Capstone Project I Proposal

IDEA - Recipe Generator

spoonacular API

This web application will take user inputs of ingredients and send back recipes based on these ingredients. The user can choose a recipe and see detailed cooking instructions and nutrition facts.

Proposal

What goal will your website be designed to achieve?

Have you ever had a moment of staring at the food in your fridge but having no idea what to make? Have you ever wasted any food by throwing it in the trash can because it sit in your fridge for too long but you still didn't know how to make it? Are you tired of making the same dish at least 5 days a week? What about the frustration when you finally treat yourself to a hearty, homey, and healthy meal and realize you don't know how to cook?

The web application is designed to help users eat brighter and healthier. No more scratching your head to think of how to make a meal out of broccoli, eggplant, and carrot. Type in the ingredients you have on hand and Tada! Easy Vegetable Fried Rice! It only takes 5 steps in 25 minutes and has calories as low as 235 kcal per serving!

Save your time and your leftover ingredients in the fridge! Explore new recipes to eat healthily and have fun!

What kind of users will visit your site? In other words, what is the demographic of your users?

The main user group will be:

1. Home cooks who are tired of deciding what to eat everyday
2. Young millennials who want to learn cooking and try out interesting recipes with different combinations of ingredients
3. People who are aware of their health condition and want to cook delicious and healthy meals at home

What data do you plan on using? You may have not picked your actual API yet,

which is fine, just outline what kind of data you would like it to contain.

The web application will use spoonacular API to fetch data, such as recipes based on ingredients, cooking instructions, recipe nutrition facts, etc.

In brief, outline your approach to creating your project (knowing that you may not know everything in advance and that these details might change later).

a. What does your database schema look like?

My database will have a **users table** to store registered users' information. The columns include id (auto-generated, PK), username, password, email, first_name, last_name, profile_image, and diet_label.

There will be another table for user-saved recipes. The **saved_recipes table** has columns: id (auto-generated, PK), user_id (FK), and recipe_id (this will be the recipe id from API).

These 2 tables have a **1-to-many** relationship.

b. What kinds of issues might you run into with your API?

1. There are a lot of API calls I can make in the doc. I might be overwhelmed and don't know what to focus on.
2. Don't know how to convert raw API responses to the information I need
3. No results after search —> check if there's a bug or simply no response
4. Exceed API calls limit

c. Is there any sensitive information you need to secure?

The web application will save registered users' information in the database. So users' passwords need to be secured.

d. What functionality will your app include?

1. Search recipes based on user-typed-in ingredients
2. Users can check the details of a recipe, including instructions and nutrition facts
3. User register & login & Edit profile & Change password
4. Users can save & unsave recipes to their accounts for the future use

e. What will the user flow look like?

- User register on the website
- User log in
- Type in ingredients and search for recipes
- Check the summary and basic info (calories, diet labels...) of each search result

- Click on one recipe and go to the recipe details page, including cooking instructions, nutrition labels, ingredients and equipment info, etc.
- If the user likes the recipe, he/she can save it for the future use
- Users can go to the profile page to update user information, change passwords and check saved recipes

f. Any add-on features?

- Browse all recipes based on diet labels and cuisines (TBD, depends on API call limits)
- Add filter & sort features based on nutrition information, diet labels, cooking times and etc (TBD, depends on API call limits)
- If a user likes a recipe, he/she can share it on social media or send it via emails and messages
- Users can create their own recipe - save it to DB but how to integrate it with API?