

# Task 2.7

## What do you want users to search for?

- Users will be able to search for recipes via various inputs.

## What should the criterion for a search be?

- Users will be able to search for recipes by: Recipe Name, Ingredients, Difficulty Level.
- For the recipe name, it can be a partial match or a complete match and will be case-insensitive.
- When searching for a recipe by ingredients, the ingredient must be spelled correctly and in its entirety (not partial). The ingredient search will also be case-insensitive.
- For searching/filtering by difficulty level of a recipe, users will either select from a dropdown menu containing the four difficulty levels or they will type the difficulty level (prompted by a message) in its entirety. This difficulty level search (if typed) will also be case-insensitive.

## What should the format of the output be?

- For the display of the output, upon clicking the search button after inputting search criteria, the list of all recipes will filter down to show only the results matching the user's search criteria.
- Additionally, I will be using charts to show data insights as a visual representation for recipes and their data.
- If searching for an ingredient, all recipes containing that ingredient will be displayed
- If searching for the name of a recipe, a recipe with that name should be displayed. If it doesn't exist, a message indicating that the recipe doesn't exist will be displayed along with a button to a form for the user to create it if they so choose.
- If searching for a difficulty level, all recipes with that difficulty level will be displayed. The user should be able to either select from a dropdown menu containing the four difficulty levels, or they should be prompted by a message to search for one of the four difficulty levels.

# Data Analysis

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## Visualization #1: Bar Chart – *Recipes By Difficulty*

- Displays number of recipes per difficulty level (Easy, Medium, Intermediate, Hard).
  - X-Axis: Difficulty Level
  - Y-Axis: Number of Recipes
  - Chart Type: Static (not based on user-input)
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## Visualization #2: Pie Chart – *Distribution of Cooking Time*

- Displays the proportion of different cooking times across recipes.
  - X-Axis: Cooking Time Ranges (0-10 mins, 11-30 mins, 31-60 mins, 60+ mins)
  - Y-Axis: Number of Recipes
  - Chart Type: Static (not based on user-input)
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## Visualization #3: Line Chart – *Most Common Ingredients*

- Displays the Top 5 most common ingredients used in all recipes.
  - X-Axis: Ingredients (Top 5)
  - Y-Axis: Number of recipes containing that ingredient
  - Chart Type: Static (not based on user-input). Ingredients from most to least used.
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# Execution Flow

## FLOWCHART

