElementById("myHeader");
            var sticky = header.offsetTop;

            function myFunction() {
                if (window.pageYOffset > sticky) {
                header.classList.add("sticky");
                } else {
                header.classList.remove("sticky");
                }
            }

        </script>
    </body>
</html>
```

```
{% extends "layout.html" %}

{% block body %}
    <div class="header" id="header">
        <h1>Tea Recommendation System</h1>
    </div>
    <h2>Fill out the following, and click submit to see the recommendations.</h2>
    <form action="/preferences" method="post">
        <input autocomplete="off" autofocus name="name" placeholder="Name" type="text">
        <select name="taste">
            <option disabled selected value="taste">Taste</option>
            <option value="Flowery">Flowery</option>
            <option value="Sweet">Sweet</option>
            <option value="Herbal">Herbal</option>
            <option value="Spicy">Spicy</option>
            <option value="Earthy">Earthy</option>
            <option value="Fruity">Fruity</option>
        </select>
        <select name="effect">
            <option disabled selected value="effect">Effect</option>
            <option value="Nerves">Nerves</option>
            <option value="Stomach">Stomach</option>
            <option value="Cold">Cold</option>
            <option value="Blood Pressure">Blood Pressure</option>
            <option value="Weight">Weight</option>
        </select>
        <input type="submit" value="Preferences" style="background-color:□rgb(107, 29, 16); color: ■white;">
    </form>

    <script>
        document.querySelector('form').onsubmit = function() {
            if (!document.querySelector('input').value) {
                alert('You must fill out your name');
                return false;
            }
            else if (!document.querySelector('select').value) {
                alert('You must fill out all preferences');
                return false;
            }
            return true;
        };
    </script>
    <script>
        window.onscroll = function() {myFunction()};

        var header = document.getElementById("myHeader");
        var sticky = header.offsetTop;

        function myFunction() {
            if (window.pageYOffset > sticky) {
            header.classList.add("sticky");
            } else {
            header.classList.remove("sticky");
            }
        }
    </script>
{% endblock %}
```

```html
<!DOCTYPE html>

<html>
    <head>
        <meta name="viewport" content="initial-scale=1, width=device-width">
        <link href="{{ url_for('static',filename='styles/style.min.css') }}" rel="stylesheet" media="screen">
        <title>Tea Recommendation System</title>
    </head>
    <body>
        {% block body %}{% endblock %}
    </body>
</html>
```
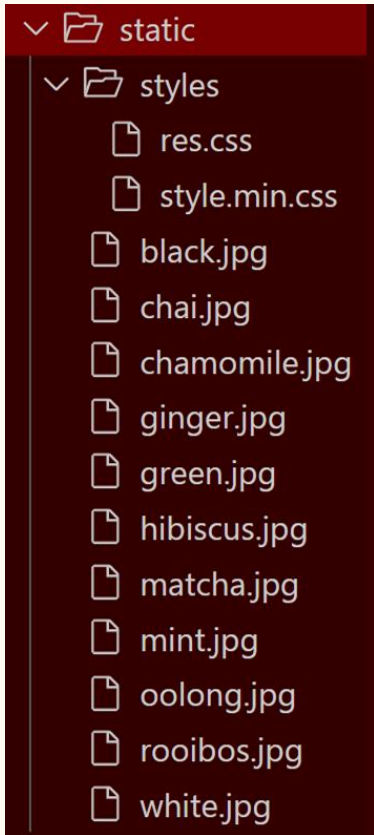
```
{% extends "layout.html" %}

{% block body %}
    Please fill out all fields.
{% endblock %}
```

Software Description

```
static
  styles
    res.css
    style.min.css
  black.jpg
  chai.jpg
  chamomile.jpg
  ginger.jpg
  green.jpg
  hibiscus.jpg
  matcha.jpg
  mint.jpg
  oolong.jpg
  rooibos.jpg
  white.jpg
```

<link href="{{ url_for('static',filename='styles/style.min.css') }}" rel="stylesheet" media="screen">

Demo!

Advantage

What works?

Physical construction

- Overall flow + layout

Playability

- Easy to use and understand

Software

- Recommendation paths
- Buttons
- Dropdown Menus
- Look
- Pictures + Embedded links
- Links
- Overall organization

Improvement

What does not work?

Physical construction

- Fixed Header

Playability

- Scroll to Bottom

Software

- Fixed Header
- CSS Files

Future Implementation

Composition

- More professional look
- Menu bar

Additional Features

- Rating System
- Feedback
- Personalization
- SQLite Implementation
- More Preferences + Recommendations
  - Recommendations via machine learning and or more extensive data