

1. Title: **Diet Planner**

2. **Project Summary:**

This project is a relational database-centric web application. The primary tech stack for this project includes Node.js, React, Redux, Express.js and MangoDB. React and Redux will be utilized to achieve the front-end functionality that acquire users' requests, Express.js are used to bridge the HTTP traffic across different internal application services while MangoDB are used to build application databases and manage database-related functionality. All the services of the application will be on node.js runtime environment.

3. **Description:**

The application aims at creating a weekly diet plan for users based on their recipes. Additionally, we want our website to allow users to enter the nutrition fact of food that they will use in their recipe to have more accurate statics of nutrition they have each week based the actual product they can get instead of using general nation wise data.

4. **Usefulness:**

The application is especially useful for student users who want to monitor and track the amount of nutrition in their daily meals, it could assist the users to reach their weight control goal and keep a healthy body condition. Similar applications can be found online that usually include the following limitations:

- A. Complex functionality that makes it difficult for users to learn and user.
- B. Limited features unless purchase membership which are not friendly for students.
- C. No customizable food nutrition fact, some provided food information is outdated.
- D. Lack of user interface localization.

Our application will optimize these mentioned troubles that are experienced by users.

5. **Realness:**

The major data of the application includes nutrition fact of food and recipes which all will be manually entered by users. Users should be able to obtain nutrition fact information from the back of the food package or they can obtain food information from USDA official database. Other data includes user account information.

6. Description of the **functionality** that your website offers:

- A. CRUD (Create, Read, Update, Delete): The website should be able to allow users to create, read, update, delete their own recipe and the nutrition fact of food they selected in their recipes.

B. Search option: The website should allow users to search for recipes and food nutrition facts they create by name of recipe or food.

C. Identification: The website should be able to store user information and allow users to access their stored information with username and credentials. Third party authentication might be implemented.

D. (Optional)Weekly diet plan: The website should be able to allow users to create weekly diet plans with recipes they choose. (Advanced idea, what about the website automatically create the diet plan for user based on their weekly nutrition or calories need)

E. (Optional)Data visualization: The website should provide visualization such as a chart or diagram to represent total nutrition consumed weekly based on the diet plan.

7. **A low fidelity UI mockup:**

This will be delivered in a different file name **UI mockup**.

8. **Project work distribution:**

A. Role for each person

a. Jiachen Kou(jkou4):

GCP operation related and responsible for GitHub updating/submission, CRUD functionality.

b. Haoran Jiang(hj28):

Frontend

c. Siwei Zhang(siwei4):

Frontend

d. Zhaokuan Chen(zc56):

Database