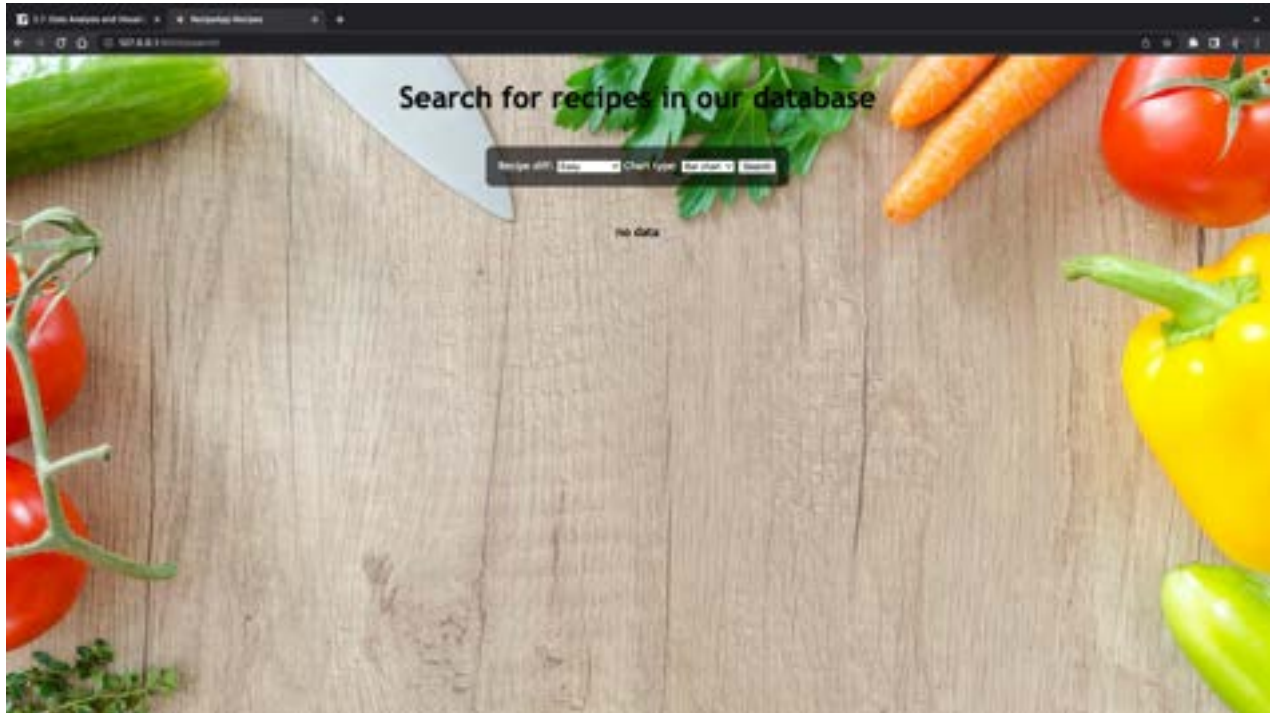# 2.7 Data Analysis and Visualization

Data Analysis

On this recipe app, I am adding a new feature: "Search Using Recipe Difficulty Level". Using this feature, users should be able to choose the difficulty of recipes from the database and the type of chart they want the data to be displayed on.

According to the search criteria entered by the user (recipe difficulty and chart type), the app should extract the recipes needed from the database as QuerySet, convert the QuerySet to pandas DataFrame, and display the results as a table.

In the above image, I have chosen 'Easy' as the difficulty level on the form and the app displayed three recipes with 'easy' level difficulties to cook.

The app also gives data visualization on the search page using the 'matplotlib' library. According to the chart type chosen by the user, it displays a chart with the names of the recipes searched against their respective cooking times. The following images are charts of recipes in the database with 'intermediate' difficulty and their cooking times compared.

Execution flow

The following images show the flow of the user on the app.

Welcome to My Recipe App

Log in to your account to see our list of recipes.

Login

Login

Username:

Password:

Login Cancel