



RECIPECOLLECTOR

A web application for crowdsourcing recipes from lay users.

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Problem Definition

Food is indeed an important part of our lives .With food specific emerging sciences like computational gastronomy, structured data of food that we consume is needed to perform a detailed analysis of various aspects of the constituents of our aliment.We've come across many recipe databases in our day to day lives. However, these databases are hardly structured enough to do any kind of research which might need specific parts of the recipe like only the ingredients or the form of the ingredients etc.

This recipe crowdsourcing application, the RecipeCollector has been built with the aim to compile a structured database by collection of recipes from lay users by facilitating them in entering the data in a structured manner and expand the data for research purpose.This comes along with a multiple criteria based search functionality which makes recipe search easier for common people.



Deliverables

1. The web application is divided into two sections:
 - a) **Add Recipe**: to crowdsource recipes from users
 - b) **Search Recipe**: to search for crowdsourced recipes based on title, ingredient, process, or utensil.
2. Users can enter ingredient phrases followed by cooking instructions in the recipe submission section.
3. A single **ingredient phrase** will be gathered as a quadruple **{quantity, unit, ingredient name, and form}**
4. An **instruction** is collected as a quadruple **{process, ingredient, utensil, description}**
5. The recipe search section allows you to search crowdsourced recipes by title, ingredient, process, or utensil.



Data Used

Cubit Lists provided by **CoSyLab** which include:

- Units,
- Ingredients,
- Forms,
- Processes, and
- Utensils

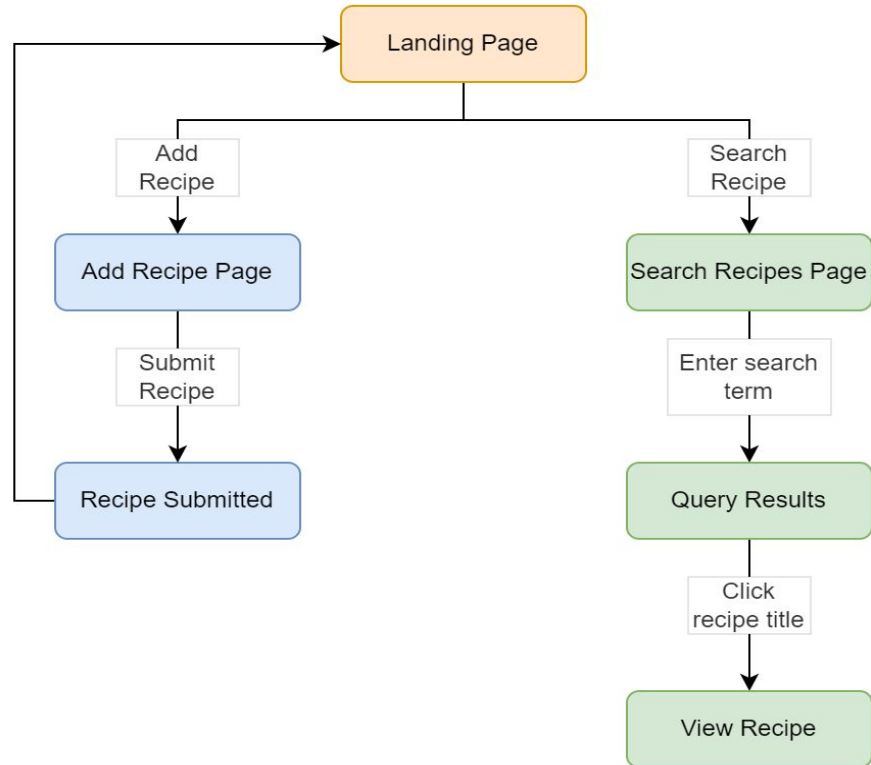
This data is fed into the database to be provided as options in the input fields.



Implementation Details

1. **Framework and Runtime:** We made an **ExpressJS**-based web application with **Node.js** runtime.
2. **UI:** The UI is implemented using **Embedded Javascript (ejs)** templates styled using **Bootstrap 4**.
3. **Database:** The data is stored and retrieved from a **MongoDB** database at the backend.
4. Our application flexible is compatible on all screens from mobiles to desktops.

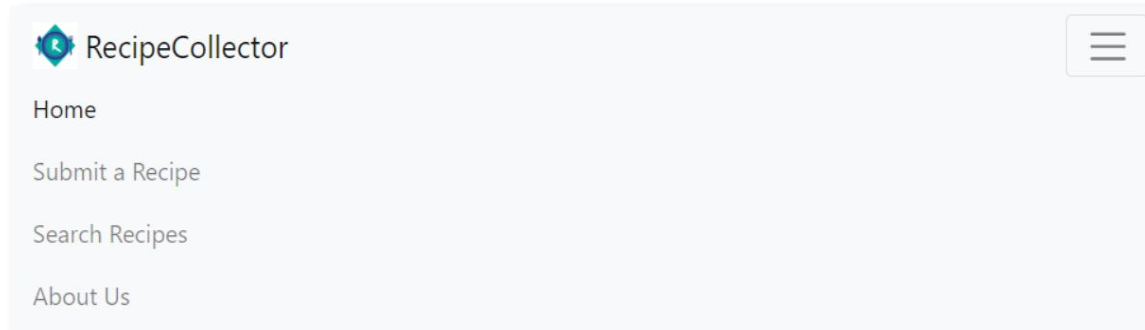
Application Flow



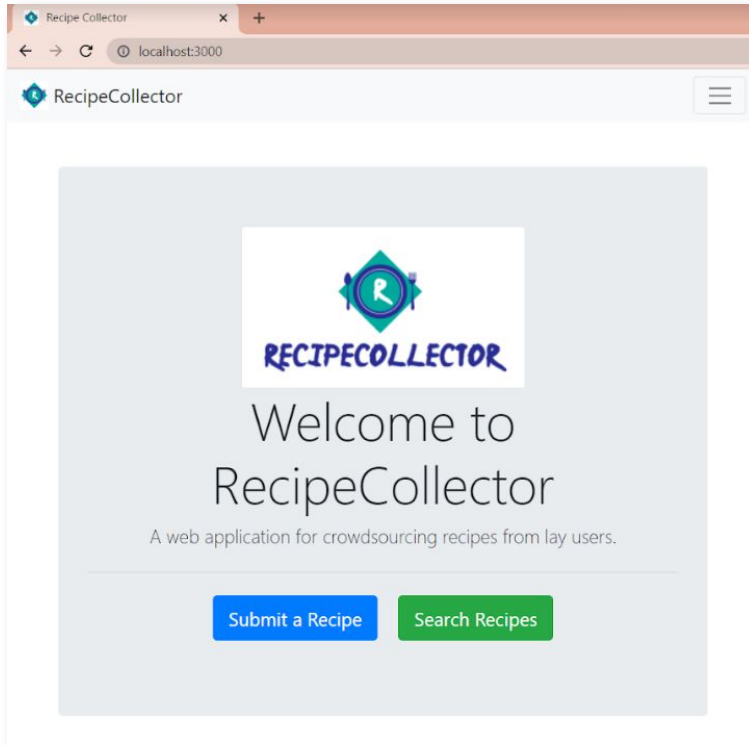
Screenshots



Navigation Bar



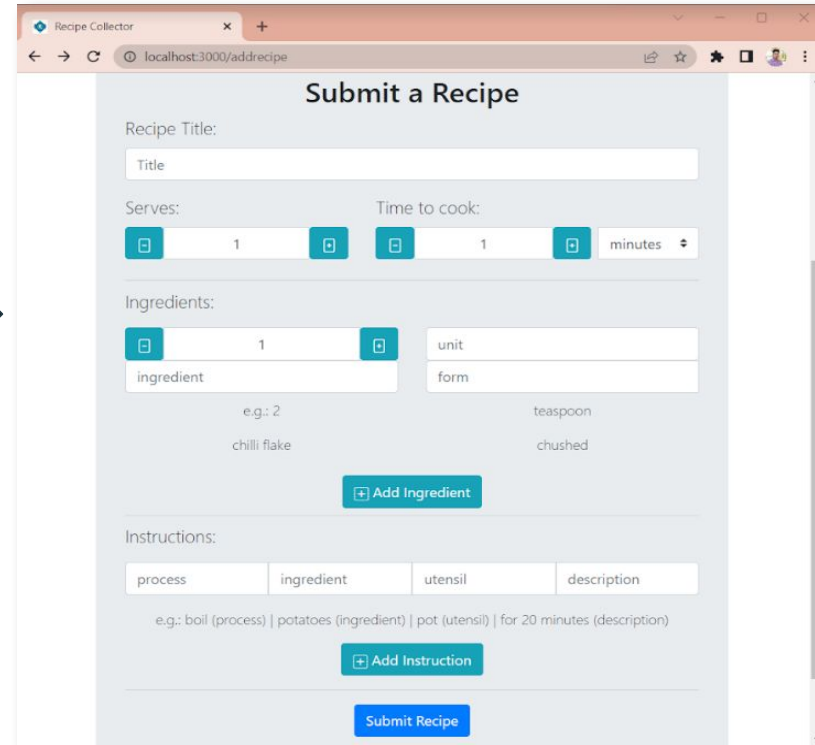
Landing Page



The landing page features a central logo with a stylized 'R' inside a green diamond, flanked by a fork and a spoon. Below the logo, the text 'Welcome to RecipeCollector' is displayed in a large, elegant font. Underneath, a smaller line of text reads 'A web application for crowdsourcing recipes from lay users.' At the bottom, there are two prominent buttons: a blue 'Submit a Recipe' button and a green 'Search Recipes' button. The browser's address bar shows 'localhost:3000'.



Recipe Submission page



The submission page is titled 'Submit a Recipe'. It contains several input fields and buttons. At the top is a 'Recipe Title:' field. Below it are 'Serves:' and 'Time to cook:' fields, each with a numeric input and a unit dropdown (currently set to 'minutes'). The 'Ingredients:' section includes a table with columns for 'ingredient', 'unit', and 'form'. An example row shows 'chilli flake' as the ingredient, '2' as the unit, and 'teaspoon' as the form. Below this is an 'Add Ingredient' button. The 'Instructions:' section has a table with columns for 'process', 'ingredient', 'utensil', and 'description'. An example row shows 'boil (process) | potatoes (ingredient) | pot (utensil) | for 20 minutes (description)'. Below this is an 'Add Instruction' button. At the bottom of the form is a 'Submit Recipe' button. The browser's address bar shows 'localhost:3000/addrecipe'.

Search Page



Search Recipes

Search a recipe using title, ingredient, process or utensil ...

Q Search

Tea

French Omelette

French Fries

Strawberry Lemonade

Cold Pea Salad

Honey and Lemon Tea

Grilled Cheese Sandwich

Quick and Easy Egg Drop Soup

Nimbu Soda

Recipe View



French Fries

Servings: 1

Time to cook: 40 minutes

Ingredients:

1. 500 gm potato peeled sliced
2. 2 tablespoon vinegar
3. oil
4. 1 pinch salt
5. 1 cup tomato sauce

Instructions:

1. add vinegar bowl in water
2. soak potato in the soaking liquid above
3. heat oil pan
4. dry potato after soaking
5. fry potato pan for few minutes till they turn golden brown

Future Work

- Ability to add multiple forms in a single ingredient phrase
- Ability to add multiple ingredients in a single instruction
- Search Filter based on whether the user wants query results to match exactly, start with or end with the search term
- Ability to sort the search results based on title, ingredient, process, or utensil



Live Demo



Thank you! :)