

NUTRITIONIST - A Case Study

Problem Statement

Build a system to search for a specific food to find it's nutrition details, show list of matching food, view the nutrition content for a selected food and bookmark favourite food for later reference.

FoodData Central API

- The application needs to search for food and find nutrition data for a selected food by registering with the following link and get API key required to call the APIs.

- <https://fdc.nal.usda.gov/api-key-signup.html>
- <https://fdc.nal.usda.gov/api-guide.html>

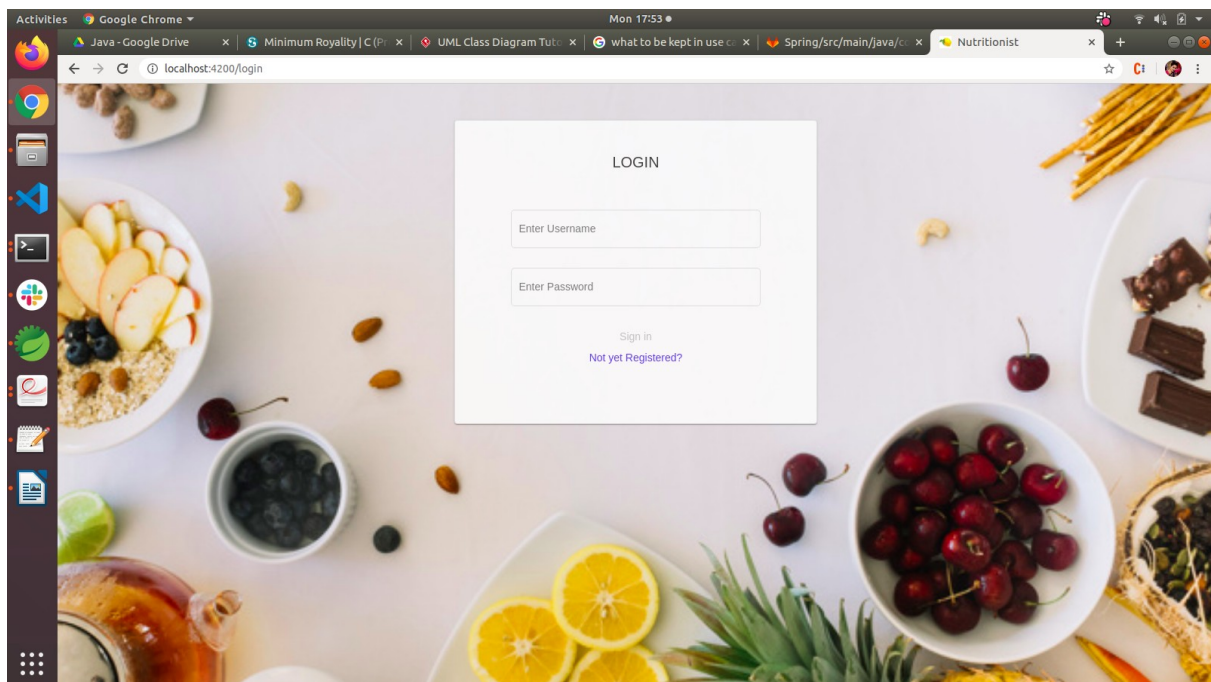
Modules

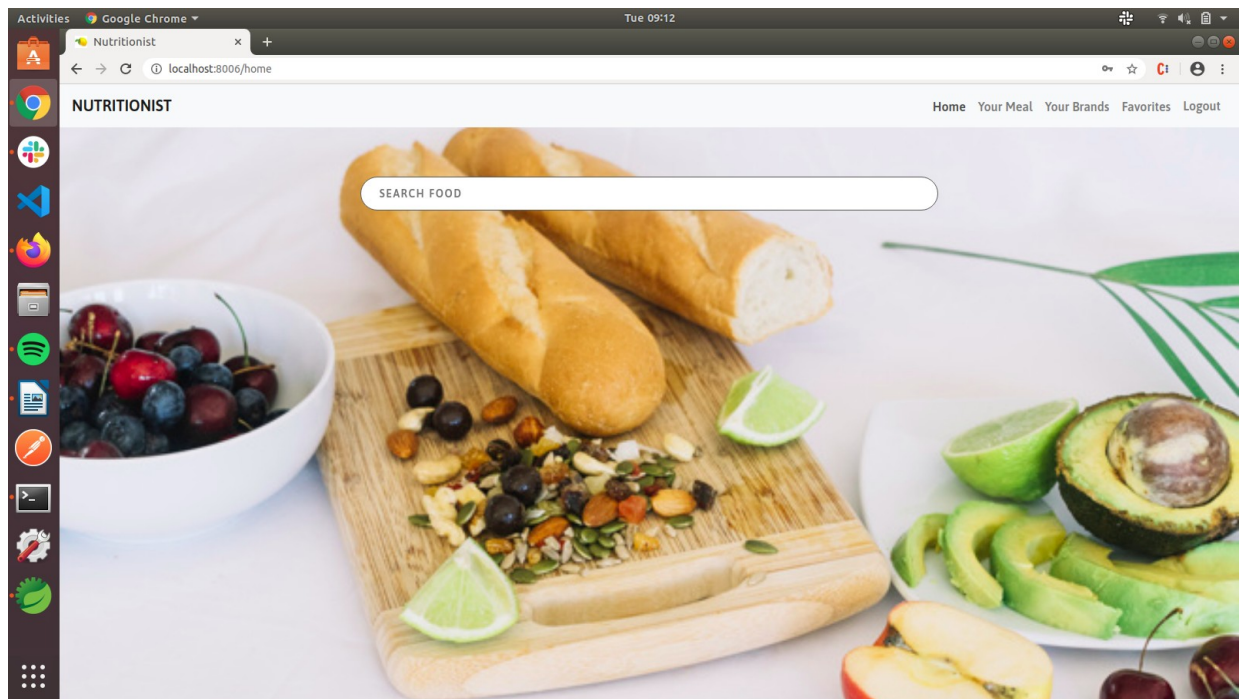
User Module

On launching the application the user should get the login page. The login page should have a link for registration using which the user should be able to register.

Upon login, the user should be taken to the home page. Home page should have proper ui elements to search for food based on fooddescription, food type, published date.

Home page should have proper navigation links to logout, fetch favourite food, fetch recommended food etc.





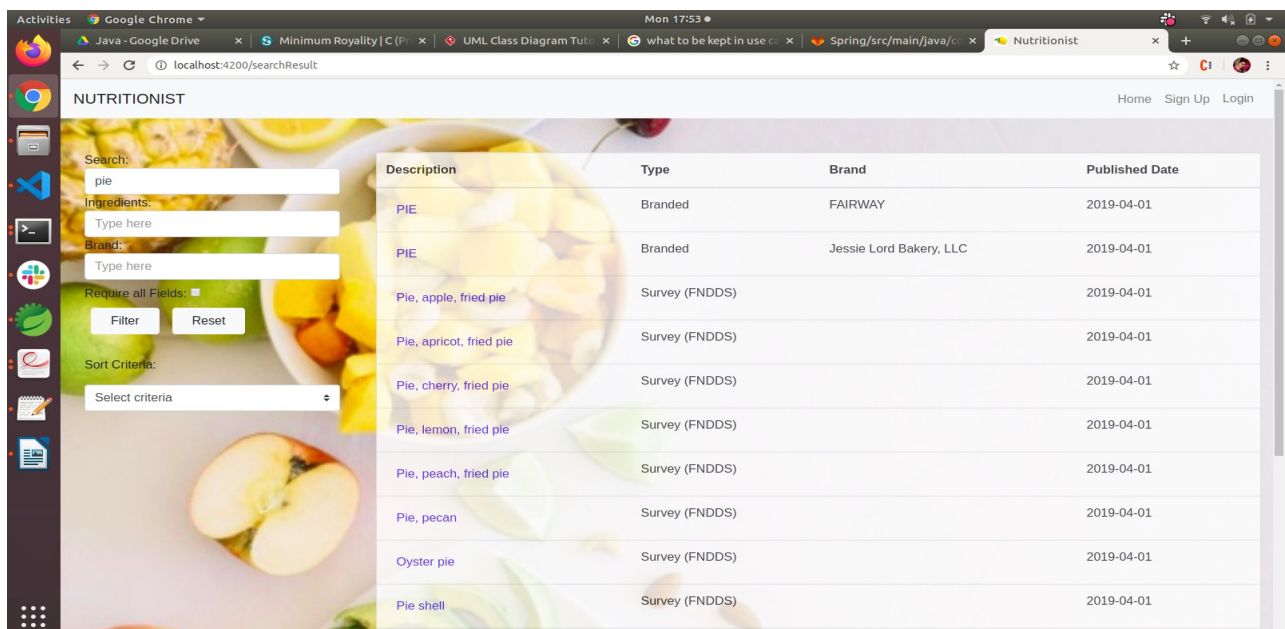
Search Food Module

User should be able to search with different criteria (based on availability of rest end point) like

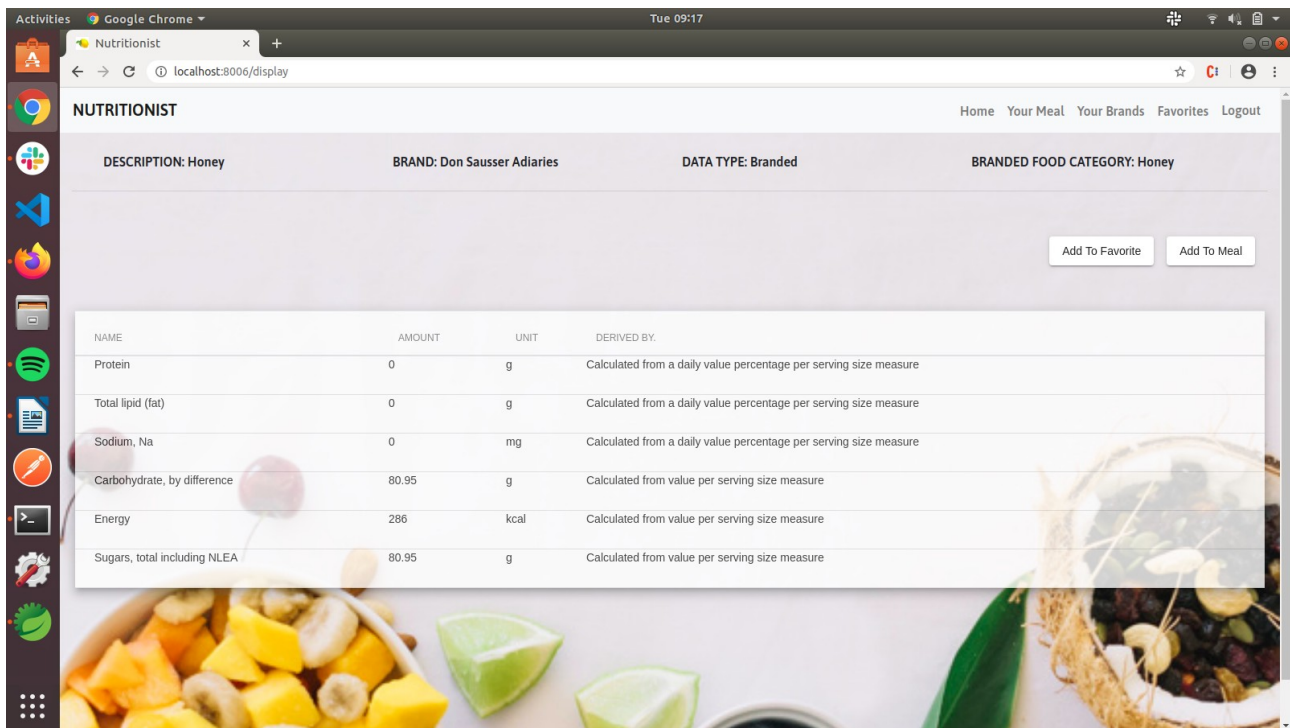
- a) ingredients
- b) brandOwner
- c) requireAllWords

Pagination should be implemented sorting should be implemented.

Sorting the results should also be possible. Based on selected field – like description, food type, published date.



The users should be able to select a specific item, which should display the nutrients of the particular item (Data fetched form the API).



NUTRITIONIST Home Your Meal Your Brands Favorites Logout

DESCRIPTION: Honey BRAND: Don Sausser Adiaries DATA TYPE: Branded BRANDED FOOD CATEGORY: Honey

Add To Favorite Add To Meal

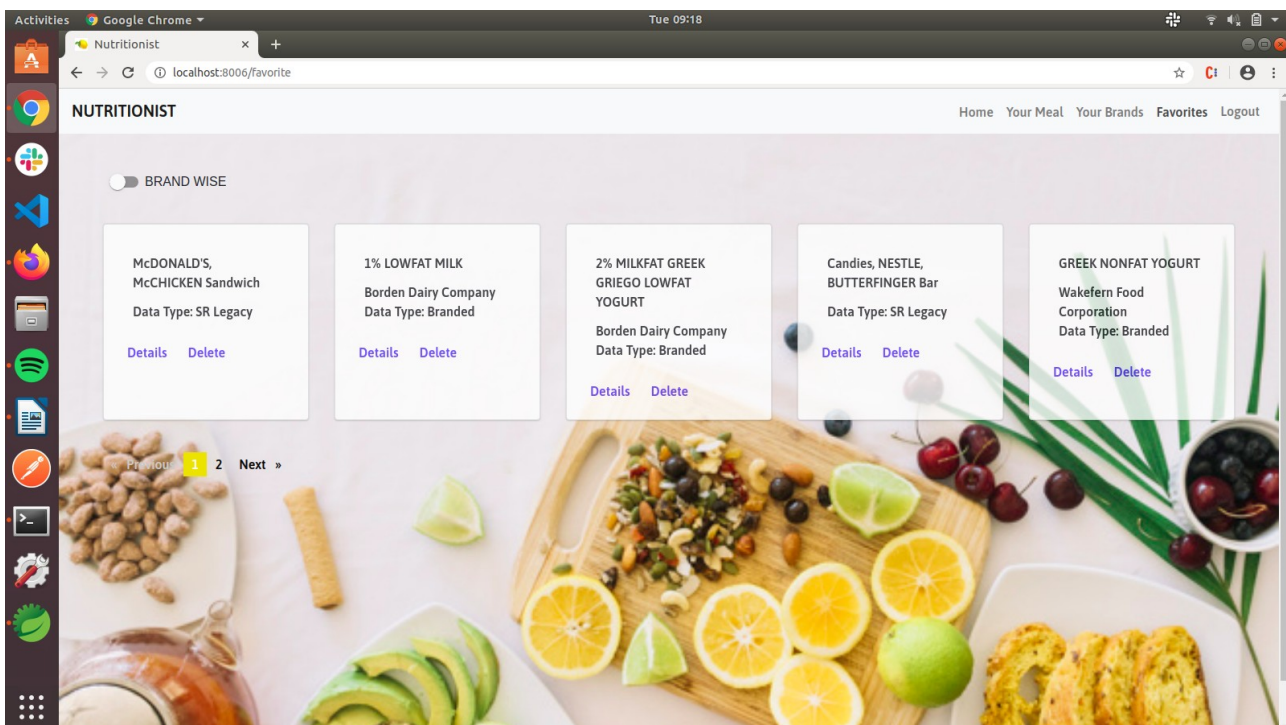
NAME	AMOUNT	UNIT	DERIVED BY:
Protein	0	g	Calculated from a daily value percentage per serving size measure
Total lipid (fat)	0	g	Calculated from a daily value percentage per serving size measure
Sodium, Na	0	mg	Calculated from a daily value percentage per serving size measure
Carbohydrate, by difference	80.95	g	Calculated from value per serving size measure
Energy	286	kcal	Calculated from value per serving size measure
Sugars, total including NLEA	80.95	g	Calculated from value per serving size measure

Favorite Food Module

User should able to add food as favorite.

User should able to delete food as favorite

User should able to fetch all favorite food items display into categories (brand owner)



NUTRITIONIST Home Your Meal Your Brands Favorites Logout

☐ BRAND WISE

McDONALD'S,
McCHICKEN Sandwich
Data Type: SR Legacy
[Details](#) [Delete](#)

1% LOWFAT MILK
Borden Dairy Company
Data Type: Branded
[Details](#) [Delete](#)

2% MILKFAT GREEK
GRIEGO LOWFAT
YOGURT
Borden Dairy Company
Data Type: Branded
[Details](#) [Delete](#)

Candies, NESTLE,
BUTTERFINGER Bar
Data Type: SR Legacy
[Details](#) [Delete](#)

GREEK NONFAT YOGURT
Wakefern Food
Corporation
Data Type: Branded
[Details](#) [Delete](#)

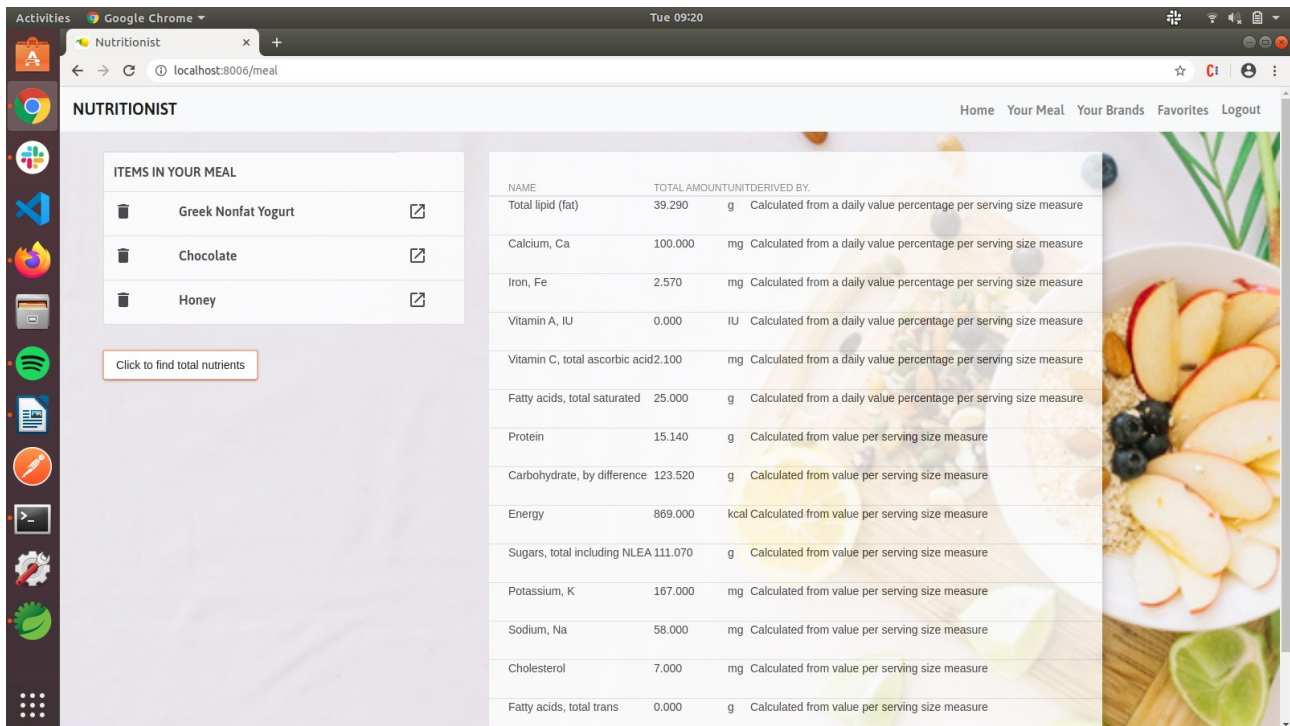
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Recomended Food Module

Fetch all the food items based on the brand of food which the user ordered mostly.

Meal Module

We have added a Meal module to display the total nutrients of total Food items together.



The screenshot shows a web application interface for a nutritionist. On the left, under 'ITEMS IN YOUR MEAL', there is a list of three items: Greek Nonfat Yogurt, Chocolate, and Honey, each with a trash icon and an external link icon. Below this list is a button that says 'Click to find total nutrients'. On the right, there is a table titled 'TOTAL AMOUNT UNIT DERIVED BY' which lists various nutrients and their calculated values. The table has four columns: NAME, TOTAL AMOUNT, UNIT, and DERIVED BY. The background of the page features a large image of a bowl of fruit and yogurt.

NAME	TOTAL AMOUNT	UNIT	DERIVED BY
Total lipid (fat)	39.290	g	Calculated from a daily value percentage per serving size measure
Calcium, Ca	100.000	mg	Calculated from a daily value percentage per serving size measure
Iron, Fe	2.570	mg	Calculated from a daily value percentage per serving size measure
Vitamin A, IU	0.000	IU	Calculated from a daily value percentage per serving size measure
Vitamin C, total ascorbic acid	2.100	mg	Calculated from a daily value percentage per serving size measure
Fatty acids, total saturated	25.000	g	Calculated from a daily value percentage per serving size measure
Protein	15.140	g	Calculated from value per serving size measure
Carbohydrate, by difference	123.520	g	Calculated from value per serving size measure
Energy	869.000	kcal	Calculated from value per serving size measure
Sugars, total including NLEA	111.070	g	Calculated from value per serving size measure
Potassium, K	167.000	mg	Calculated from value per serving size measure
Sodium, Na	58.000	mg	Calculated from value per serving size measure
Cholesterol	7.000	mg	Calculated from value per serving size measure
Fatty acids, total trans	0.000	g	Calculated from value per serving size measure

Tech Stack

- Spring Boot
- MySQL
- Angular- CI (Gitlab Runner)
- Docker, Docker Compose

Demonstrate the entire application

1. Make sure all the functionalities are implemented
2. Make sure both the UI (Component and Services) and server side (For all layers) codes are unit tested.
3. All the Services are up and running using docker (Docker should be used for running them)
4. E2E tests should be executed and shown.
5. Application is completely responsive in nature.