Artifact for Sprint 5
Team: Calculatrons

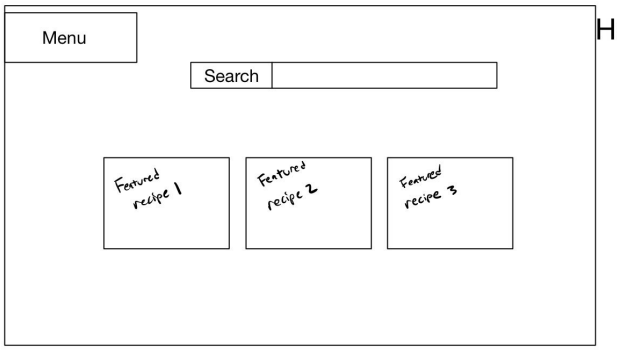
Features (user stories) to Implement in Next Sprint:

- **Food Data:**
  (PP_recipes.csv, PP_users.csv, RAW_interactions.csv, RAW_recipes.csv, ingr_map.pkl, interactions_test.csv, interactions_train.csv, interactions_validation.csv)

- **Feature 1.** As a user I want to find a specific recipe that I want, using a search function.
- **Feature 2.** As a user I want recipes that are popular, or highest rated shown to me as I enter, so as to hopefully find one of interest.
- **Feature 3.** As a user, I want the information for the recipe given, such as calories, etc.
- **Feature 4.** As a user, I want a rating system that takes into account what people have thought of the recipes that they have tried.
- **Feature 5.** As a user, I want the ability to read comments on how the recipe came out, or how it might be made better by other users who would like to comment on it.
- **Feature 6.** As a user, I want to be able to save certain recipes for later.
- **Feature 7.** As a user, I want to see the recipes that I saved.
- **Feature 8.** As a user, I want to see the ingredients used in a recipe.
- **Feature 9.** As a user, I want to be able to understand which recipes will give the highest rating based on cooking time. (scatterplot)
- **Feature 10.** As a user, I want to be able to see if the number of ingredients used in a recipe actually affects the recipe quality. (bar graph)
- **Feature 11.** As a user, I want to be able to see the distribution of the number of ingredients used and understand more about what each recipe is like. (box plot)

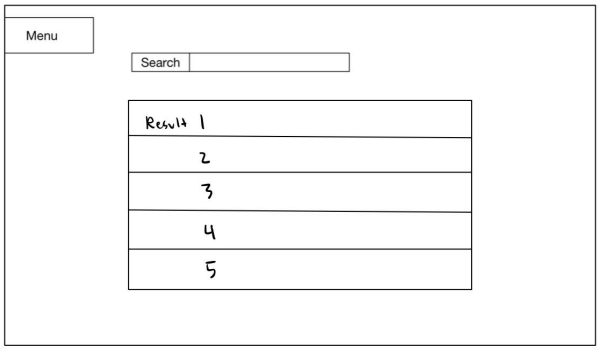
GUI Design for Insert/Update/Delete:

- Home Page: This is the page the user sees first



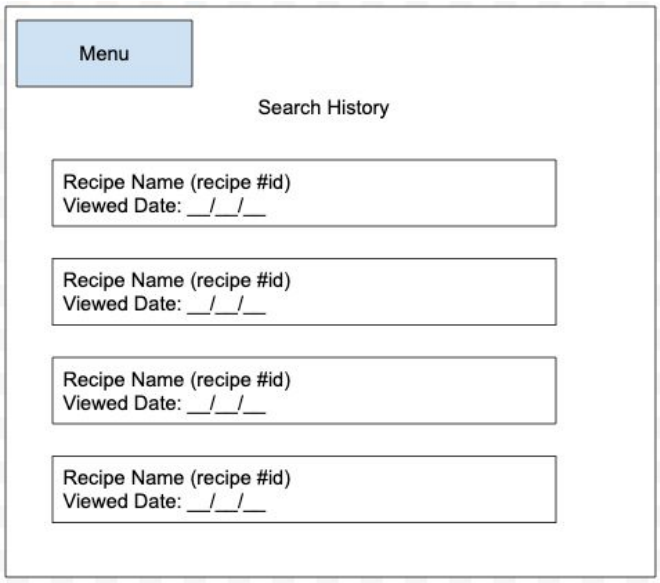
Home Page

- Results Page: When the user enters a search to find a particular set of items, those searched results will appear in this format.

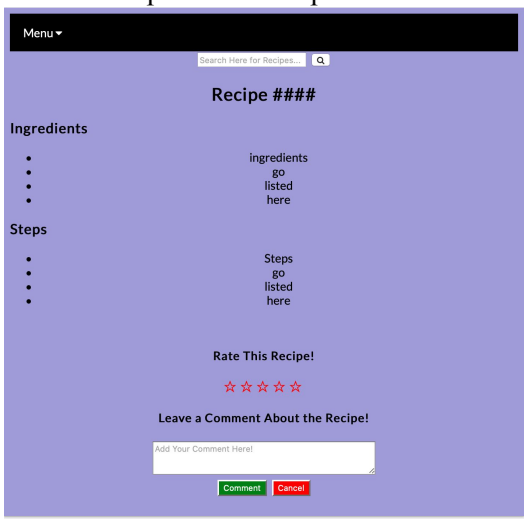


Results

- Search History: All recipes that the particular user has searched for in the past will appear in this format.



- Recipe Page: Each recipe has its own page and that is where specific information about that particular recipe can be viewed by the user.



- Analytic Page Results:

- Results 1:

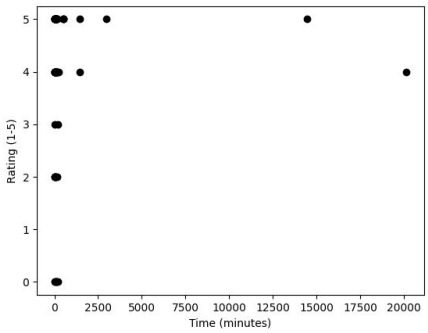
RESULTS1 PAGE

This is the first analytics page.

Grabbing linear plot:

display plot

LINEAR PLOT:



Understanding the plot:
This plot displays the distribution of suggested cooking time (in minutes) vs. the ratings for each recipe. From this plot, we can see that the recipes with the highest ratings of 4.0 and 5.0 are usually the recipes that take less time to make.

- Results 2:

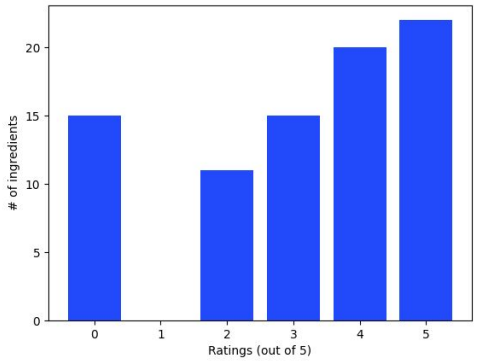
RESULTS2 PAGE

This is the second results page.

Grabbing linear plot:

display plot

BAR GRAPH:



Understanding the bar graph:
This plot displays the distribution of ratings for each recipe vs. average number of ingredients used for each recipe.
The distribution of the data seems to very close, but we can see that the recipes with the highest ratings have the most ingredients (about 20).

- Results 3:

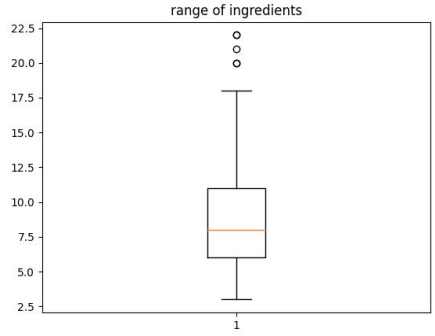
RESULTS3 PAGE

This is the third results page.

Grabbing linear plot:

display plot

Box Plot:



Understanding the box plot:
This plot displays the distribution of number of ingredients that are used for each recipe.
Minimum number of ingredients: ~3 ingredients
Median number of ingredients: 7.5 ingredients
Maximum number of ingredients: ~22 ingredients

TEST CASES

- **Feature 1 Test Cases:** As a user I want to find a specific recipe that I want, using a search function.
    - **Test case 1**: as a user, I should be able to easily locate a button that indicates searching and have the ability to type in an input.
        - Correct Output: The website displays a search button with either the label, or a symbol that can be used to type in and search a keyword or words.
    - **Test case 2**: as a user, I enter the information and search to find important information relating to the words typed.
        - Correct Output: The website accepts the input entered by the user, and then displays the proper recipes that are in the .csv file used.
- **Feature 2 Test Cases:** As a user I want recipes that are popular, or highest rated shown to me as I enter, so as to hopefully find one of interest.
    - **Test Case 1:** As a user, I want my default search results to show the highest rated recipes first.
        - Correct Output: The website displays recipes with ratings in descending order by default.

- **Feature 3 Test Cases:** As a user, I want the information for the recipe given, such as calories, etc.
    - **Test Case 1:** As a user, I should be able to easily see all the nutritional information listed in each recipe with the corresponding values per serving
        - Correct Output: I should see an organized table with one column that lists each category of nutritional information (protein, carbohydrates, calories, etc.) and the second column lists the corresponding amount for each category.
- **Feature 4 Test Cases:** As a user, I want a rating system that takes into account what people have thought of the recipes that they have tried.
    - **Test Case 1**: As a user, I want to be able to see a number/rating/star highlight based on what people have thought of the recipe.
        - Correct Output: In each recipe image, the colored star ratings should be seen

every time each recipe is seen in the search results and after clicking on the selected recipe when the user wants to get more information.

- **Feature 5 Test Cases:** As a user, I want the ability to read comments on how the recipe came out, or how it might be made better by other users who would like to comment on it.
    - **Test Case 1:** As a user, I should be able to find a list of comments below the description of each recipe.
        - Correct Output: A list of comments for each recipe should be visible when I scroll down past the listed recipe. The list contains the commenters' names, their message, and any other identifying factors.
    - **Test Case 2:** As a user, I should be able to add a comment of my own for a recipe that I feel a certain way about.
        - Correct Output: After pressing the "comment" button adjacent to the title and image of the selected recipe, a message box opens up. I type in my thoughts on the recipe and press the "post" button adjacent to it. The message is now inputted to this recipe's list of comments and appears alongside the rest.
- **Feature 6 Test Cases:** As a user, I want to be able to save certain recipes for later.
    - **Test Case 1:** As a user, I press the "save" button next to the image or title of the selected recipe, which should save the recipe.
        - Correct Output: The recipe's id is downloaded and available for use locally.

- **Feature 7 Test Cases:** As a user, I want to see the recipes that I saved.
    - **Test Case 1:** As a user, I should be able to find a list of recipes that were saved by me.
        - Correct Output: A list of recipes should be displayed that were saved by user.
    - **Test Case 2:** As a user, I should be able to add/remove recipes from the saved list.
        - Correct Output: New recipes that were added should be visible and deleted recipes should no longer be visible.
- **Feature 8 Test Cases:** As a user, I want to see the ingredients used in a recipe.
    - **Test Case 1:** As a user, I should be able to see every ingredient and nutrition information listed for each recipe.
        - Correct Output: A table of ingredients is listed in an organized matter
- **Feature 9 Test Cases:**As a user, I want to be able to understand which recipes will give the highest rating based on cooking time.
    - **Test Case 1:** As a user, I should be able to a scatter plot that displays the correlation between cooking time and highest rating
        - Correct Output: A scatter plot is displayed with correct data representing the two compared values.
- **Feature 10 Test Cases:** As a user, I want to be able to see if the number of ingredients used in a recipe actually affects the recipe quality.
    - **Test Case 1:** As a user, I should be able to a bar graph that displays the correlation between the number of ingredients and highest rating
        - Correct Output: A bar graph is displayed with correct data representing the two compared values.
- **Feature 11 Test Cases:**As a user, I want to be able to see the distribution of the number of ingredients used and understand more about what each recipe is like.
    - **Test Case 1:** As a user, I should be able to a box plot that shows the user what each recipe is like.
        - Correct Output: A box plot is displayed with correct data representing the two compared values.

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COMPLETED:

- Created a local client/server application using NodeJS and JavaScript that sends requests to the server and returns a message. (finished by Abel Theodros)
    - Basic dummy front-end using HTML and CSS (Abel Theodros)
- Created a basic README.md file on Github. (finished by Michelle Dozal)
- Created an overall project proposal that lists our potential features and objectives of our project/application (finished by Abel Theodros, Michelle Dozal, Kinjal Mugatwala, Terry Jung, and Steven Joseph)
- Front-end search bar & navigation layout created using HTML and CSS (Michelle Dozal)
    - Search button that connects search bar to back-end (Michelle Dozal, Abel Theodros)
    - Back-end request for csv files, returns dummy message (Abel Theodros)
- Added .csv files to google drive as a backup (Kinjal Mugatwala)
- Server.js → organized csv files into an array and this array
- Parsed a particular csv file and formatted it into an Array object to make it easier to access certain data values (Kinjal Mugatwala, Terry Jung, Steven Joseph)
- Created recipeviewer.html frontend as the page where a specific recipe is viewed (Michelle Dozal)
- Frontend Star Rating System so the user can rate the recipe (Michelle Dozal)
- Frontend Comment Section/Submit & Cancel button to Post comments (Michelle Dozal)
- Created the savedrecipes.html,searchhistory.html,top_recipes.html,under100cal.html (Kinjal Mugatwala)
- Created a drop-down menu that has the list of other pages the user can visit (Kinjal Mugatwala)
- **(October 28)** - Using Python and Flask for the backend instead of NodeJS as NodeJS was becoming more difficult to incorporate (Terry Jung)
    - Files created:
        - Server-side = server.py (utilizing libraries from Flask)
        - Client-side = index.html (contains html, css, and js implementation), results.html (used to display the search results for now)
- Created a parser() function using the csv library that reads in each value using the reader() function and tries to separate the values based on the delimiter (Terry Jung, Steven Joseph)
- Passing in values that user inputted in the search bar to server.py to create some output, searched input value can be seen in the url (Kinjal Mugatwala)
- Added the ability to see the comments on the page (Michelle Dozal)
- Added separate “get” functions(parsers) for specific data on different csv files(Terry Jung)
- Wrote implementation to save recipes based on the user inputting the recipe_id value (Kinjal Mugatwala)
- Enabled a button that lets user clear all of their saved recipes → clears saved.csv content (Kinjal Mugatwala)
- Added 3 graphs for analytics - scatterplot, bar graph, and boxplot (Kinjal Mugatwala, Terry Jung)
- Search features lets user view several entries of recipes that match the searched category (Abel Theodros, Michelle Dozal)

TO DO LIST FOR THE NEXT SPRINT:

- Improve upon previous sprints designs, and broaden the scope of our projects capabilities.
- Create more, and better detailed analytical charts to show the relation of certain key elements accurately, and precisely enough to be explicit. (At least 3 more)
- Figure out how to organize and display the search results (figure out which GUI elements will be involved)
- Streamline when necessary
- Add more to the front-end to make it nicer/organize the search results
- Figure out how to save searched results and access search history (backup)
    - Add recipes that were searched in past to the 'Search History' page
- Ability to see comments that where posted on the page before.
- Have the rating stay with the recipe and create an "Avg" rating.