Nutritional Calculator

**Iteration 2 | 02/23/2018**

Hector Garza

Alexander Kermani

Songyang Li

Ryan Lira

Thiphavanh Phoutthivongsack

Parijat Singh

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8. **System Under Design**

Nutritional Calculator -

1. **List of Requirements for SUD**

* R1: The system will allow the user to **create a new account**.
  + R1.1: The system will allow the user to **log into their account** and view their previously added entries and their goal
  + R1.2: The user will also be able to **log out of their account**.
  + R1.3: The system will allow the user to **save account details**, such as the previous items and goals of the account.
  + R1.4: The system will allow the user to **load the last account details** saved.
* R2: The system will allow users to **add a new goal**.
  + R2.1: Setting a new goal will **calculate** **the recommended caloric intake** (how many calories the user should aim for daily).
  + R2.2: The user can **edit their goal**, which will make the old goal deprecated.
* R3: The user will be able to **add a new food entry** to their food tracker.
  + R3.1: The user can **search for a food item** from the database to make a new entry they wish to add to the food tracker.
  + R3.2: The user can **add a new food item to the database** and that will be used to create a new food entry in the food tracker
  + R3.3: The user will be able to **edit food entries** in their food tracker.

1. **Iteration Plan**

* 1st iteration (February 23): we will allow the user to add items and calculate the daily nutritional requirements to reach their goals.
* 2nd iteration (March 23): we will add a database that users can add items from, instantly including all of the nutritional data from it.
* 3rd iteration (April 15): we will allow better access to the webpage from phones and allow the user to save all goals and data for future use.

1. **Domain Model - Brainstorming**

* Item
* Goal
* Calculator
* Database Manager
* User
  + Items Manager
  + Goals Manager
* Website
  + GUI
  + Controller

1. **Domain Model – Classification**

A close up of a map

Description generated with high confidence

1. **Use Case Model – High Level Use Case**

* Use Case 1: **Register**

TUCBW User clicks on the “Sign Up” button on the login page

TUCEW User seeing confirmation of registration

* Use Case 2: **Log In**

TUCBW User enters username/password into their respective fields and clicks “Log In” button

TUCEW User seeing the website main page or an error if the login was unsuccessful

* Use Case 3: **Log Out**

TUCBW User clicks on the “Log Out” button

TUCEW User sees the login page

* Use Case 4: **Save Data**

TUCBW User clicks on the “Save” button

TUCEW User can see confirmation of their data being saved

* Use Case 5: **Load Data**

TUCBW User clicks on the “Load” button

TUCEW User sees an of their previously saved data in their food tracker

* Use Case 6: **Add Goal**

TUCBW User clicks “Add Goal” button

TUCEW User can see their updated goal and new daily caloric intake recommendation

* Use Case 7: **Edit Goal**

TUCBW User clicks on the edit/pencil icon next to their current goal

TUCEW User can see their updated goal and new daily caloric intake

* Use Case 8: **Add Food Entry**

TUCBW User clicks on the plus icon on the food tracker table

TUCEW User can see a new entry in the food tracker with an item name, quantity, and calories

* Use Case 9: **Edit Food Entry**

TUCBW User clicks on the edit/pencil icon next to an entry in the food tracker

TUCEW User can see an updated entry in the food tracker (name, quantity, and calories)

* Use Case 10: **Search Food Item**

TUCBW User clicks on the search bar and types in the food name (after having clicked the plus icon on the food tracker table)

TUCEW User can see a list of food items based on the search criteria

* Use Case 11: **Add Food Item**

TUCBW User clicks on the “Add new food item” button (after having clicked the plus icon on the food tracker table)

TUCEW User sees confirmation that the food item has been added to the database

1. **Use Case Model – Diagram**

A picture containing text, map

Description generated with very high confidence

1. **Use Case Model – Extended Use Case**

Use Case 1: **Register**

|  |  |
| --- | --- |
|  | 0. User sees the Login page. |
| 1. TUCBW User clicks on the “Sign Up” button on the login page | 2. The website GUI displays the fields for username, password, and email. |
| 3. User inputs their username, password, and email and clicks “Finish” button | 4. If the email has not already been used, the GUI passes the user’s information to the system to create the user’s account and add it the database |
| 5. TUCEW User seeing confirmation of registration |  |

Use Case 2: **Log In**

|  |  |
| --- | --- |
|  | 0. User sees the Login page |
| 1. TUCBW User enters username/password into their respective fields and clicks “Log In” button | 2. The account details are checked against the accounts in the database, and the website GUI displays either:  a. The main website  b. Incorrect login info error |
| 3. TUCEW User sees either:  a. The website main page.  b. “Wrong username/password” if login was unsuccessful |  |

Use Case 3: **Log Out**

|  |  |
| --- | --- |
|  | 0. User sees the website main page |
| 1. TUCBW User clicks on the “Log Out” button | 2. The website GUI prompts if the user is sure if they want to log out |
| 3. The user clicks the “yes” button under the prompt | 4. The system logs out the user and displays the login page |
| 5. TUCEW User sees the login page |  |

Use Case 4: **Save Data**

|  |  |
| --- | --- |
|  | 0. User is logged in. |
| 1. TUCBW User clicks on the “Save” button | 2. The database manager updates and saves the user’s information, and the website GUI displays a “Data Saved” prompt. |
| 3. TUCEW User can see confirmation of their data being saved |  |

Use Case 5: **Load Data**

|  |  |
| --- | --- |
|  | 0.User is logged in. |
| 1. TUCBW User clicks on the “Load” button | 2. Website GUI pulls the user’s information from the database and displays the previously saved items and goals. |
| 3. TUCEW User sees an of their previously saved data in their food tracker |  |

Use Case 6: **Add Goal**

|  |  |
| --- | --- |
|  | 0.User is logged in. |
| 1. TUCBW User clicks on the “Add goal” button. | 2. The website GUI shows input boxes for the goal end date and an input for goal weight |
| 3.User enters the end date and goal weight. | 4. The website GUI displays that a goal has been set and displays the recommended daily caloric intake |
| 5. TUCEW User can see their goal and daily caloric intake recommendation |  |

Use Case 7: **Edit Goal**

|  |  |
| --- | --- |
|  | 0.User is logged in. |
| 1. TUCBW User clicks on the edit/pencil icon next to their current goal | 2. The website GUI shows input boxes for the goal end date and an input for goal weight |
| 3.User enters the end date and goal weight. | 4. The website GUI displays that a new goal has been set and displays the new recommended daily caloric intake |
| 5. TUCEW User can see their updated goal and new daily caloric intake recommendation |  |

Use Case 8: **Add Food Entry**

|  |  |
| --- | --- |
|  | 0. User is logged in |
| 1. TUCBW User clicks on the plus icon on the food tracker table | 2. The website GUI displays a search bar and an add new food item button |
| 3. User clicks search (Use Case: **Search Food Item**) | 4. The GUI displays a list of food items based on the search criteria |
| 5. The user clicks on the desired food item in the list | 6. The GUI prompts the user for the quantity of the item to add |
| 6. User inputs the quantity | 7. The website GUI displays options to either confirm the entry addition or decline the entry addition. |
| 5. User either:  a. Confirms the addition of the entry  b. Declines the addition of the entry | 6. The System adds the entry to the database and updates the food tracker table with the new entry |
| 7. TUCEW User can see a new entry in the food tracker with an item name, quantity, and calories |  |

Use Case 9: **Search Food Item**

|  |  |
| --- | --- |
|  | 0. The website GUI displays a search bar and an add new food item button |
| 1. TUCBW User clicks on the search bar and types in the food name (after having clicked the plus icon on the food tracker table) | 2. The GUI displays a list of food items based on the search criteria |
| 3. TUCEW User can see a list of food items based on the search criteria |  |

Use Case 10: **Add Food Item**

|  |  |
| --- | --- |
|  | 0. The website GUI displays a search bar and an add new food item button |
| 1. TUCBW User clicks on the “Add new food item” button | 2. The GUI displays input fields for food item name and calories |
| 3. The user types the name and calories into the fields | 4. The System adds a new food item it to the database |
| 5. TUCEW User sees confirmation that the food item has been added to the database |  |

Use Case 11: **Edit Food Entry**

|  |  |
| --- | --- |
|  | 0. User is logged in |
| 1. TUCBW User clicks on the edit/pencil icon next to an entry in the food tracker | 2. The website GUI displays a delete button and an edit button |
| 3. User clicks either:  a. Delete  b. Edit | 4. The System either:  a. Deletes the entry from the tracker table and the database  b. Deletes the entry from the tracker table and database; begins the Use Case: **Add Food Entry** |
| 5. TUCEW User can see an updated entry in the food tracker (name, quantity, and calories) |  |

1. **Use Case Model – Traceability Matrix**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Weight | UC1 | UC2 | UC3 | UC4 | UC5 | UC6 | UC7 | UC7 | UC7 | UC7 | UC7 |
| R1 | 3 | X | X | X | X | X |  |  |  |  |  |  |
| R2 | 1 |  |  |  |  |  | X | X |  |  |  |  |
| R3 | 2 |  |  |  |  |  |  |  | X | X | X | X |
|  | Score | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 2 |

10.  Design Sequence Diagram

11.  Design Class Diagram

12.  Test

13.  Code