Business Requirement Document: BitOHealth

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Revision History

Version Number	Version Date	Nature of Change	Author of Change
1.0	09/29/2021	Initial draft	Emily Sahyoun, Jacob Munoz
1.2	10/8/2021	Updated	Emily Sahyoun, Jacob Munoz

Project Overview

Document Purpose

The Business Requirement Document (BRD) for the BitOHealth progressive web application ensures that essential details of every feature are defined and specified clearly. This document is to be developed based on the requirements the developer team created and the client's feedback. This document is intended to include all relevant information regarding the web application's features and should be referred to in relation with the high level design, site map, and technical specification.

Problem

In modern society, as a byproduct of the digital age, there has been an increase in people leading busy and mismanaged lives prioritizing one aspect while disregarding others such as health. Simple habits that improve the quality of life and longevity are disregarded because of the complexity of the health and nutrition industry.

Solution

For the people who are leading busy or mismanaged lives, BitOHealth is a web application that provides organizational and health/nutritional tools that aid in prioritizing health and bringing awareness to concerns. It centralizes many features into one space providing diverse features for the user under the same profile. It is not a replacement for healthcare or treatment; however, it allows users to consistently keep track and stay updated on their health.

Target Customers

- Busy Individuals - Those with hectic schedules tend to allow various matters in life to take over, leading them to be oblivious to overall health.

- Unorganized Individuals - Holding all valuable medical information in one place can give those with chaotic lives a sense of relief. Setting reminders to ensure consistent completion of goals such as taking medications, going to appointments, etc.

- Low-income Community – Disregard of health is prominent in such communities, so a centralized application focusing on both health and nutrition can encourage them to take action in making healthier habits.

Competition

 It is common for people to use multiple applications to target the same concern as many of these apps focus on one task. For instance, one might allow its users to record their medications while the other might be a reminder tool or a calorie calculator. Our goal is to have an all-in-one web application that targets both medical and nutritional concerns by providing diverse features to the user under the same profile.

Scope

Beta versions and older versions of chrome will not be supported as

1. Desktop browser support:

- Chrome 94.0.4606.01 - current up until 7/1/2022

2. Data collected by our site:

      - Files : PDF & JPG

      - Text

      - User data for profile creation : Name, Birthdate, E-mail

      - Caloric intake data

- Weight and height information

- User location

- Zip Code

3. Application Type: Web Application

4. Countries Supported: United States of America

5. Languages Supported: English (US) and Español (México)

6. Measurement System: Imperial System and Metric System

- Imperial System for tracking records

- Example: (5 foot 2 inches, 160lb)

- Metric System for Medications

- Example: (5mg Adderall).

Error handling

System is expected to:
- Notify users of all frontend errors
- Notify users of system failure during backend errors.
- Notify administrators of all backend errors.
- Handle errors without any data loss.
- Recover from errors/failures from a defined RPO or RTO.
- Tolerate the following:
  - Client and Server failures.
  - Client and Server power outages.
  - Client and Server network interruptions.
- If an attempt to do an operation fails three times and there are no possible steps to solve the problem with, notify the administrator. Inform the user to try again later.
- If error can be solved by the users five steps of what they should perform.

Features

1- Medication/Health Recorder

<u>Create Record</u>

Functional Requirement:
System shall allow users to create a record.

Preconditions:
- User must be logged in.
- User must be at the Medication/Health View.
- User must have less than 1000 existing records.
- User must have created less than 10 records within 1 hour.

Required Input:
- User Selects Create Record Option
    - Category Name
        - User selects the category from a dropdown list.
        - Only one category can be selected per record. (User will only be able to select one)
    - Name of Record:
        - The user enters the name of the record on the designated name field.
        - This name will be the first line on the record.
        - The name has to be a minimum of 1 character and a maximum of 100.

*The date and time of the record will be exactly when the user made the submission.

Successful Postconditions:
- The record is created.
- The record is automatically saved under the specified category.
    - Each time a record is saved under a category, the record will be reordered by date (most recent- least recent).
- Record is visible in the Medication/Health View.
- User is redirected to the Record View.

Failure Scenarios:

1- User abruptly exits from creating a record request.

2- User attempts to leave any of the required fields empty.

3- User attempts to pick more than 1 category.

4- User attempts to exceed the maximum character limit of the name field.

5- User attempts to create too many records within a given time frame.

Handling Failure Scenarios :

1- System aborts the request.

2- User will be notified that input is required.

3- Last category selected by the user will be the category of the record.

4- Once the user reaches the character limit they will no longer be able to type in the field unless they backspace characters to make space.

5- The create button will not be visible to the user and they will be notified for exceeding the record limit for the hour.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

The create record process must take a maximum of 2 seconds.

Input Data on Record

Functional Requirement:

System shall allow users to input data on their existing record.

Preconditions:

- User must be logged in.
- User must be inside the Record View.
- Record must exist.

Required Input:

-Text:

- User will be able to input characters with no minimum or maximum characters inside the record.

- Upload Files:

- The file type must be of jpg or pdf.
- The file must be a minimum of 0.5 MB or a maximum of 16 MB.
- A maximum of 2 files can be uploaded onto a single record per day.
- To select the image or pdf file to upload from a desktop, the user will be prompted to browse their files.

- To select the image or pdf file to upload from a mobile device, the user will be prompted to browse their photo album or their files.
- User will be given the option to select one or more files to upload at once.
- Date and Time (Optional):
    - User will be given the option to edit the date and time of the record either by selecting the auto generated current date and time, or by selecting it from a dropdown list.
    - Date is dependent on the user's time zone.

Successful Postconditions:

User is able to input data to the record.

Failing Scenarios:
1- User attempts to upload a file that is not of type JPG or PDF.
2- User attempts to upload a file below the minimum or maximum MB.
3- User attempts to upload more than 2 files within 24 hours.

Handling Failing Scenarios:
1- File will not upload and the user will be notified that:
    - upload was unsuccessful
    - only upload approved file types.
2- File will not upload and the user will be notified that:
    - upload was unsuccessful
    - only upload files within the range of the MB
3- The upload file option will not be visible to the user after two file uploads within 24 hours, and the user will be notified for reaching the maximum file uploads for the day.

Failure Postconditions:
User is unable to input data to the record.

Nonfunctional Requirements:
Uploading the selected files must take a maximum of 3 seconds.

Save Record

Functional Requirements:

System shall allow users to save changes made to their existing records.

Preconditions:

- User must be logged in.
- The record must exist.
- User must be in the Record View.

Required Input:

- User selects the save record option.

Successful Postconditions:

The contents of the record are saved and the previous version is overwritten.

Failure Scenarios:

1- User attempts to leave the record before saving.

2- User attempts to save the record without making any changes.

3- User attempts to leave required user input fields blank.

Handling Failure Scenarios:

1- User will be asked to confirm whether they want to save or discard the changes they made to the record.

2- The save option will not be visible until the user makes changes to the record.

3- The save option will not be visible until the user provides required input.

Failure Postconditions:

Successful postcondition fails and the user will be notified.

Nonfunctional Requirements:

The saving process should take a maximum of 2 seconds.

View Record

Functional Requirements:

User will be able to access a record and view an existing record's content.

Preconditions:

- User must be logged in.
- The record must exist.
- User must be in the Health/Medication Recorder view.

Required Input:

User selects the record.

Successful Postconditions:

User is inside and viewing the record.

Failure Postconditions:

Successful postcondition fails and the user is notified.

Nonfunctional Requirements:

Redirecting from Health/Medication Recorder view to Record View should take a maximum of 2 seconds.

Edit Record

Functional Requirements:

System shall allow users to edit an existing record.

Preconditions:

- User must be logged in.
- The record must exist.
- User must be in the Medication/Health Recorder View.

Required Input:

- User selects the record:

- User will be able to edit the content of the record.
- User will be able to change the title and/or category of the record:

- Title can be changed by re-inputting the first line of the record.
- Category can be changed by selecting an alternative option from the dropdown list.
- User will be able to delete files or add files to the record.
- User must follow the proper guidelines for inputting the title and category of record (refer to Create Record subfeature):
    - User selects only one category.
    - Title ranges from 1-100 characters.
- User must follow the proper guidelines for uploading files (refer to Create Record subfeature):
    - The file type must be of jpg or pdf.
    - The file must be a minimum of 0.5 MB or a maximum of 16 MB.
    - A maximum of 2 files can be uploaded onto a single record per day

- User selects the Save Record Option:

- User must save all changes made to the record.
- Record date and time will automatically change to match when the record was edited.

Successful Postconditions:

- Record is updated with the user's changes.
- Updated Record must be reflected in the Record View and Medication/Health Recorder view.

Failing Scenarios:

1- User attempts to leave required fields empty.

2- User does not follow the proper guidelines for inputting the title and category of record (refer to Create Record subfeature)

3- User does not follow the proper guidelines for uploading files on record (refer to Input Data on Record subfeature)

4- User does not follow the proper guidelines for saving changes made onto record. (refer to Save Record subfeature).

- User attempts to leave the record before saving.
- User attempts to save the record without making any changes.

Handling Failures:

1- User will be notified that input is required.

2a Last category selected by the user will be the category of the record.

2b User will be notified to enter at least 1 character in the name field and will not be able to save the record until they do so.

2c- Once the user reaches the character limit for the title they will no longer be able to type in the field unless they backspace characters to make space.

3a- File will not upload and the user will be notified the upload was unsuccessful and to only upload approved file types.

3b-   File will not upload and the user will be notified the upload was unsuccessful and to only upload files within the range of the MB.

3c- The upload file option will not be visible to the user after two file uploads within 24 hours, and the user will be notified for reaching the maximum file uploads for the day.

4a- User will be asked to confirm whether they want to save or discard the changes they made to the record.

4b- The save option will not be visible until the user makes changes to the record.

Failure Postconditions:

Successful postconditions fail and the user is notified.

Nonfunctional Requirements:

Updating the content of the record must take a maximum of 2 seconds.

Delete Record

Functional Requirements:

System shall allow users to delete an existing record.

Preconditions:

- User must be logged in.
- User must be at the Record View.

Required Input:

- User must select the Delete Option.
- User must confirm deletion of the record.

Successful Postconditions:

- Record is deleted.
- Record is no longer visible in the Health Recorder View.

Failure Scenarios:

1- User abruptly exits from the Record View.

Failure Handling:

1- User is notified to confirm whether they want to delete the record before

exiting.

Failure Postconditions:

Successful postconditions fail and the user is notified.

Nonfunctional Requirements:

The deletion process must take a maximum of 2 seconds.

2- Reminders

<u>Create a Reminder</u>

Functional Requirements:

User will be able to create and be notified of a reminder.

Preconditions:

- User must be logged in.
- User must be in the Reminder List View.
- The user's current Reminder List has less than 99 reminders.

Required Input:

- User selects Create Reminder Option
- User inputs reminder name:
    - The user enters the name of the reminder on the designated name field.
    - This name will be the first line on the record.
    - The name has to be a minimum of 1 character and a maximum of 100.

- Reminder Description:
    - User enters a body describing the reminder on the designated description field.
    - The description ranges from 0-1000 characters.

- Date and Time:
    - User sets a date and time using a dropdown list to be notified for the reminder
    - Only future date and time allowed.
    - Based on the user's time zone.
        - If the time zone changes, the reminder's date will change to match the previous time zone.
    - Repeat Reminders
        - User chooses whether a reminder will occur once, or will be recurring
            - If user chooses repeat reminders, they select an option of how often the user wants the reminder to occur. They will be given options of daily, weekly, or monthly.

Successful Postconditions:

- Reminder is created.
- Reminder is saved and added to the Reminder List.
- The Reminder List View is updated to reflect the newly added reminder.
- User is redirected to the Reminder View.

Failure Scenarios:

1- User abruptly exits from creating a reminder request.
2- User attempts to leave required fields empty.
3- User attempts to exceed the maximum character limit of the name field.
4- User attempts to exceed the maximum character limit of the reminder description.

5- User attempts to pick a past date and time to set the reminder.

Failure Handling:

1- System aborts creating a reminder.
2- User will be notified that input is required.
3,4- Once the user reaches the character limit they will no longer be able to type in the field unless they backspace characters to make space.
5- User will not be able to select any past date from their current date.

Failure Postconditions:
All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- Reminder must be added to the reminder list view in a maximum of 2 seconds.
- User is redirected from the Reminder List View to the Reminder View in 2 seconds.

Edit Reminder

Functional Requirements:

System shall allow users to edit the content of an existing reminder.

Preconditions:

- User must be logged in.
- User must be in the Reminder List View.
- The reminder must exist.

Required Input:

- User selects the edit reminder option.

- User selects the reminder.

- User will be able to change the name, description,date, repeat reminders, and time fields of the reminder by deleting and refilling the fields.
- User must follow the proper guidelines (refer to Create Reminder subfeature):
    - Name must be a minimum of 1 character and a maximum of 100.
    - Description must be a maximum of 1000 characters.
    - Only future date and time.

- How often they want reminder to repeat (if applicable)

- User selects the Save option.

- User must save all changes made to the record.

Successful Postconditions:

- The reminder is updated.
- The Reminder View and Reminder List View should reflect changes made by the user.

Failure Scenarios:

1- User abruptly exits from editing the reminder without saving.

2- User attempts to leave required fields empty.

3- User does not follow the proper guidelines for inputting the reminder name, description, or date and time.

Failure Handling:

1- User is notified to confirm whether they want to save or discard the changes made.

2- User will be notified that input is required and they will not be able to continue without it.

3a User will be notified to enter at least 1 character in the reminder name field.

3b- Once the user reaches the character limit they will no longer be able to type in the description field unless they backspace characters to make space.

3c- User will not be able to select any past date from their current date.

Failure Postconditions:
All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- User must be redirected from Reminder List View to Reminder View at a maximum of 2 seconds.

- Changes in the Reminder must be reflected at a maximum of 2 seconds.

View Reminder

Functional Requirements:

System shall allow users to view an existing reminder from their reminder list.

Preconditions:

- User must be logged in.
- User must be at the Reminders List View.
- User must have at least 1 reminder in their reminder list.

Required Input:

- User selects the reminder in the reminder list.

Successful Postconditions:

- User is inside the reminder view looking at the content of the selected reminder.

Failure Postconditions:

Successful postcondition fails and the user is notified.

Nonfunctional Requirements:

User must be redirected from reminder list view to reminder view at a maximum of 2 seconds.

Delete Reminder

Functional Requirements:

System shall allow users to delete reminders off their reminder list.

Preconditions:

- User must be logged in.
- The reminder must exist.

- User must be in the Reminder View.

Required Input:

- User selects Delete Option:

- User must confirm before deletion.

Successful Postconditions:

- Deletion of the reminder.
- Reminder is no longer visible in the Reminder List View.

Failure Scenarios:

1- User abruptly exits from Reminder View before deleting.

Handling Failures:

1- User is notified to confirm whether they want to delete the record before exiting.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- The deletion process must take a maximum of 2 seconds.

*Note: Past reminders will be deleted automatically in 30 days to reduce clutter.

Export Reminder

Functional Requirements:

System shall allow users to export existing reminders.

Preconditions:

- User must be logged in.
- The reminder must exist.
- User must be in the Reminder View.

Required Input:

- User selects Export Reminder Option

    - To export a reminder from a mobile device, the reminder will be exported as an iCal and saved to their Files to manually be added to 3rd party services.
    - Web Hosted iCal feed for synchronization between devices
    - To export a reminder from a desktop, the reminder will be exported as a iCal and the user chooses where to save it.

Successful Postconditions:

    - Reminder is exported.

Failure Scenarios:

    1- User abruptly exits the Reminder View before the export reminder request is completed.

Failure Handling:

    1- User is notified to confirm whether they want to export the reminder before exiting.

Failure Postconditions:

Reminder is not exported and the user is notified.

Nonfunctional Requirements:

Exporting reminder process must take a maximum of 3 seconds.

<u>Opt-in Notifications</u>

Functional Requirements:

System shall allow users to be notified of their reminders.

Preconditions:

    - User must be logged in.
    - User must be in the Reminder List View.

Required Input:

- User selects the Opt-In Notifications Option.
- User selects reminder preference
    - Calender or email.

Successful Postconditions:

- The user will be notified at the proper timing via email or calendar.
- iCal hosted instance on web server
- 1 email per minute to prevent spam

Failure Scenarios:

- User abruptly exits from the Reminders List before confirming their Opt-In Notifications choice.

Failure Handling:

- System will force the user to confirm before exiting from the Reminders List.

Failure Postconditions:
All successful postconditions fail and the user is notified.

Nonfunctional Requirements:
User should receive notification at the exact date and time of the reminder.

3- Health Locator

Start Search

Functional Requirements:

System shall allow users to search for health related locations near their area.

Examples: hospitals, parks, gyms, therapists, pharmacies, clinics, specialists w/o doctor approval (eg dentists, eye doctor, etc).

Preconditions:

- User must be logged in
- User must be in the Health Locater View.

Required Input:

- User selects the health locater search option.
- User selects a category to choose from.
- User enters the following information in the designated fields:
    - Valid Zip Code:
        - The zip code is 5 characters.

            *Note: If the user doesn't have a zip code they must input the nearest one to their location.

    - Mile Radius:
        - Radius must range between 1 to 50 miles.

Successful Postconditions:

- Search displays the location's name and distance from the user's inputted zip code.
- Search can return 0 results.
- Search will only return a maximum of 50 results ordered by closest to furthest proximity from the user.
- After user selects a specific location, additional information regarding the location is displayed to the user.

    *Example: Location's hours, phone number, and website.

- If no services are near the user's location, user is informed.

Failure Scenarios:

1- User abruptly exits the Health Locator Search Option before submitting.

2- User abruptly exits before the search is completed.

3- User attempts to leave any required inputs empty.

4- User attempts to select from more than one category.

5- User attempts to input an invalid zip code where:

- Zip code does not exist.
- Zip code includes noninteger characters.

6- User attempts to input an invalid mile radius where:

- Mile radius is below the minimum requirement of 1 mile.
- Mile radius is above the maximum requirement of 50 miles.
- Mile radius contains non integer characters.

Failure Handling:

1- System will abort the search request.
2- User must confirm whether they want to leave the search request.
3- User will be notified that input is required and they will not be able to continue without it.
4- Last category selected by the user will be the chosen one.
5- User will be notified to enter a valid zip code.
6- User will be notified to enter a valid mile radius.

Failure Postconditions:
All successful postconditions fail and the user is notified.

Nonfunctional Requirements:
The search process should take a maximum of 2 seconds.

4- Medication Lookup

<u>Start Search</u>

Functional Requirements:

System shall allow users to search and find medications at the most affordable prices from different vendors.

Preconditions:

- User must be logged in.
- User must be in the Medication Lookup View.

Required Input:

- User selects the Medication Search Option.
    - User must search for a medication using the search bar:
- Input name of medication:
    - Name ranges from 1-100 characters.
    - Recommended options will be suggested to the user underneath depending on what they inputted.

- Input zip code.
  - Zip code must be 5 characters long.
  - *Note: If the user doesn't have a zip code they must input the nearest one to their location.
- Input Mile Radius:
  - Must range between 1-50 miles.

   - Alternatively, user will be given the option to search for medication details from an auto-generated list of medications.

Optional Input:

- User selects the sort option.
  - By price: cheapest or most expensive first.
  - By proximity: closest or furthest away in radius first.

Successful Postconditions:

- Search displays the different vendors within the radius of the user that offers the medication.
- Search displays the list of prices associated with the medication.
  - Prices will be in US dollars.
  - Price will be the price at the time the user searched for the medication.
- Search can return 0 results:
  - No search results will be displayed if the user inputs unavailable medication.
- A maximum of 50 results will be displayed.
- Sort updates the medication lookup view.

Failure Scenarios:

1- User abruptly exits the Medication Search Option before submitting.
2- User abruptly exits before the search is completed.
3- User attempts to leave any required input empty.
4- User misspells medication.
5- User attempts to exceed the maximum character limit of the medication name field.
6- User attempts to input invalid zip code where:
  - Zip code does not exist.
  - Zip code contains non-integer characters.
7- User attempts to input invalid mile radius:

- Mile radius is below the minimum requirement of 1 mile.
- Mile radius is above the maximum requirement of 50 miles.
- Mile radius contains non-integer characters.

Failure Handling:

    1- System will abort the medication search request.
    2- User must confirm whether they want to leave the medication search request.
    3- User will be notified that input is required and they will not be able to continue without it.
    4- No results will be returned, suggest to users what they meant to type
    5- Once the user reaches the character limit they will no longer be able to type in the field unless they backspace characters to make space.
    6- User will be notified to enter a valid zip code.
    7- User will be notified to enter a valid mile radius.

Failure Postconditions:
All postconditions fail and the user is notified.

Nonfunctional Requirements:

- It must take a maximum of 3 seconds to conduct the search.
- It must take a maximum of 2 seconds to sort the search list.

View Medication

Functional Requirements:

System shall allow users to view details on a searched medication.

Preconditions:

- User is logged in.
- User is in the Medication Lookup View.
- User successfully searched for a medication.
- Search displays at least one medication.

Required Input:

- User selects a medication retrieved from the search.

Successful Postconditions:

- Displays all locations of the vendor within the radius user inputed.
- Displays information regarding the medication.

  Example: side effects, requirement of prescriptions, etc.

Failure Postconditions:

- All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

User must be redirected from the Medication Lookup View to the Medication View in a maximum of 2 seconds.

Favorite Medication

Functional Requirements:

System shall allow users to favorite medication vendors for a specific medication.

Preconditions:

- User must be logged in.
- User must be in the Medication View.
- User has less than 10 favorites in the favorite list.

Required Input:

- User selects the Favorite Option.

Optional Input:

- User deselects the Favorite Option.

Successful Postconditions:

After favoriting:

- Medication vendor is favorited.
- Medication vendor is saved to the favorite list so the user can refer back to it.
- Favorite list incremented by 1.

After removing favoriting:

- Medication location is unfavorited.
- Medication vendor is removed and no longer saved to the favorite list.
- Favorite list decremented by 1.

Failing Postconditions:

- All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- Favoriting and unfavoring a medication location must take a maximum of 1 second to appear in the medication view (heart color changes)
- Favorite must be added to the Favorite List in a maximum of 2 seconds.

View Favorite List

Functional Requirements:

System shall allow users to view their Favorite List which includes their favorite vendors for specific medications.

Preconditions:

- User must be logged in.
- User must be in the Medication Lookup View.

Required Input:

- User selects the Display Favorite List Option.

Successful Postconditions:

- User is redirected to the Favorite List View.
- The Favorite List is displayed to the user.
- Selecting an item off the favorite list will take the user to the Medication View which displays its different locations and information.
    - User may favorite/unfavorite a medication vendor from the medication view.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- Redirecting user from the Medication Lookup View to the Favorite List View must take a maximum of 2 seconds.
- Updating the Favorite List View if the user favorites/unfavorites when selecting an item must take a maximum of 2 seconds.

<u>Refill Medication:</u>

Functional Requirements:
System shall remind users to refill their medications near their refill date.
Postconditions:
- User must be logged in.
- User must be in the Medication View.

Required Input:
- User selects the Refill Reminder Option.
- User must input the refill date and time to be reminded.
- User must input the reoccurring time.
Successful Postconditions:
- A refill reminder will be added to the Reminder List.

Failure Scenarios:

1- User abruptly exits from creating the refill reminder request.
2- User attempts to leave required fields empty.
3- User attempts to pick a past date and time to set the refill reminder.

Failure Handling:

1- System aborts adding reminder to the reminder list.
2- User will be notified that input is required.
3- User will not be able to select any past date from their current date.

Nonfunctional Requirements:
Adding the refill reminder to the Reminder List must take a maximum of 2 seconds.

5- Weight Management/Calorie Counter

<u>Input Weight Goal Data</u>

Functional Requirement:

System shall allow users to create an entry to input data regarding their weight goals

Preconditions:

- User must be logged in.
- User must be at the Weight Management View.
- User information from Profile is received.

Required Input:

- User selects the Create Goal Option. '
- User inputs data on the required fields:
    - Target Weight:
        - The user enters their target weight on the designated weight field.
        - The ideal weight must be a number.

        *Note: weight will be in pounds (lbs)

    - Exercise Schedule:
        - The user will select one choice from the given exercise schedule options.
        - Example: No exercise, Low exercise, High Exercise etc.
    - Time Frame:
        - User selects an ideal date to reach their weight goal from a dropdown list.
        - Only future date and time is allowed.

    - Upload Files

    - The file type must be of jpg or pdf.
    - The file must be a minimum of 0.5 MB or a maximum of 16 MB.
    - A maximum of 2 files can be uploaded per day.
    - To select the image or pdf file to upload from a desktop, the user will be prompted to browse their files.
    - To select the image or pdf file to upload from a mobile device, the user will be prompted to browse their photo album or their files.
    - User will be given the option to select one or more files to upload at once.

Successful Postconditions:

- User will be able to track their weight loss/gain progress by uploading daily images for 90 days.

- Input user provided will be used to make calculations for reaching their weight goals.
- Users will be notified if they are off target from their goal

Failure Scenarios:

1- User abruptly exits from the Create Goal Option before inputting all the required information.

2- User attempts to leave any of the required fields empty.

3- User attempts to put nonintegers in integer fields.

4- User attempts to pick a past date and time for their time frame.

5- User attempts to upload a file that is not of type JPG or PDF.

6- User attempts to upload a file below the minimum or maximum MB.

7- User attempts to upload more than 2 files within 24 hours.

Failure Handling:

1- System will abort the Create Goal request.

2- User will be notified that input is required.

3- User will be notified to only use integers.

4- User will not be able to select any past date from their current date.

5- File will not upload and the user will be notified that:

- upload was unsuccessful
- only upload approved file types.

6- File will not upload and the user will be notified that:

- upload was unsuccessful
- only upload files within the range of the MB

7- The upload file option will not be visible to the user after two file uploads within 24 hours, and the user will be notified for reaching the maximum file uploads for the day.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

Uploading the selected files must take a maximum of 3 seconds.

Edit Weight Goal Data

Functional Requirement:

System shall allow users to change and update their weight goals.

Preconditions

- User must be logged in
- User must be in the Weight Management View

Required Input:

- User selects the Edit Goal Option.
    - Required fields are editable.
- User may refill the target weight, exercise schedule, and date.
- User may delete previous files and upload new files for the day.
- User must follow the proper guidelines for each input:
    - The ideal weight must be a number.
    - Only future date and time is allowed.
    - Only one exercise schedule can be selected.
    - The file type must be of jpg or pdf.
    - The file must be a minimum of 0.5 MB or a maximum of 16 MB.
    - A maximum of 2 files can be uploaded per day.
- User selects the Save Goal Option:
    - User must save all changes made to their goal.

Successful Postconditions:

- Weight goal is updated.
- Updated weight goal is reflected in the Weight Management View.

Failure Scenarios:

1- User abruptly leaves while editing weight management

2- User attempts to leave required fields empty.

3- User does not follow the proper guidelines for inputting the ideal weight and time frame.

4- User does not follow the proper guidelines for uploading files

5- User attempts to leave the record before saving.

6- User attempts to save the record without making any changes.

Failure Handling:

1- System aborts editing and no changes are made.

2- User will be notified to input data on all required fields.

3- User will be notified to follow the proper guidelines where the ideal weight must be an integer and the date must be a future date.

4- File will not upload and the user will be notified to follow the proper guidelines.

5- User will be asked to confirm whether they want to save or discard the changes they made to the record.

6- The save option will not be visible until changes are made.

Failure Postconditions:

Any of the failure scenarios failing

Nonfunctional Requirement:

Updating the contents of the weight goal must take a maximum of two seconds

Search Food Item

Functional Requirement:

System shall allow users to document their food and calorie intake for the day.

Preconditions:

- User must be logged in

- User must be Food Log View

Required Input:

- User selects the Search Food Option.
    - User must select a category to add the food to. Example: Breakfast, Snack, Lunch, etc.
- User searches for the food item using the search bar.
    - Input the name of the food.
        - The name has to be a minimum of 1 character and a maximum of 100.

Successful Postconditions:
- Search returns food item and its calories that correspond to the user's input.
- Search can return 0 items.
    - No search results will be displayed if the user inputs unavailable food or incorrect spelling of the food name.
- A maximum of 50 results can be displayed.

Failure Scenarios:
1- User abruptly exits the Add Food Option before submitting.
2- User abruptly exits before the search is completed.
3- User attempts to exceed the maximum character limit of the food name field.

Failure Handling:
1- System will abort the food search request.
2- User must confirm whether they want to leave the food search request.
3- Once the user reaches the character limit they will no longer be able to type in the field unless they backspace characters to make space.

Nonfunctional Requirements:

- It must take a maximum of 3 seconds to conduct the search.

Add Food Item

Functional Requirement:
System shall allow users to add food items to their Food Log.

Preconditions:
- User must be logged in.
- User must be in the Food Log View.
- User must have successfully searched for a food item.
- User has less than 20 food items added to the Food Log in the 24 hours.

Required Input:
- User selects the Add option near the food item.
    - User selects from a dropdown list the portion size of the food item.
      *Portion size is measured in grams.

Successful Postconditions:
- Food Log is updated to reflect newly added meals under a category.
- Food Log is incremented by 1.

Failure Scenarios:
1- User abruptly exits from the food search before selecting a food item.
2- User abruptly exits during the add process.

Failure Handling:
1- System exits the user from the search.
2- User must confirm whether they want to discard adding food to their Food Log.

Failure Postconditions:
All successful postconditions fail and the user is notified.

Nonfunctional Requirements:
Adding food item to the Food Log must take a maximum of 2 seconds.

Custom Food Item

Functional Requirement:
System shall allow users to create custom food items that can later be added to their Food Log.

Preconditions:
- User must be logged in.
- User must be in the Food Log View.

Required Input:
- User selects the Custom Food Option.
- User must input the following details regarding the food item on the designated fields.
    - Name
        - The name has to be a minimum of 1 character and a maximum of 100.
    - Description
        - The description ranges from 0-1000 characters.
    - Calories

- Must be an integer.
  - Carbs in grams: optional and must be an integer.
  - Protein in grams: optional and must be an integer.
  - Fat in grams: optional and must be an integer.

- User selects the Add option.

Successful Postconditions:
  - Food Log is updated to reflect newly added meals under a category.
  - Food Log is incremented by 1.

Failure Scenarios:
  - User abruptly exits from the custom food option.
  - User attempts to keep required fields empty.
  - User attempts to violate the guidelines of any of the fields.
  - User abruptly exits from the custom food option during the add process.

Failure Handling:
  1- System exits the user from the custom food option.
  2- User will be notified to enter input for required fields.
  3- User will be notified to follow the proper guidelines of the fields.
  2- User must confirm whether they want to discard adding custom food to their Food Log.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

Adding food item to the food log must take a maximum of 2 seconds.

Delete Food Item

Functional Requirement:

System shall allow users to delete food items from their Food Log.

Preconditions:

  - User must be logged in
  - At least one item must be in the Food Log.
  - User must be in the Food Log View.

Required Input:

- User selects a category from the Food Log.
- User selects a food item from the category.
- User selects the delete option from the Food Item View.

Successful Postconditions:

- Food item is deleted from the category found in the Food Log.
- Update should be reflected in the Food Log View.
- Food Log is decremented by 1.

Failure Scenarios:

1- User abruptly exits from the Food View after selecting the delete option.

Failure Handling:

1- User is notified to confirm whether they want to delete the food item before exiting.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

Deleting a food item from the Food Log must take a maximum of 2 seconds.

Counting Calories

Functional Requirement:
System shall display to users details regarding their calorie intake and their progress towards their goals.

Postcondition:
- User must be logged in.
- User must be in the Calorie Counter View.

Required Input:
System retrieves user inputted data from Weight Management and Food Log.
System retrieves the user's personal data from their profile.

Successful Postconditions:
- The following calculations are made and displayed to the User:
    - User's recommended daily calorie intake.
    - User's total calories eaten.
    - User's remaining available calories.
    - User's surplus or deficit in calories.
    - User's average amount of calories accross the week.

- Feedback regarding their eating habits and whether they are on track with their goals.

Failure Postconditions:
All successful postconditions fail and the user will be notified.

Nonfunctional Requirements:
Display of calorie calculations and feedback must take a maximum of 3 seconds.

Export Food Log

Functional Requirements:

System shall allow users to export their Food Log onto their mobile devices or desktops.

Preconditions:

- User must be logged in.
- User must be in the Food Log View.

Required Input:

- User selects Export Food Log Option.

Successful Postconditions:

Food log is exported to the user's chosen destination.

Failure Scenarios:

1- User abruptly exits the Food Log View before the export request is completed.

Failure Handling:

1- User is notified to confirm whether they want to export before exiting.

Failure Postconditions:

Food log is not exported and the user is notified.

Nonfunctional Requirements:

Exporting food log process must take a maximum of 3 seconds.

6- Track Records

Search Records

Functional Requirements:

System shall allow users to search for existing records.

Preconditions:

- User must be logged in.
- User must be in the Track Records View.
- At least one record must exist.

Required Input:

- User selects the Search Record Option:

    - User inputs an existing name or date of a created record.
        - Date Syntax: MM-DD-YYYY

        As user types, the search bar will show files that match the user's input.

- User selects a record:
    - User will be redirected to the Record View of the selected record.

Successful Postconditions:

- Track Record View displays valid searched records.
- User has the option to view the selected record.
- Misspelling a record name returns 0 results.
- Inputting incorrect date returns 0 results.

Failure Scenarios:

1- User abruptly exits the track Records Search Option before submitting.

2- User abruptly exits the Track Records View before the search is completed.

3- User attempts to violate the naming guidelines of a record by inputting a name exceeding the maximum character limit or by leaving it empty.

4- User attempts to violate the date guidelines of a record by inputting a different syntax.

Failure Handling:

1- System will abort the medication search request.

2- User must confirm whether they want to leave the Record Search request.

3,4- User will be notified to follow the proper guidelines for inputting name/date of record.

Failure Postconditions:

All postcondition fails and the user will be notified.

Nonfunctional Requirement:

The search process must take a maximum of 2 seconds.

Categorize Records:

Functional Requirements:

User will be able to categorize their existing medical or nutritional records into folders.

Preconditions:

- User must be logged in.
- User must be in the Track Records View.
- User performed a record search.

Required Input:

- User selects the Create Folder Option.
    - User inputs the name of the folder.

- Name must range between 1-100 characters.
- No two folders can have the same name.
- User selects the Add Record to Folder Option.
- User selects a record returned from the search request.
  - User can select multiple records at a time within a search.
  - User can start a new search and add those records into the folder.

Successful Postconditions:

Existing files are categorized into folders the user created.

Failure Scenarios:

1- User attempts to violate the proper search records guidelines (refer to Search Records subfeature)

2- User abruptly exits before completing the create folder request.

3- User abruptly exits in the process of adding records into the folder.

Failure Handling:

1- User will be notified to follow the proper guidelines for inputting the name/date of record.

2- System will abort the create folder request.

3- User will be notified to confirm whether the selected record(s) should be added or not to the folder before exiting.

Failure Postconditions:

Successful postcondition fails and the user is notified.

Nonfunctional Requirements:

- Creating a folder should take a maximum of 2 seconds.
- Adding files to the folder should take a maximum of 2 seconds.

<u>View Folder</u>

Functional Requirement:

System shall allow users to view the content of the folder.

Preconditions:

- User must be logged in.
- User must be in the Track Records View.
- Folder must exist.

Required Input:

- User selects the folder.
    - User is redirected to the Folder View.

Optional Input:

- User may select the sort results option:
    - Files are sorted either alphabetically or chronologically.
    - User's order preference will be saved for future searches.
- User may select a specific record:
    - User is now redirected inside the record in Record View.
- User may selects the search option:
    - Must follow the search record guidelines (Refer to Search Records subfeature)
    - User inputs valid name or date of a record in the folder.

    As user types, search bar will show files that match the user's input.

Successful Postconditions:

- User is able to view the contents of a folder.
- User is able to sort the records of a folder.
- User is able to view a specific record.
- User is able to search for the records in a folder.

Failure Postconditions:

All functional requirements fail and the user is notified.

7- Diet Recommendations

<u>Create Diet Recommendation</u>

Functional Requirements:

System allows users to create personalized diet plans.

Preconditions:

- User must be logged in.
- User information is retrieved.
- User must be in the Diet Recommendations View.
- 10 dietary questions are displayed to the user.

Required Input:

- User selects answers to all the given questions.
    - These answers will help generate accurate meals based on the user's preference.
    - Depending on the question, the user can select more than one answer.

Optional Input:

- User selects the filter option to filter the Diet Recommendations based on a certain criteria.
    - Timing (breakfast, lunch, etc).
    - Level of difficulty (easy, moderate, hard)
    - Food Components (vegetarian based, fish based etc)

Successful Postconditions:

- Search displays meals and recipes based on the user's answers to the questionnaire.
- A maximum of 30 meals will be displayed at a time, but user can query more if they would like to.
- 5 queries can be displayed per minute.
- User may filter the displayed results.
- Search cannot return 0 results.

Failure Scenarios:

1- User abruptly exits the Diet Recommendations View before submitting the answers of the questionnaire.

2- User does not answer all the questions.

3- User abruptly exits before the personalized meals are generated.

Failure Handling:

1- System aborts the Create Diet Recommendation request.

2- User will be notified to answer all questions of the questionnaire.

3- User must confirm whether they want to leave the Personalized Meals generating process.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- Recommended recipe and meal list must be generated at a maximum of 5 seconds.
- Filtering the list must take a maximum of 2 seconds.

View Details of Recommended Meals

Functional Requirement:

System shall allow users to view details of a meal/recipe from the generated personalized list.

Preconditions:

- User must be logged in.
- User must be in the Diet Recommendations View.
- User is displayed a list of menu/recipe recommendations.
- List includes at least one result.

Required Input:

- User selects a meal.

Successful Postconditions:

- User is redirected to the Meal View.
- Details of the selected meal are displayed to the user.

Nonfunctional Requirements:

- Display of meal details must take a maximum of 2 seconds.

Add Meal to Meal List

Functional Requirement:

System shall allow users to add meals onto their meal list.

Preconditions:

- User must be logged in.
- User must be in the Diet Recommendations View.
- User is displayed a list of menu recommendations.
- Meal list contains less than 5 meals in 24 hours.

Required Input:

- User selects a meal from the displayed list in the Diet Recommendations View.
- User selects the add option found in the Meal View.
- User must confirm adding the meal to the meal list.

Successful Postconditions:

- Meal list is updated to reflect the newly added meal.
- Meal list is incremented by 1.

Failure Scenarios:

1- User abruptly exits from the Diet Recommendations View before selecting a meal.

2- User abruptly exits from the Meal View during the adding process.

Failure Handling:

1- System exits the user from the Diet Recommendations View.

2- User must confirm whether they want to discard adding meals to the meal list or to stay.

Nonfunctional Requirements:

It must take a maximum of 2 seconds to complete the adding process.

View Meal List

Functional Requirement:

System shall allow users to view their meal list.

Preconditions:

- User must be logged in.
- User must be in the Diet Recommendation View.

Required Input:

User must select the View Meal List Option.

Optional Input:

User may select a meal in their Meal List.

Successful postconditions:

- Meal list is displayed to the User.
- A maximum of 5 meals are on the list per day.

- Selecting a meal displays its details by taking the user to the Meal View for that specific meal.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

- It must take a maximum of 2 seconds to display the meal list.

- Selecting a meal must take a maximum of 2 to redirect the user from Meal List View to Meal View.

Delete Meal from Meal List

Functional Requirements:

System shall allow users to delete a meal from their meal list.

Preconditions:

- User must be logged in.
- User must be in the Meal List View.
- Meal list must currently has at least one meal added to it.

Required Input:

- User selects the meal.
    - User selects the delete option.
    - User confirms deleting the meal from their meal list.

Successful Postconditions:

- Meal is deleted from the meal list.
- Menu List View is updated.
- Meal list is decremented by 1.

Failure Scenarios:

1- User abruptly exits from the Meal View after selecting the delete option.

Failure Handling:

1- User is notified to confirm whether they want to delete the meal before exiting.

Failure Postconditions:

All successful postconditions fail and the user will be notified.

Nonfunctional Requirements:

- Redirecting user from Meal List View to Meal View should take a maximum of 2 seconds
- The deletion process of a meal must take a maximum of 2 seconds.

8- Hot Topics

<u>View Hot Topic</u>

Functional Requirements:

System shall allow users to access a hot topic and view its content.

Preconditions:

- Users must be logged in.
- User must be in the Hot Topic View

Required Input:

- User selects the Hot Topic Search Option
- User inputs Zip Code:
    - The zip code is 5 characters.
    - User can only change zip codes once every 10 seconds

        *Note: If the user does not have a zip code they must input the nearest one to their location

Optional Input:

- User can filter the search based on the type of hot topic.

Successful Postconditions:

- Hot Topics displays all important health events nearby the user.
- Hot Topics can return 0 events.

Hot Topic will return a maximum of 50 topics ordered by the most recent to least recent filtered by category.

Failure Scenarios:

1. User abruptly exits the Hot Topic View.

2- User attempts to input invalid zip code where:

- Zip code does not exist.
- Zip code contains non-integer characters.

Failure Handling:

       1- System will abort the Hot Topic Search request.

       2- User will be notified to enter a valid zip code.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:

Displaying Hot Topic should take a maximum of 3 seconds.

Opt-in Notifications

Functional Requirement:

System shall allow users to be notified of new topics surrounding their area.

Preconditions:

- User must be logged in.
- User must be in the Hot Topics View.

Required Input:

- User selects the Opt-In Notifications Option.
- User must confirm the zip code to receive notifications based on.
- User must confirm their choice to receive notifications.

Successful Postconditions:

User receives emails of new topics happening in their area every 48 hours.

Failure Scenarios:

- User abruptly exits from the Hot Topic View before confirming their Opt-In Notifications choice.

Failure Handling:

- System will force the user to confirm before exiting from the Hot Topic VIew.

Failure Postconditions:

All successful postconditions fail and the user is notified.

Nonfunctional Requirements:
Opt-in notifications and an email being sent should take maximum 5 seconds

9- Login

<u>Login</u>

Functional Requirement:
- System shall allow user to login to an account

Preconditions:
- Individual must have a pre registered account
- Individual should not be logged in
- Individual must be at Login View

Required Input:
- User inputs email
- User inputs password
- User selects enter when correct email and password are imputed
- User must have authentication code

Successful Postconditions:
- Individual is taken to the Home Page

Failure Scenarios:
- User enter wrong email
- User enter wrong password

Failure Handling
- User will be notified that email and/or password do not match
- User will be allowed 5 attempts to input a password before the account's email is temporarily disabled for login

Failure Postconditions
- All successful postconditions fail and the user is notified.

Reset Password

Functional Requirement:
Allows the user to reset their password after successfully requesting a password reset

Preconditions:
- User must not be logged in, but cannot be an unregistered user
- Individual is not locked out
- Individual must be in Reset Password View after selecting the link

Required Input:
- Password
    - Can be up to 2000 characters
    - Can be alphanumeric with special characters
        - The allowed special characters are every special character on the US
Standard Keyboard except for < and >
        - Minimum of 12 characters
        - An option to temporarily display the password
- Reenter Password
    - Must match the entry above

Failure Scenarios:
1. User does not follow the guidelines of satisfying the requirements of a password

Failure Handling:
1. User is asked to retype the password with satisfying the requirements

Failure Postconditions:
Any of the failure scenarios failing

Successful Postconditions:
- Password is updated and sent to database
- User is logged in and taken to Home View

Non-Functional Requirements:
- The resetting process should take a maximum of 4 seconds

2 Factor Authentication

Functional Requirement:
User will be able to log into our application after our system authenticates them.

Preconditions:
- Individuals must have entered their username and password correctly.

Required Inputs:
- Username
- Password
    - An option to show the password is available

Failure Scenario:
1. User mistypes authentication code
Failure Handling:
1. User is notified to retype in authentication code
Failure Postcondition:
Any of the failure scenario failing

Successful Postcondition:
- User is taken to the Home View
- User has access to functionality requiring being logged in

Non-Functional Requirement:
- Authentication process should be completed in a maximum of 5 seconds

10- Registration

Signup

Functional Requirement:
Allows the user to register an account on our application

Preconditions:
- Individual must not be logged in
- Individual must be at the Registration View

Required Input:

- First name
    - 200 characters maximum, alphanumeric and special characters are allowed
- Last Name
    - 200 characters maximum, alphanumeric and special characters are allowed
- Email
    - 200 characters maximum, alphanumeric and special characters are allowed
    - Must be in email format
        - for example, (name@domain)
        - Must be unique across application users
- Username
    - 200 characters maximum, alphanumeric and special characters are allowed
    - Must be unique among application users

- Password
    - Can be up to 2000 characters
    - Can be alphanumeric with special characters
        - The allowed special characters are every special character on the US
Standard Keyboard except for < and >
    - Minimum of 12 characters
    - An option to temporarily display the password

- Reenter Password
    - Must match the entry above

Failure Scenarios:
1. User does not follow the guidelines of registering an account
2. Reenter Password does not match with Password
3. User enters a registered email and username

Failure Handling
1. Account is not created and is asked to fill out again by following the correct guidelines
2. User is asked to retype password
3. User is asked to use a different email/password.

Failure Postconditions:
1. Any of the failure conditions failing

Successful Postconditions:

- Individual is taken to the Home Page