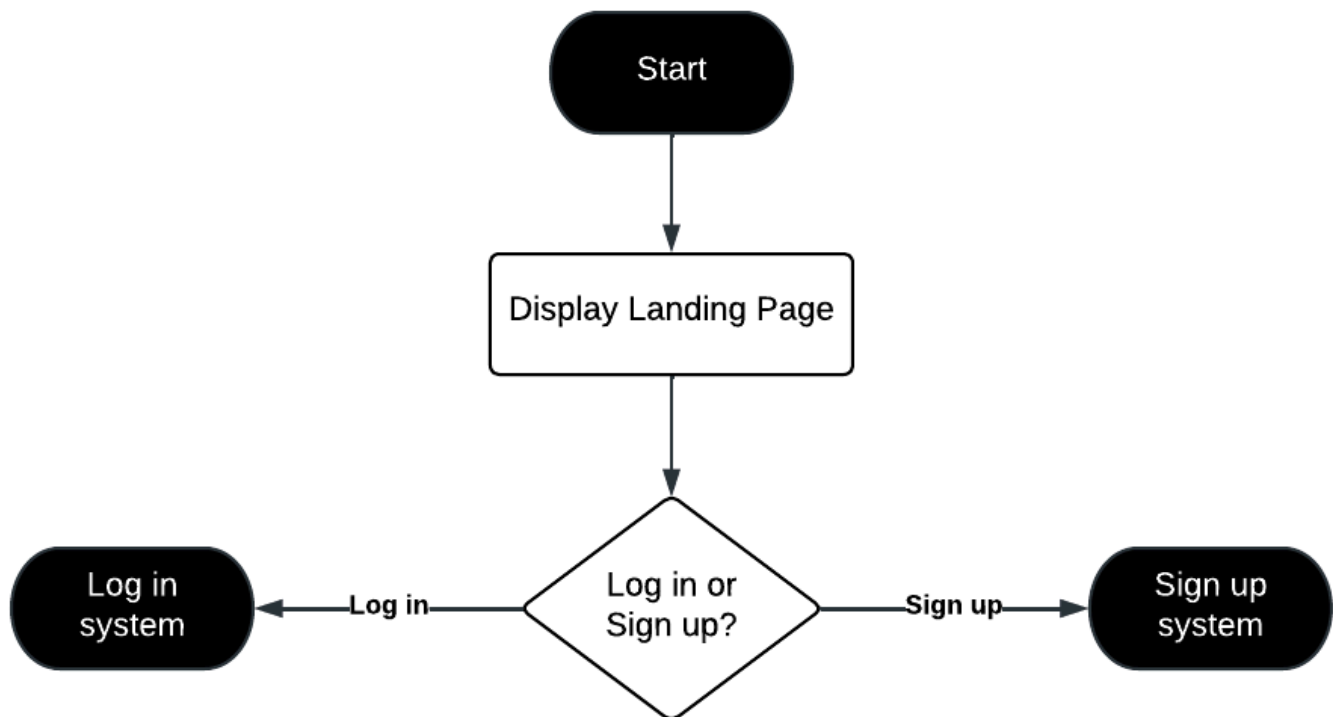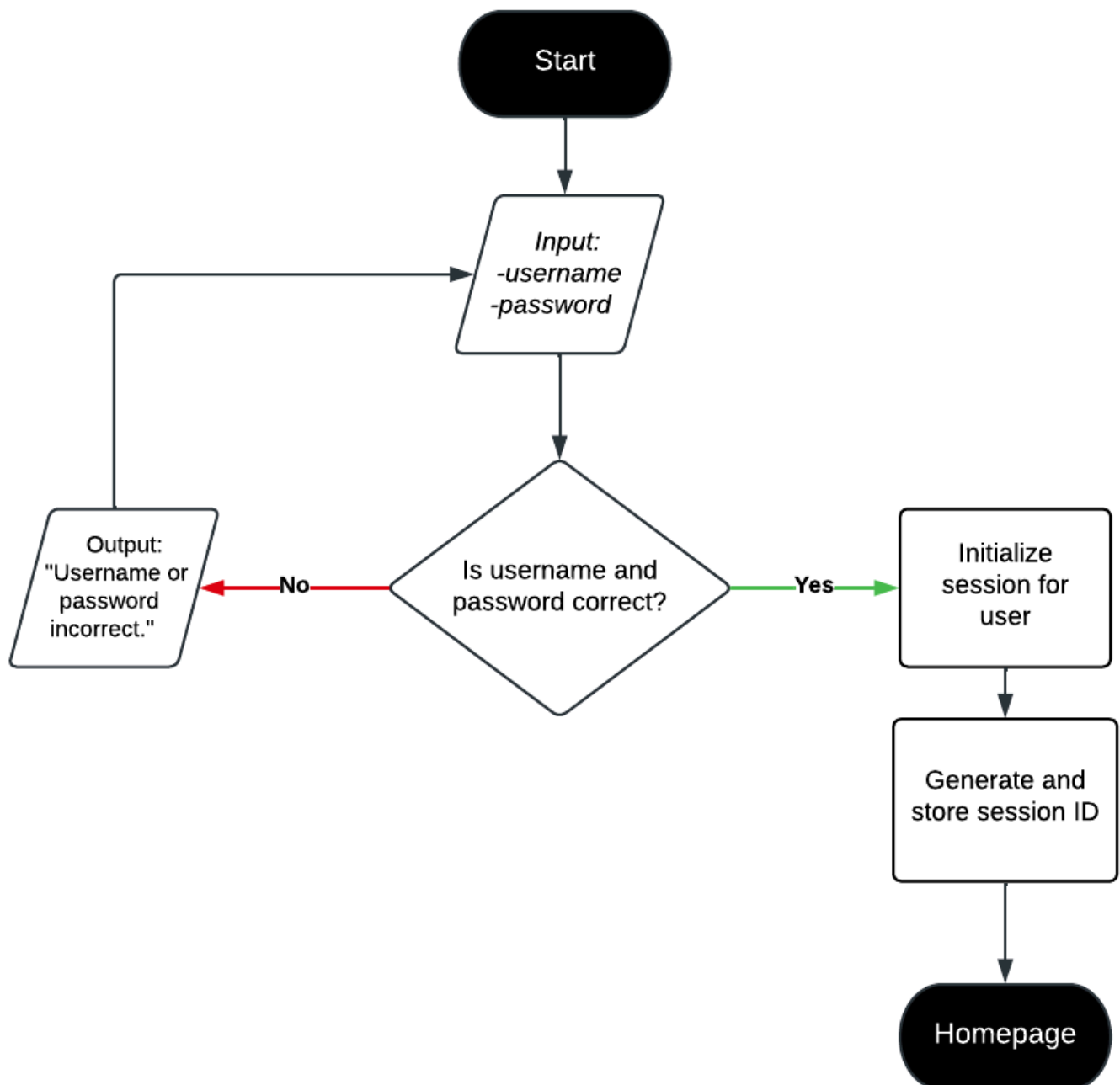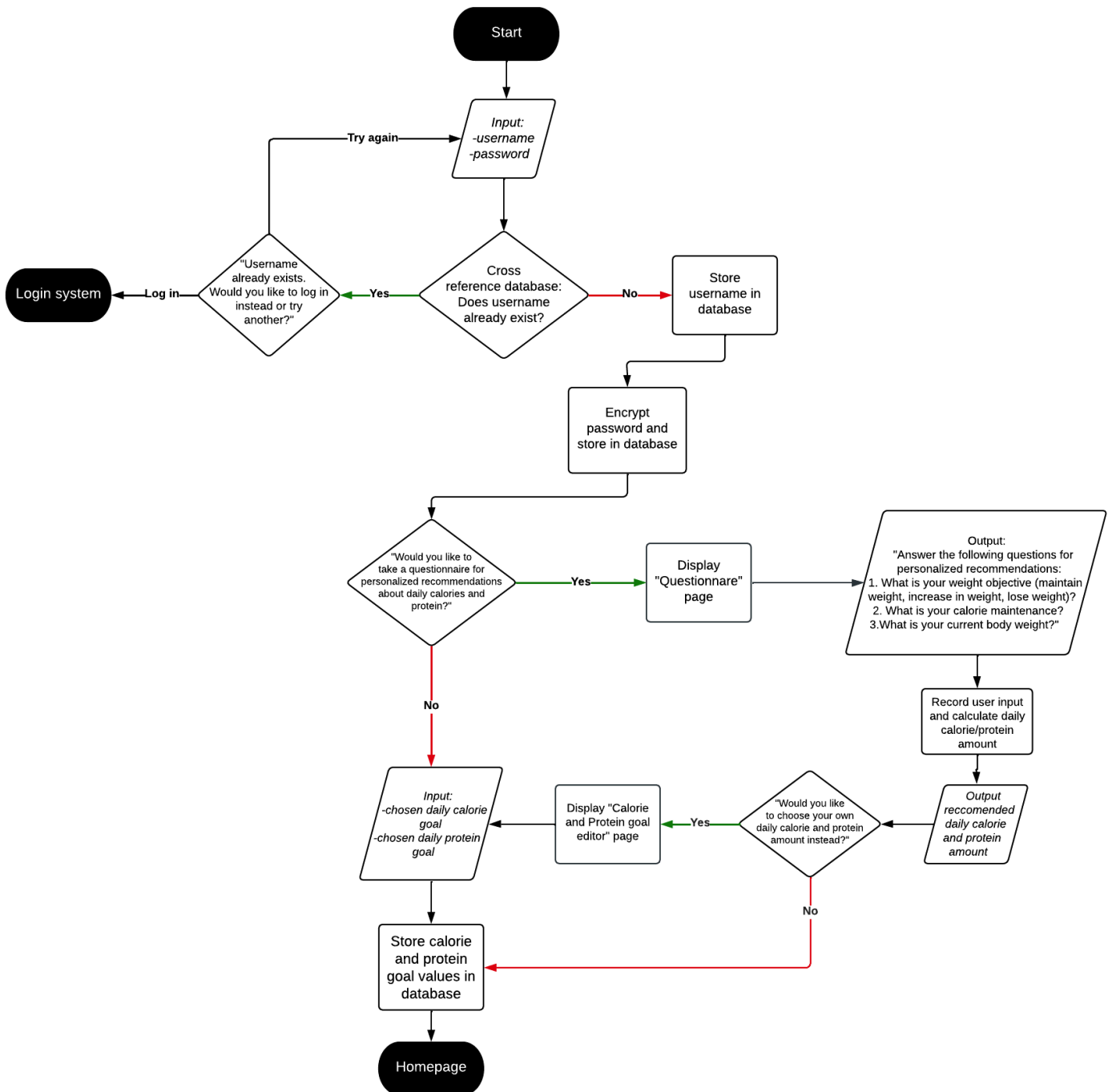## Algorithmic Flowcharts:

Figure 1 - Landing Page

This flowchart is a simple illustration of how the landing page will work. The purpose of the landing page is to direct you to the log in or sign up systems, which are both accessed through buttons.

Figure 2 - Log in System

This flowchart is a simple illustration of the log in system and what happens when you interact with the login page.

Figure 3 - Sign up System


```
                            Start

                              │
                              ▼
        ┌────Try again────►  Input:
        │                   -username
        │                   -password
        │                      │
        │                      ▼
   "Username            Cross reference
   already exists.      database:          Store
   Would you like   ◄─Yes─ Does username ─No─► username in
   to log in              already exist?     database
   instead or try │                            │
   another?"      │                            ▼
        │        Log in                   Encrypt
        ▼                                 password and
   Login system                          store in database
                                              │
                                              ▼
                 "Would you like to
                 take a questionnaire for   Display
                 personalized recommendations ─Yes─► "Questionnare"
                 about daily calories and       page
                 protein?"
                      │ No
                      ▼                                    Output:
                                                    "Answer the following
                                                    questions for personalized
                                                    recommendations:
                                                    1. What is your weight
                                                    objective (maintain weight,
                                                    increase in weight, lose weight)?
                                                    2. What is your calorie maintenance?
                                                    3.What is your current body weight?"

                                                    Record user input
                                                    and calculate daily
                                                    calorie/protein amount

   Input:            Display "Calorie    "Would you like        Output
   -chosen daily     and Protein goal ◄Yes─ to choose your own  reccomended
   calorie goal   ◄─ editor" page          daily calorie and   ◄─ daily calorie
   -chosen daily                           protein amount          and protein
   protein goal                            instead?"               amount
        │                                      │ No
        ▼                                      │
   Store calorie                               │
   and protein    ◄───────────────────────────┘
   goal values in
   database
        │
        ▼
   Homepage
```

This flowchart shows how the sign up system will work. It firstly has user authentication and cross references the database to check if a username exists. If it does not exist and password/email/username requirements are met, a new account is created and it follows the process as outlined in the flowchart.

Figure 4 - Homepage
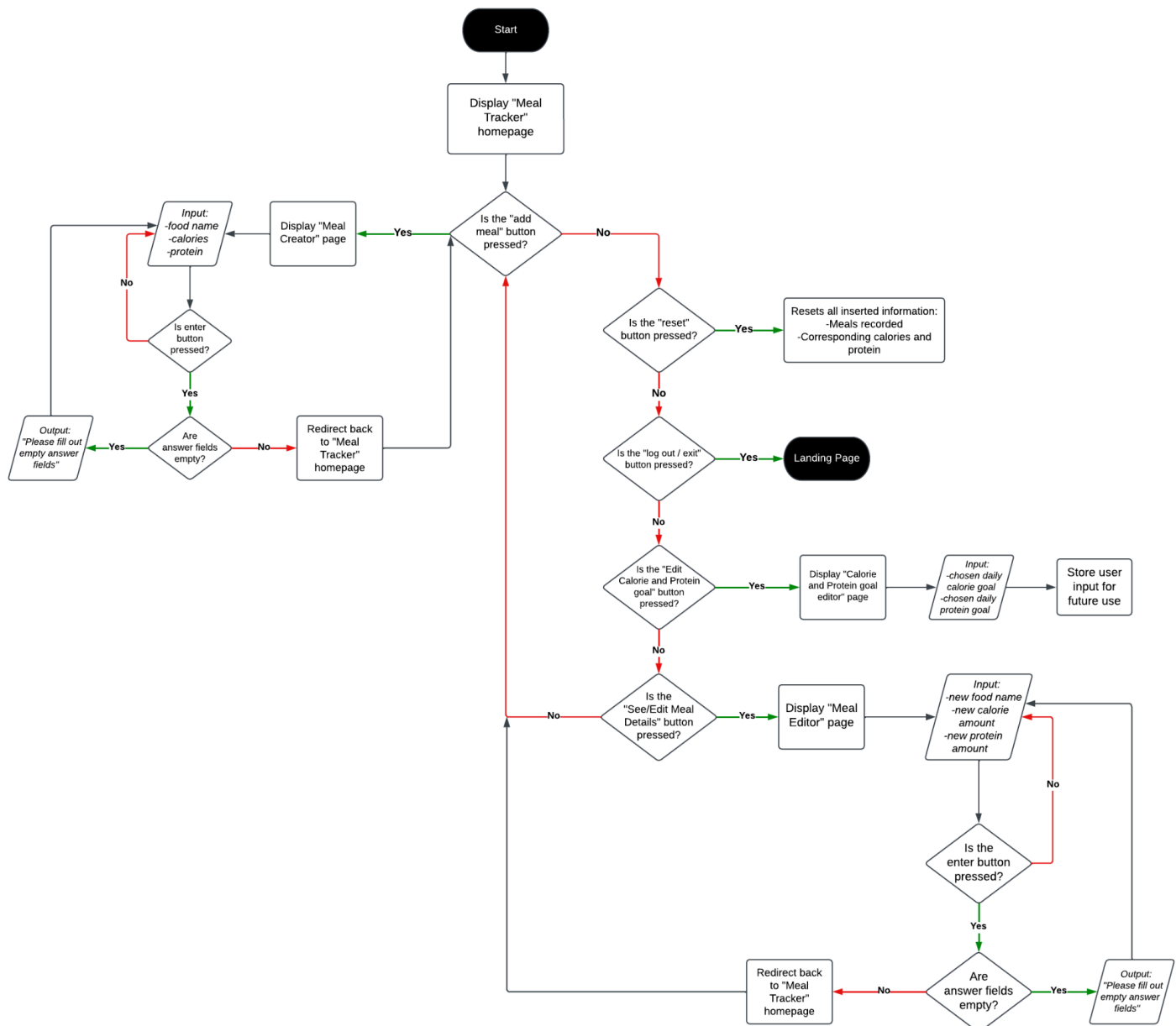
This flowchart shows how the home page system will work. The homepage will display meals, with an add meal button, a reset or delete meal button, a logout button, an edit calorie and protein goal button, a see/edit meals button, and a meal creator button. All of these button lead you to various pages and fields, as outlined in the flowchart.

Graphical Visualizations of Output:

Landing Page
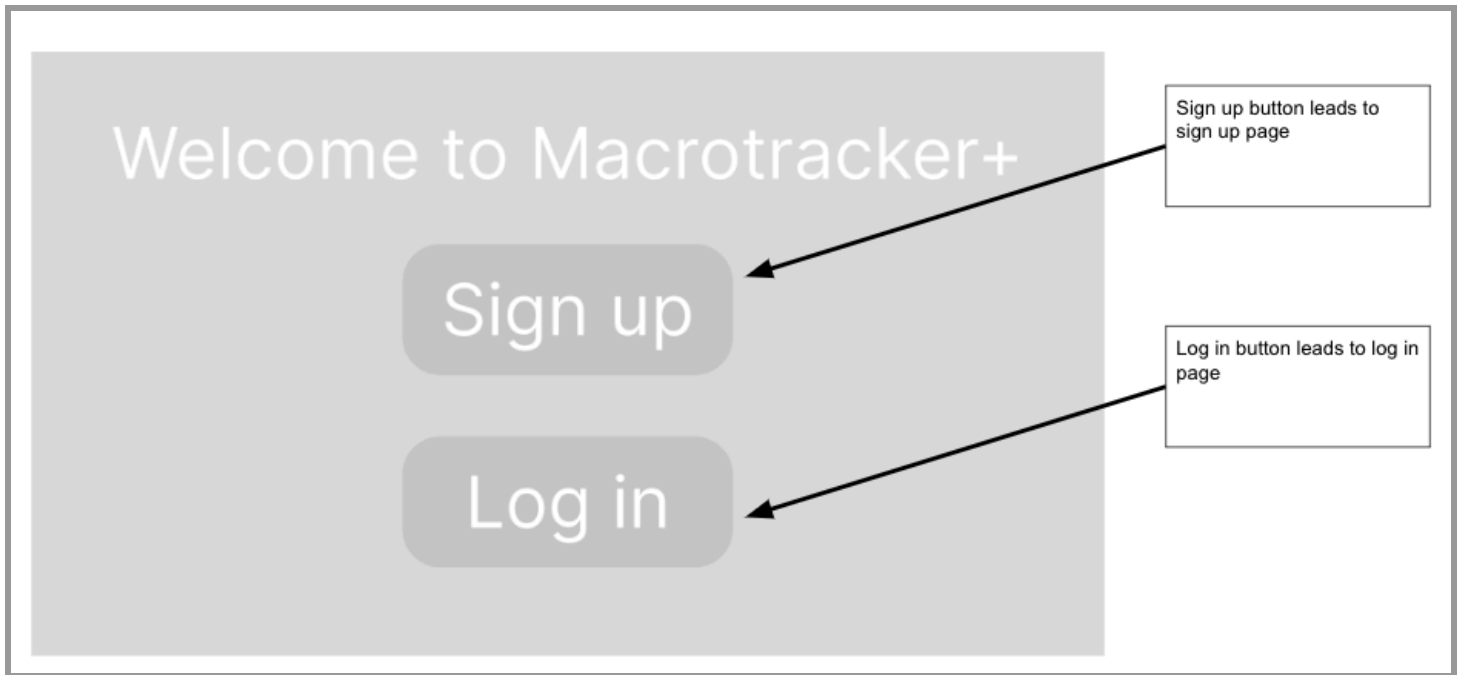
Log in Page
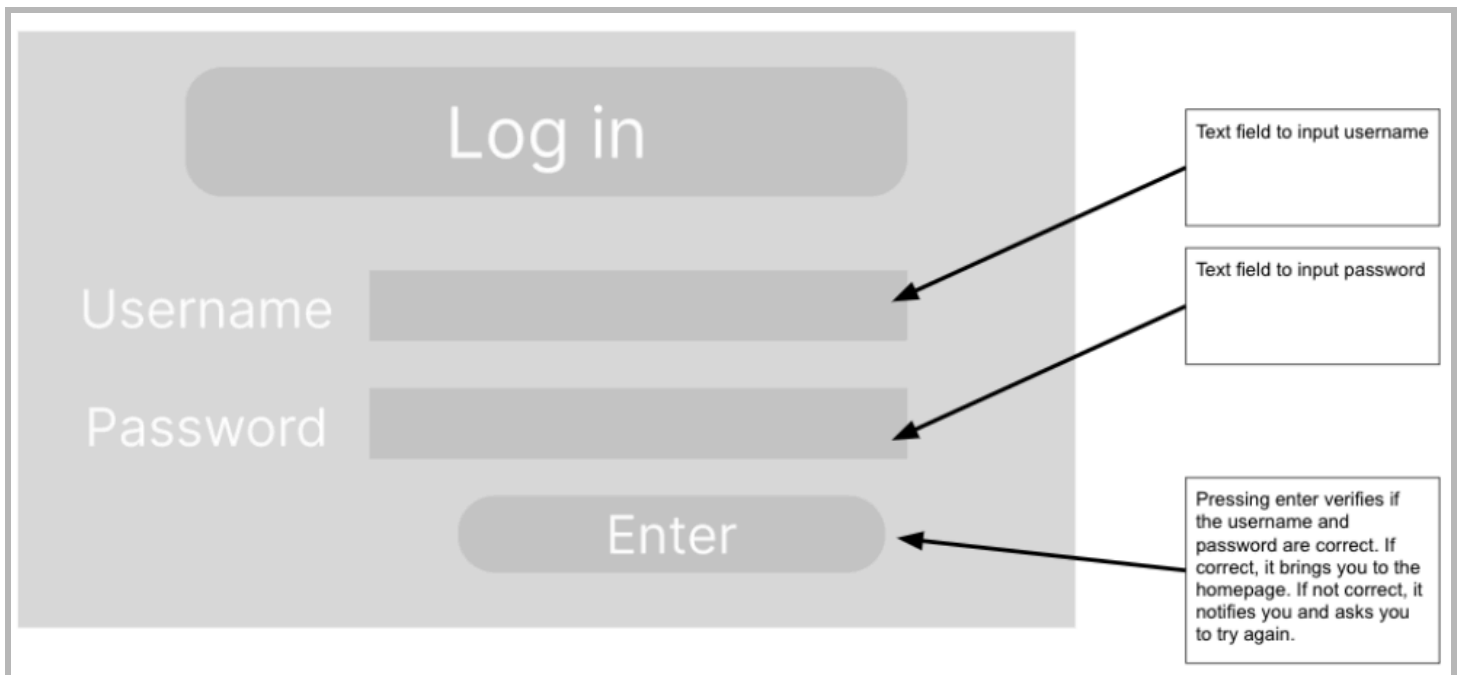
Sign up Page

Sign up

Username

Password

Enter

Text field to input username

Text field to input password

Pressing enter cross references the database and checks if the same username exists.

If username exists, the message "Username already exists. Would you like to log in instead or try another?" appears below the Enter button

If username doesn't exist, the username and encrypted password gets stored in the database, and you're led to questionnaire choice page.

Questionnaire Choice Page

Would you like to take a questionnaire for personalized recommendations about daily calories and protein?

Yes

No

Pressing the "No" button leads you to the "Calorie and Protein Goal Editor"

Pressing the "Yes" button leads you to the "Questionnaire Page"

Questionnaire Page

Questions

Answer the following questions for personalized recommendations

1. What is your weight objective?
a) maintain weight
b) increase in weight
c) lose weight

2. What is your calorie maintenance?

3.What is your current body weight?

Enter

Multiple choice question. The choice chosen by the user will be recorded and used for calculations for recommended daily calorie and protein amounts

Text fields allow numeric data types only. Units will be specified. The numbers inputted will be recorded and used for calculations for recommended daily calorie and protein amounts

Pressing the "Enter" button leads you to the "Questionnaire Results" page

Questionnaire Results Page

Based on the questionnaire,
Your recommended daily amount of calories is: x
Your recommended daily amount of protein is: y

Would you like to choose your own daily calorie and protein amount instead?

Yes   No

Values x and y will be calculated using the user input from users on the "Questionnaire" page

If the user presses the "No" button, they will be led to the homepage, automatically logged in with their newly signed up account and account information from the questionnaire

If the user presses the "Yes" button, they will be led to the "Calorie and Protein Goal Editor" page where they can choose their own daily goals.

Calorie and Protein Goal Editor Page

Calorie and Protein Goal

Current Calorie Goal: x

New Calorie Goal: _____

Current Protein Goal: y

New Protein Goal: _____

ENTER

Values x and y will be the former daily calorie and protein goals. If there are none yet, it'll show up as blank

Pressing the "Enter" button leads you to the homepage, and saves the newly inputted daily calorie and protein goals

Text fields allow numeric data types only. Units will be specified. The numbers inputted will be recorded to the user's account and displayed on the homepage.

Homepage

Pressing this button signs you out and takes you to the landing page. All your information from that session is saved.

< Log out/Exit   Edit Calorie and Protein Goal

Current Calories: x
Goal Calories: y
Calories Remaining: y - x

Current Protein: x
Goal Protein: y
Protein Remaining: y - x

Meal Tracker

Chicken Vindaloo Curry	See/Edit Meal Details
Lasagna	See/Edit Meal Details
Couscous	See/Edit Meal Details
Spaghetti Bolognese	See/Edit Meal Details
Chips	See/Edit Meal Details
Chocolate Chip Cookies	See/Edit Meal Details
N/A	ADD NEW MEAL
N/A	ADD NEW MEAL

This text is a hyperlink that leads to the "Calorie and Protein Goal Editor" page

Current Protein/Calories: displays the total calories and protein added up from all your meals.
Goal Calories/Protein: displays your previously determined daily calorie and protein goals
Calories/Protein remaining: calculates the amount of calories you have remaining for that day to reach your goal.

Buttons lead you to Meal Creator Page. If it's an edit meal button, the previous info is already on the fields and it updates the same meal. If it's an add meal button, the fields are blank

Meal Creator/Editor Page

Meal Creator

Insert Food Name: _____ ← Text field to insert food name

Insert Calories: _____

Insert Protein: _____ ← Integer field to insert food calorie and protein amounts

ENTER ← Enter button leads you to home page and saves inputted meal

Test Plan:

Action to be Tested *(Success Criteria)*	Test Methods
Authentication: Working Sign up and Login System	Sign up with a certain email and password, then log in with the same info.
Questionnaire: calculations for recommended daily calorie and protein amounts	Take a questionnaire and see results. Alter values (fitness objectives, gender, etc.) and see what results it gives to ensure the results are logical and change based on what you input.
Home Page. Displays meal logs, calorie and protein amounts, and navigation bar	Does the home page display meal logs, calorie and protein amounts, and a navigation bar? Check for each of these features
The user is capable of adding, editing, and deleting meals	Create a meal, then edit, then delete it, showcasing all three features.
Calorie/Protein Total and Remaining: calculations displaying these values	Show how the calculations work by changing the calorie/protein goal numbers and adding new meal logs to change the current calories/protein and consequently calories/protein remaining