Criterion B-Design

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Versioning

I developed three versions of the product to keep the client in sync with the progress I have been making. This was necessary so as to meet all the success criteria **(Refer to Criterion A)** to the best of my ability and to make sure the product was in line with the user requirements. Doing this helped me create a product close to what the client had in mind. **(Refer to Appendix A, B, C and D**).

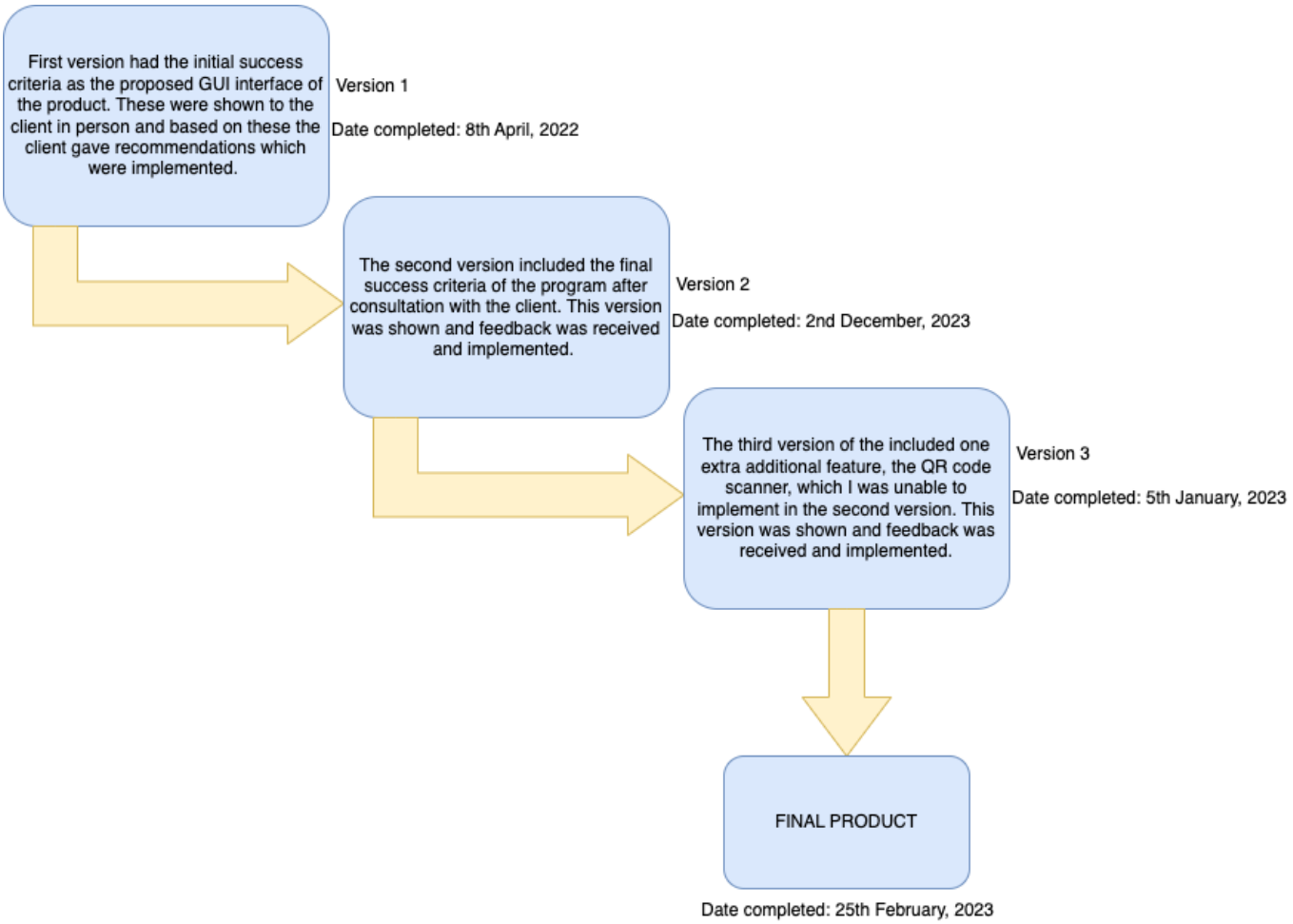

Image 1: Diagrammatic representation of the three versions

UML Class Diagram

This UML class diagram shows the interdependencies between the classes.

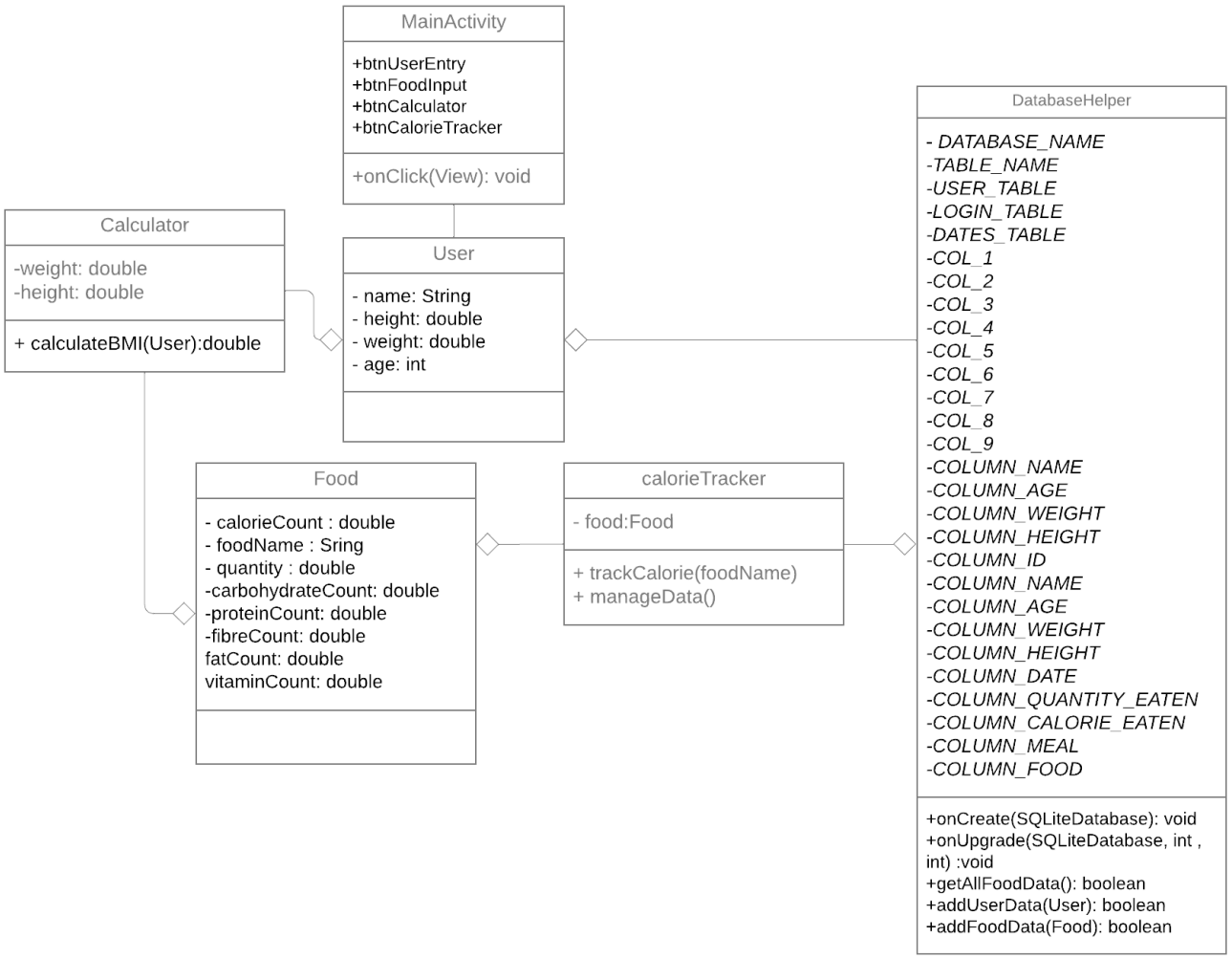

Image 2: UML class diagram

Entity Relationship Diagram (ERD)

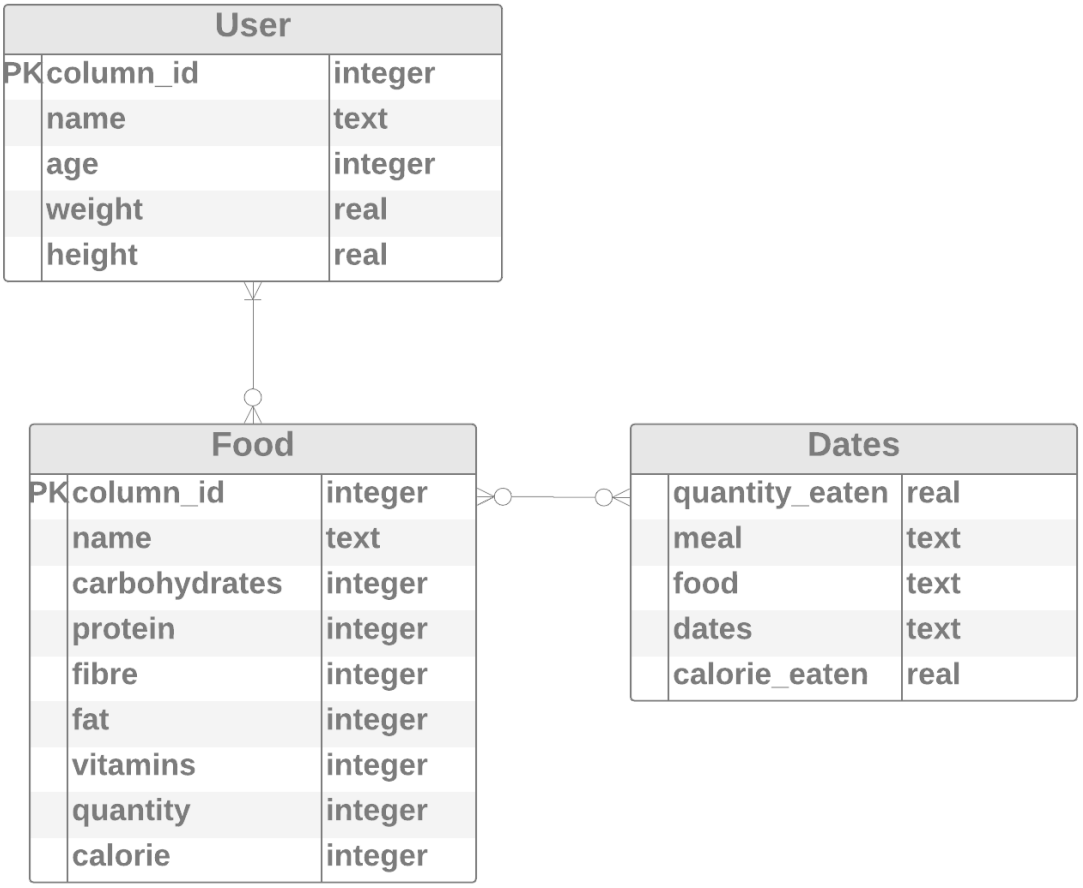

Image 3: Entity Relationship Diagram

Graphical User Interface (GUI)

The following design was approved by the client and all recommendations were taken into account when making the GUI.**(Refer to Appendix A and B)**.

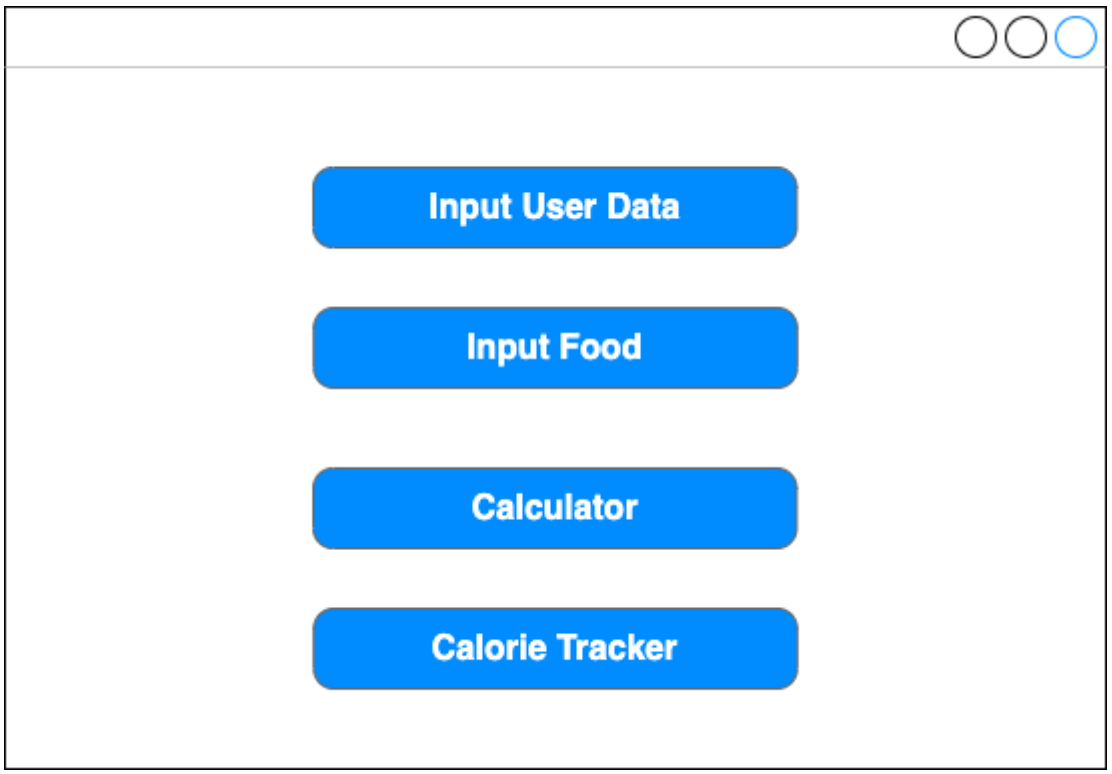

Image 4: Home Page to choose the next course of action

This page was added on the recommendation made by the client.**(Refer to Appendix B)** It makes the app more organised and easier to use.

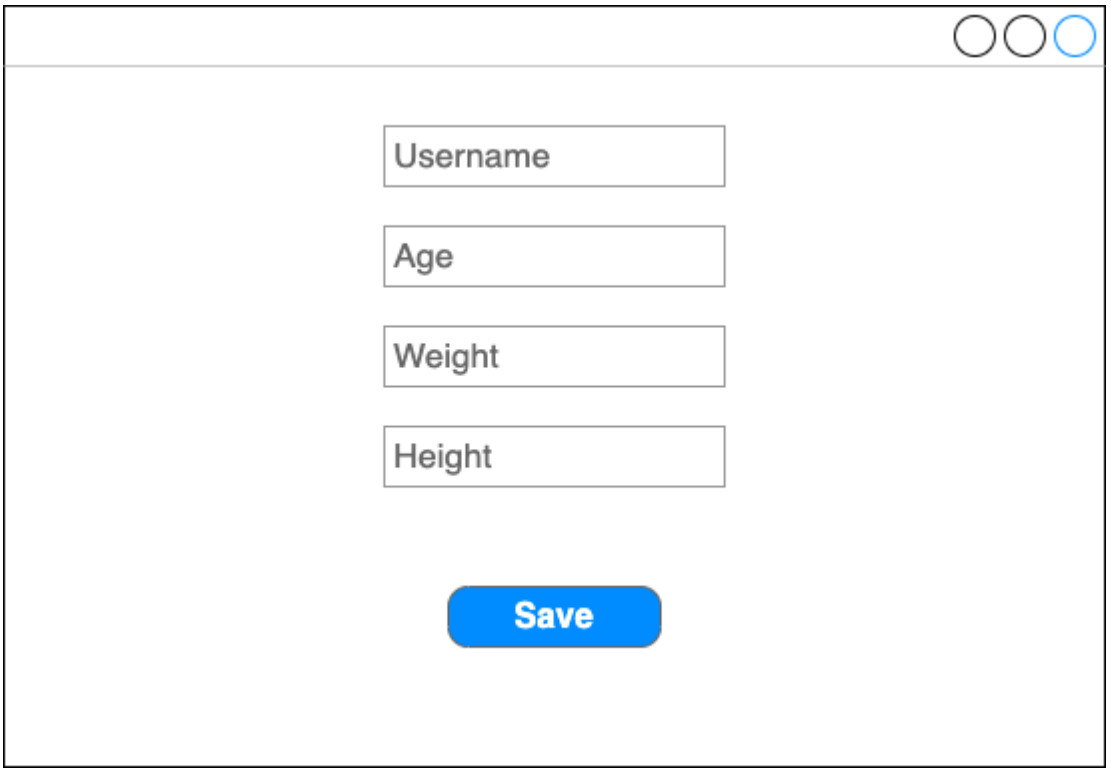

Image 5: Page to add User Information

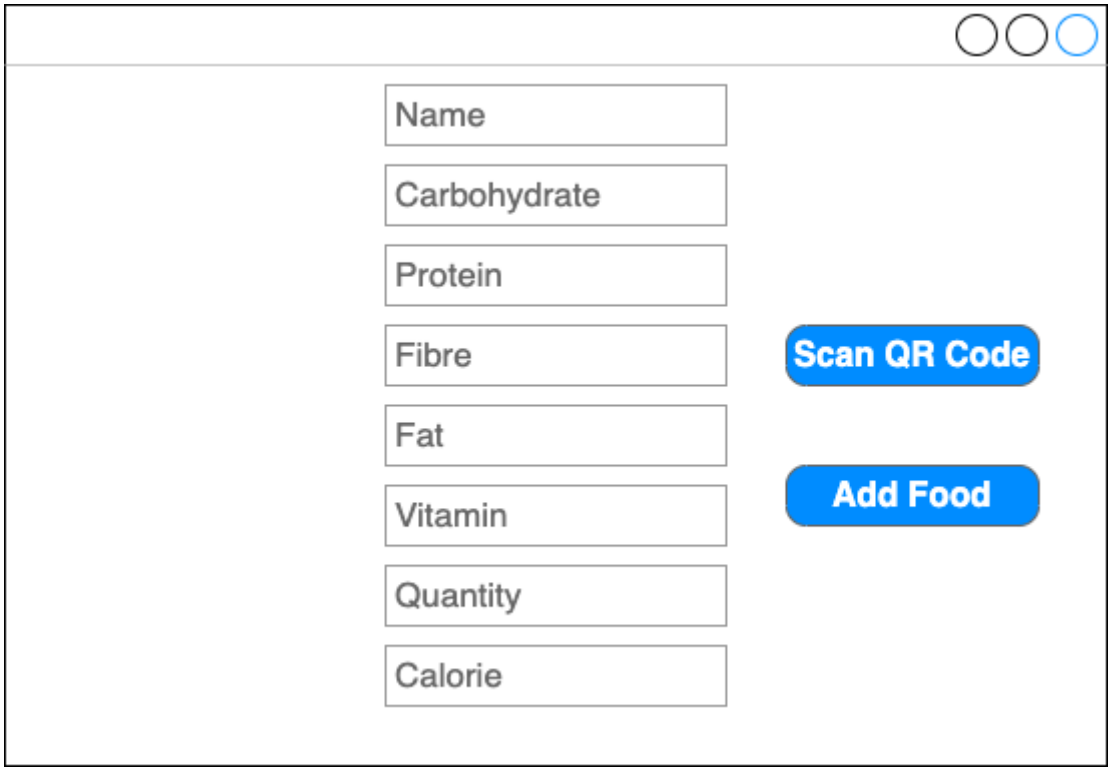

Image 6: Page to add Food

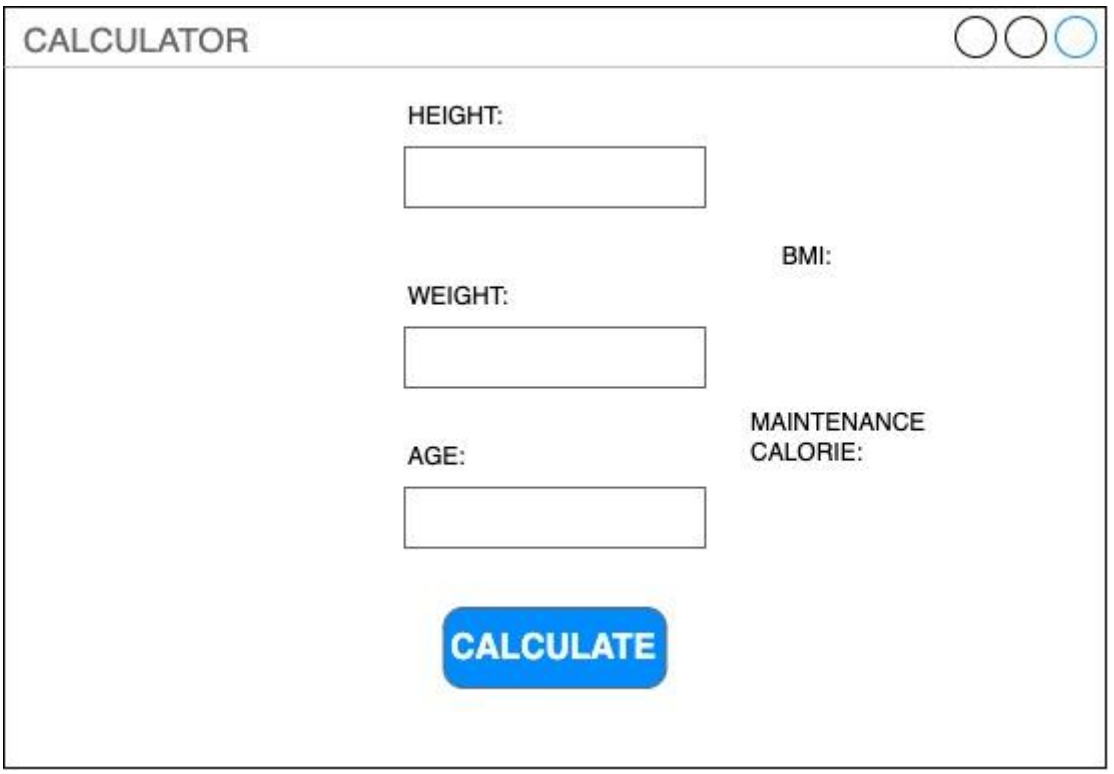

Image 7: Page to calculate BMI and Maintenance Calories

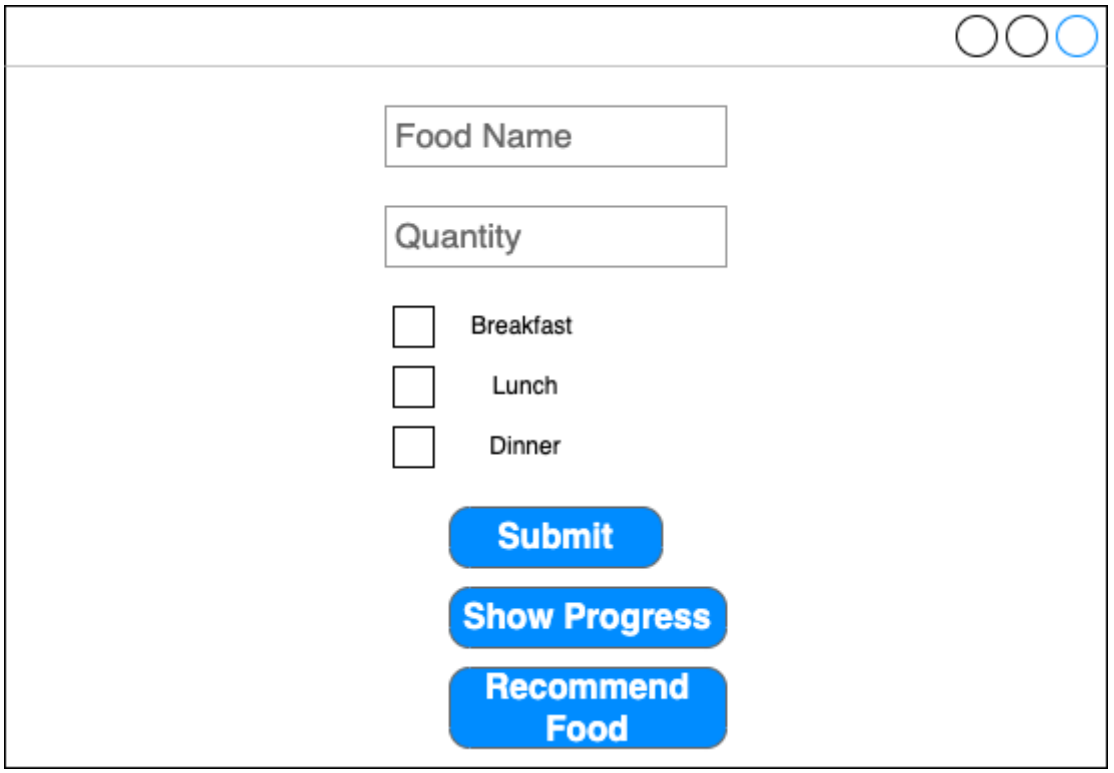

Image 8: Page to track calories

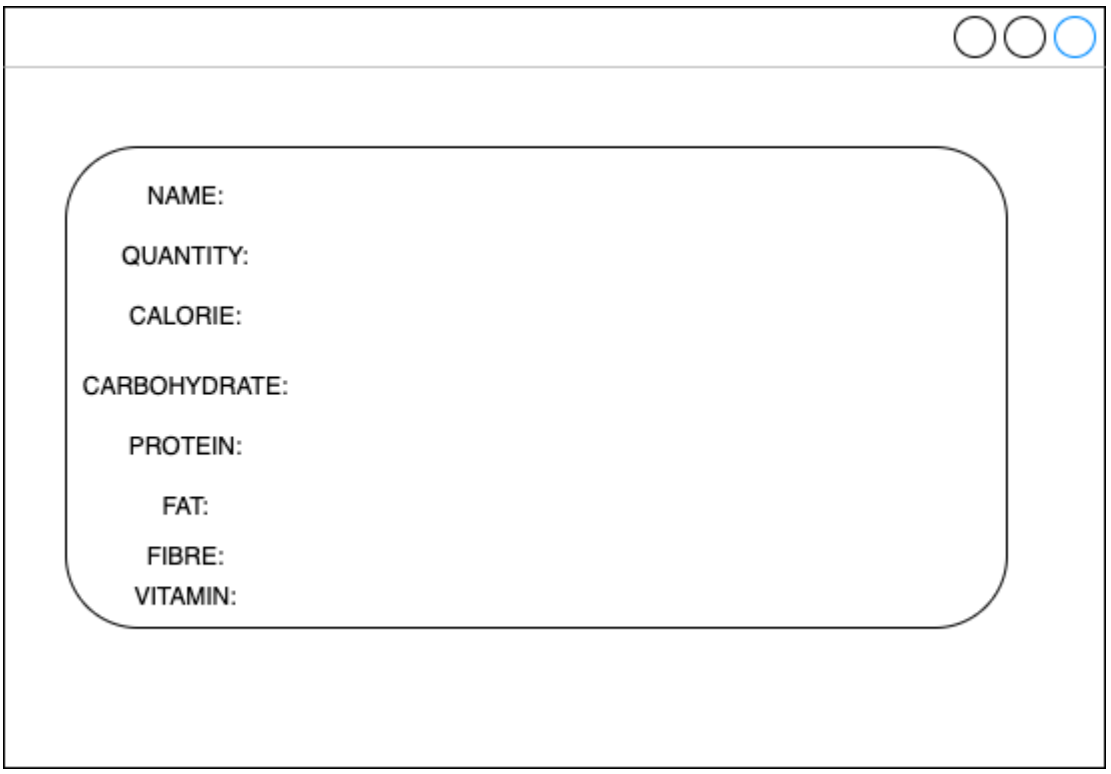

Image 9: List of food items

The card above shows the values of one food item. In the app the user will be able to scroll down in the page to view a list of many such cards populated with values of the food items stored in the database.

System Flowchart

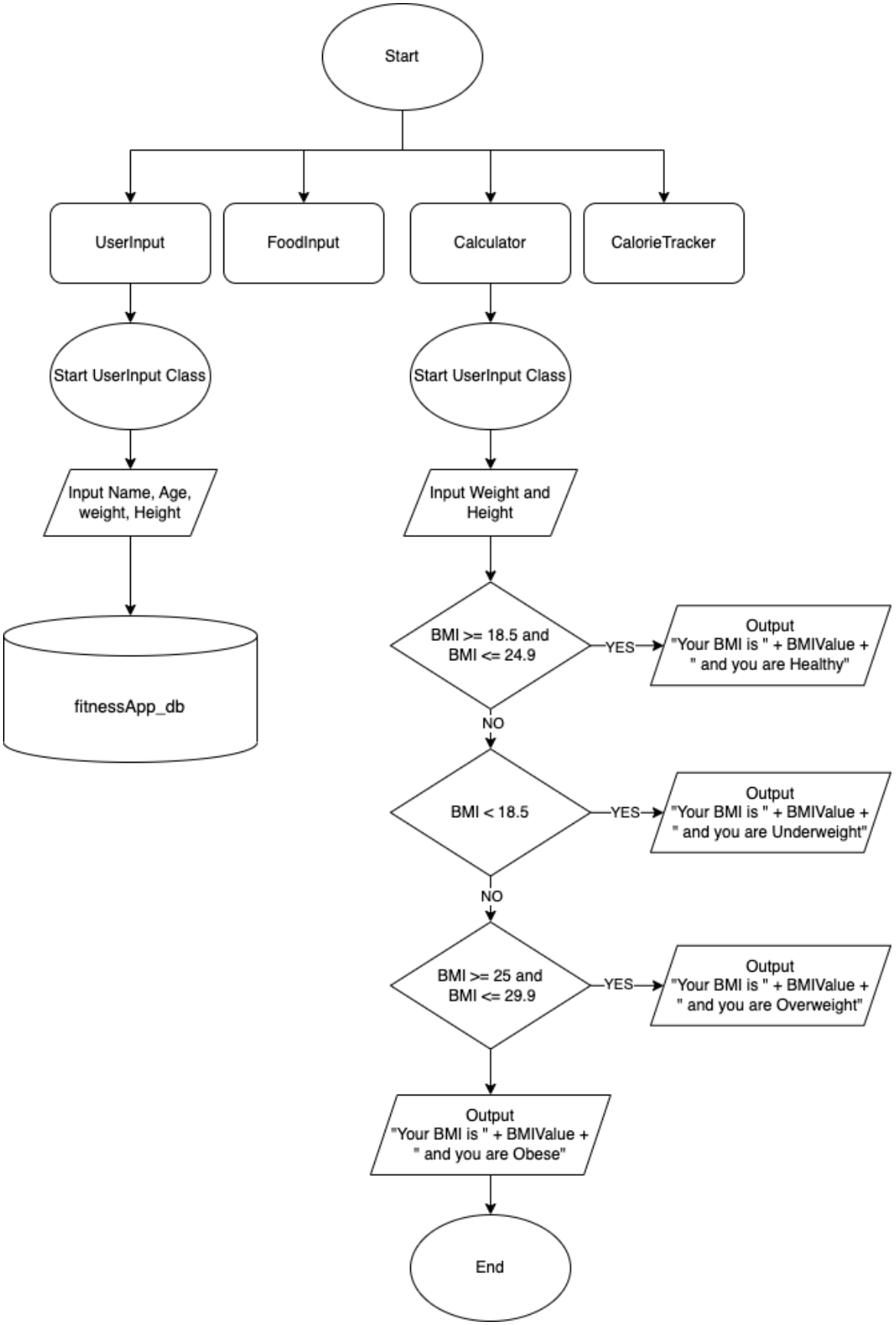

Image 10: System flow diagram of the application

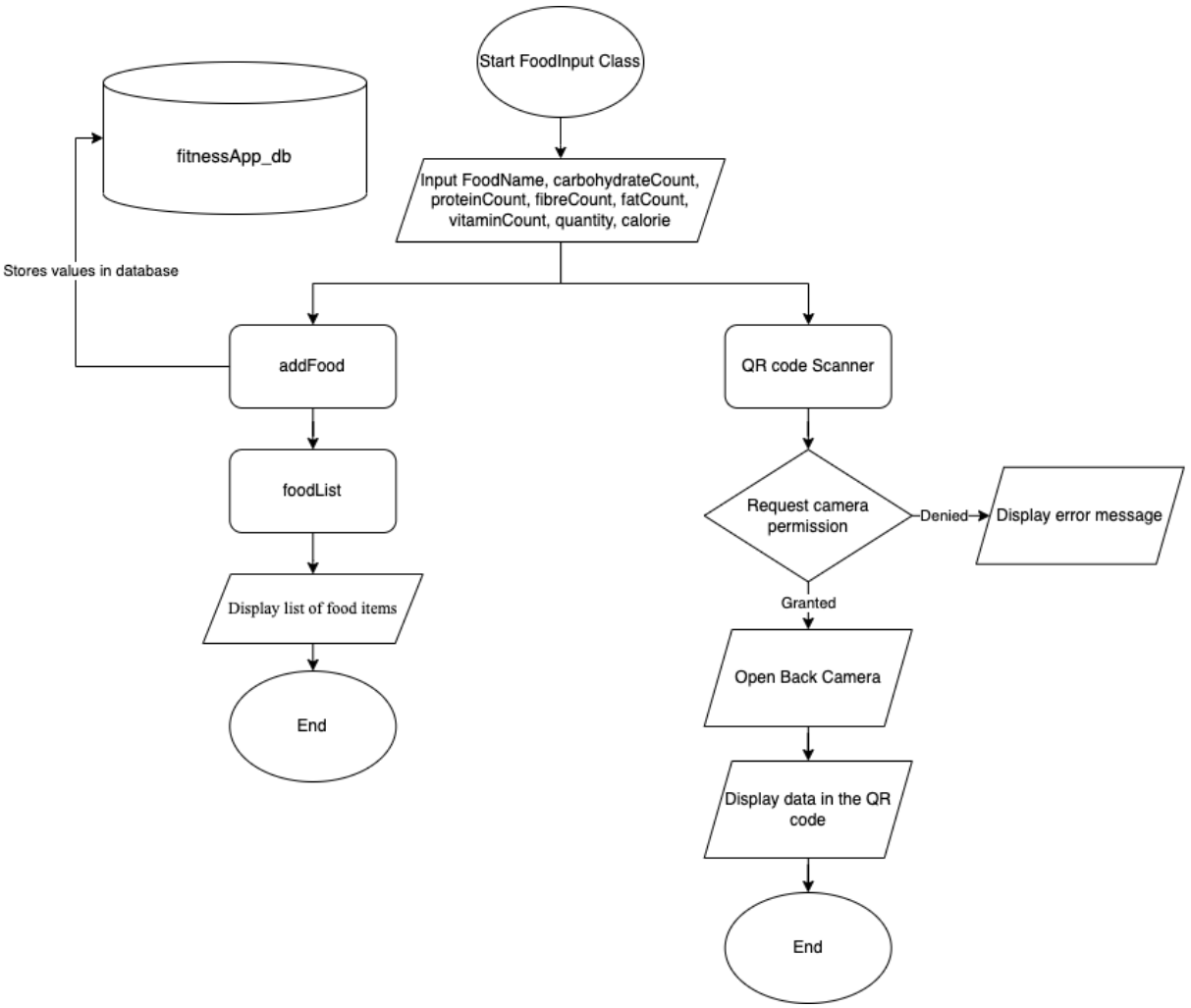

Image 11: System flow diagram of the FoodInput Class

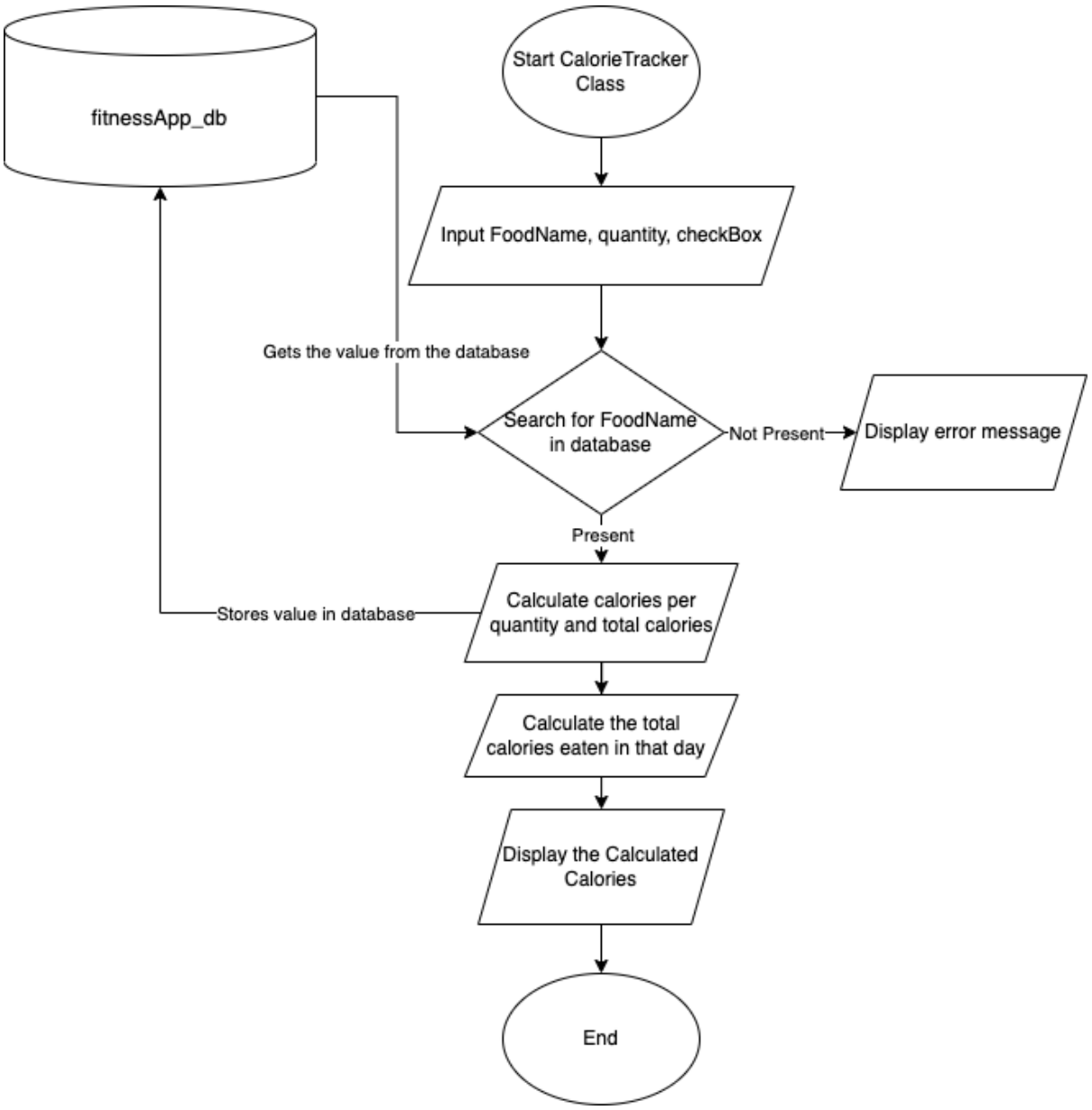

Image 12: System flow diagram of the CalorieTracker class

Structure Chart

Structured the app in this manner on the advice of the client.**(Refer to criterion B)**

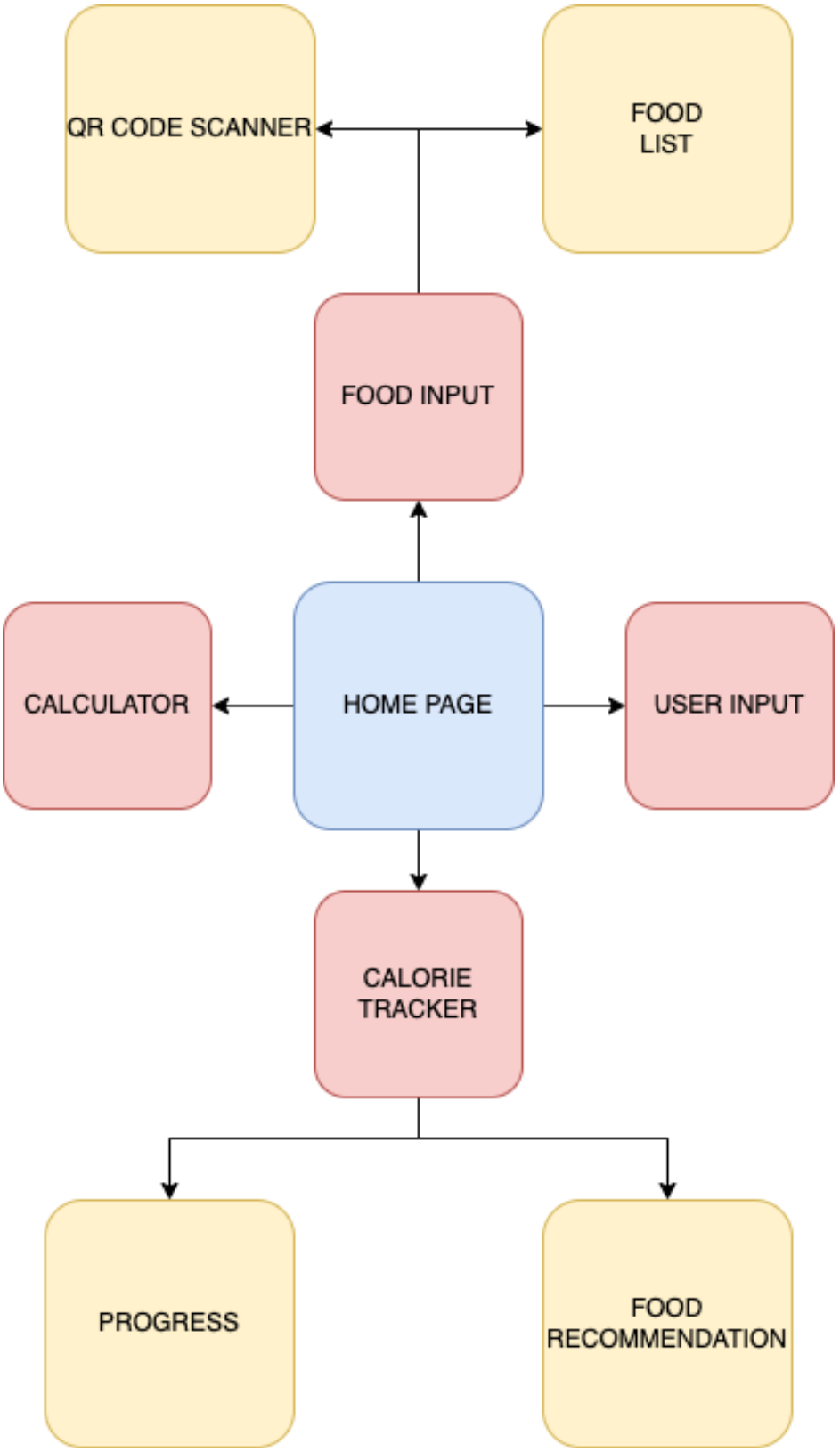

Image 13: Structure chart diagram of the app

Testing Plan

Test Name	Test Type	Criteria Addressed	Nature of Test	Expected Outcome
A	Calculating my BMI	1	Users are able to input their weight and height to calculate their BMI.	Display a pop up toast message with the calculated BMI.
B	Calculating my BMI	1	User enters no values and leaves the height and weight empty.	Display a pop up toast message asking the user to enter all the fields.
C	Calculating my BMI using different values	2	Users are able to calculate their BMI to check if they are healthy, underweight, overweight or obese range.	Display a pop up toast message that showcases the BMI and whether the user is healthy, underweight, overweight or obese.
D	Adding a food item	3	Users are able to input the nutritional facts(eg. Calories, protein, carbohydrates, etc) to add to the database.	Display a pop up toast message saying that the data has been inserted.
E	Adding a food item	3	User enters no values and leaves the nutritional facts(eg. Calories, protein, carbohydrates, etc) empty.	Display an error sign, which when clicked, reminds the user that the field is required.
F	Adding multiple food items and clicking on the show list button	4	Users are able to input the nutritional facts(eg. Calories, protein, carbohydrates, etc) of multiple food items to view them in a list.	Displays a list of cards containing the nutritional facts of the food items entered in the database.

G	Adding a User	5	Users are able to input their personal information (Name, Age, weight, height) to add to the database.	Display a pop up toast message saying that the data has been inserted.
H	Adding a User	5	User enters no values and leaves their personal information (Name, Age, weight, height) empty.	Display a pop up toast message asking the user to enter all fields.
I	Opening the QR code Scanner	6	Users are able to use the QR code scanner to scan QR codes and receive the information stored in them.	Display a pop up screen that shows the information stored in the QR code.
J	Opening the QR code Scanner	6	Users do not give permission to use the camera for the QR code Scanner.	Display a pop up screen that shows an error message.
K	Opening the QR code Scanner	6	Users click the volume up button.	The phone should turn on the flash.
L	Adding Calories eaten in a meal	7	Users are able to input the name and quantity of food items eaten to add to the database.	Display a pop up toast message saying that the data has been inserted.
M	Asking for food recommendations	8	Users are able to receive a list of recommended food items based on their personal information.	Display a page with the recommended food items
N	Tracking Calories	9	Users are able to input the nutritional facts of specific meals(Food name and quantity) to add to the database.	Display a page with the daily calorie consumption.
O	Tracking Calories	9	User enters no values and leaves the food name, quantity or the check boxes empty.	Display an error sign, which when clicked, reminds the user

				that the field is required.
P	Checking for errors	10	User leaves any of the fields in any page empty.	Either display a pop up toast message asking the user to enter all fields or show an error sign, which when clicked, reminds the user that the field is required.
Q	Opening the app	11	User opens the app.	Display a home screen that divides the app in parts to help the user get to where he/she wants to faster.