**Back-End:**

**1- Account/Signin/Signout**

// welcome message

PRINT "Welcome to the HealthHorizon"

// registration details

PRINT "Create an account:"

// Get user input

PRINT "Enter Username: "

username = User Input()

// Check if username already exists

IF (username exists in database) then

PRINT "Error: Username already in use. Please try again."

END IF

PRINT "Enter Password: "

password = User Input()

PRINT "Confirm Password: "

ConfirmPassword = User Input()

// Check if password matches

IF password != ConfirmPassword then

PRINT "Error: Passwords do not match. Please try again."

END IF

PRINT "Enter Email Address: "

email = user input()

// Check if an email already exists in the system

IF (email exists in database) then

PRINT "Error: Email already in use. Please try again."

END IF

//User’s signIn

signIn (username, password)

//check username and password from database

IF (username/password exists) then

PRINT “signIn Successful! “

ELSE “Try Again! “

END IF

//User’s signOut

IF (user is logged in) then signOut

PRINT “signOut Successful! “

END IF

**2-User’s Profile/Basic Health Information**

PRINT "Enter Age: "

age = user age ()

//Check the user’s appropriate age for an app.

IF (age < 16 OR age > 120)

THEN PRINT "Error: Invalid age. Please enter a valid age."

END IF

PRINT "Enter Gender (Male/Female/Other): "

gender = user Input()

Check user validation

IF (gender != Male/Female/Other) then

PRINT “Error: Please enter valid response. “

END IF

PRINT "Enter Height (in ft): "

height = user input()

IF (height < 3ft OR height > 15ft) then

PRINT “Error: Invalid height. Please enter a valid response. “

END IF

PRINT "Enter Weight (in lbs): "

weight = user input()

//Check user weight in lbs, it is valid or not.

IF (weight < 10 OR weight > 800) then

PRINT "Error: Invalid weight. Please enter a valid weight.“

END IF

// Store new user in the system

ADD NewUser TO database

// print account created message

PRINT "Account successfully created! "

END

**3- User’s Goal:**

//set users health goals.

IF current weight > targetWeight then

PRINT “Keep working on your weight target.”

END IF

IF steps != targetSteps then

PRINT “Steps target not achieved! “

END IF

IF (cardio = 60Minutes/day) then

PRINT “You have successfully completed today’s goal”

END IF

**3b-Data Analysis**

//this can be used for storing and formatting any data like steps, time walk/ran, calories burned, etc.. it can also be scaled to account for any intervals we want such as weekly, monthly, yearly

Create queue(i) <= 7

Insert rear(x)

//check for overflow

If (rear > c) || (rear == front)

Delete front()

Else

queue(rear) = x

Rear = rear +1

End

//weekly results

Print (queue(rear))

Print (queue(rear+1))

Print (queue(rear+2))

Print (queue(rear+3))

Print (queue(rear+4))

Print (queue(rear+5))

Print (queue(front))

y = sum of queue(i)

Print (y)

end

**..**