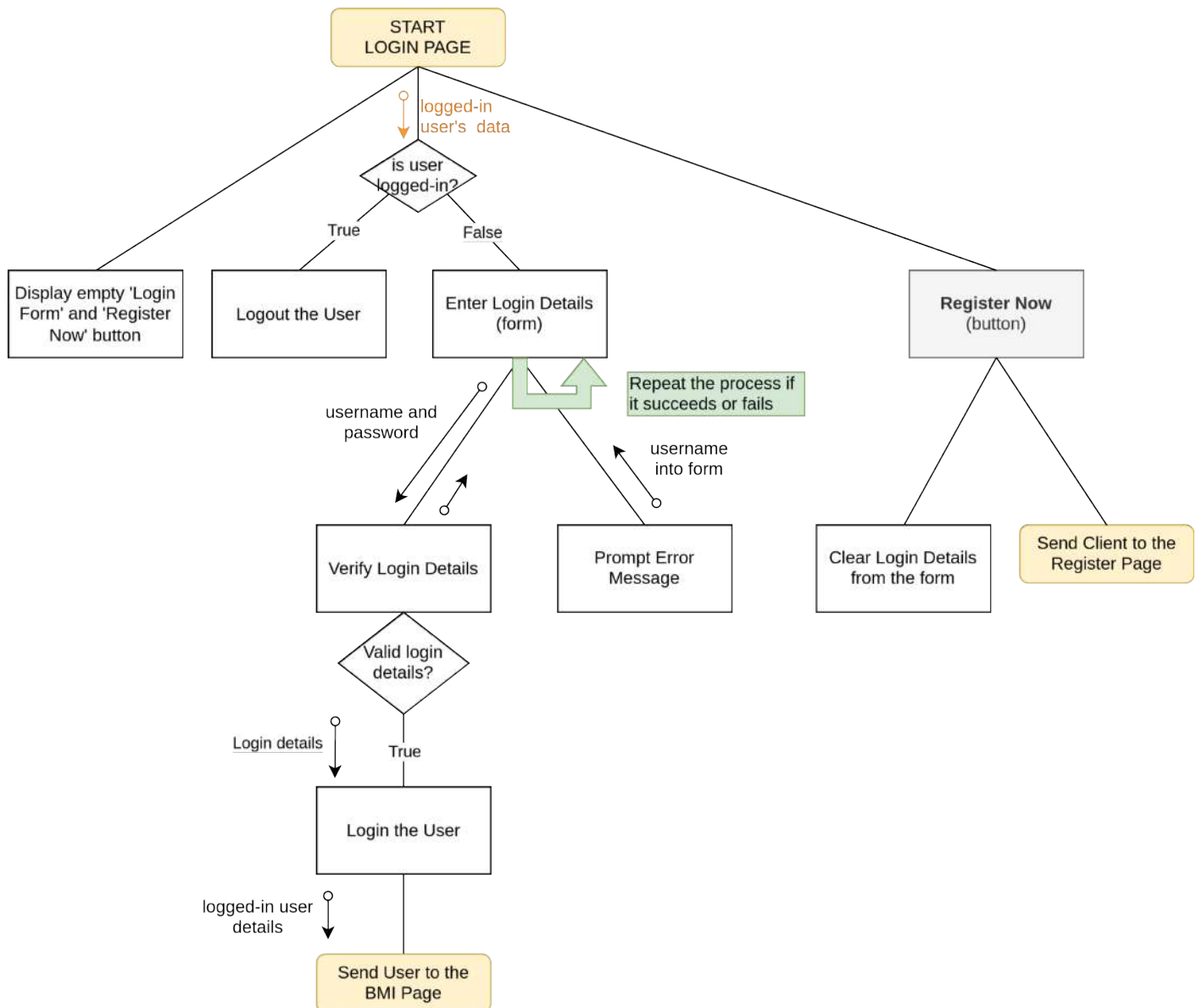
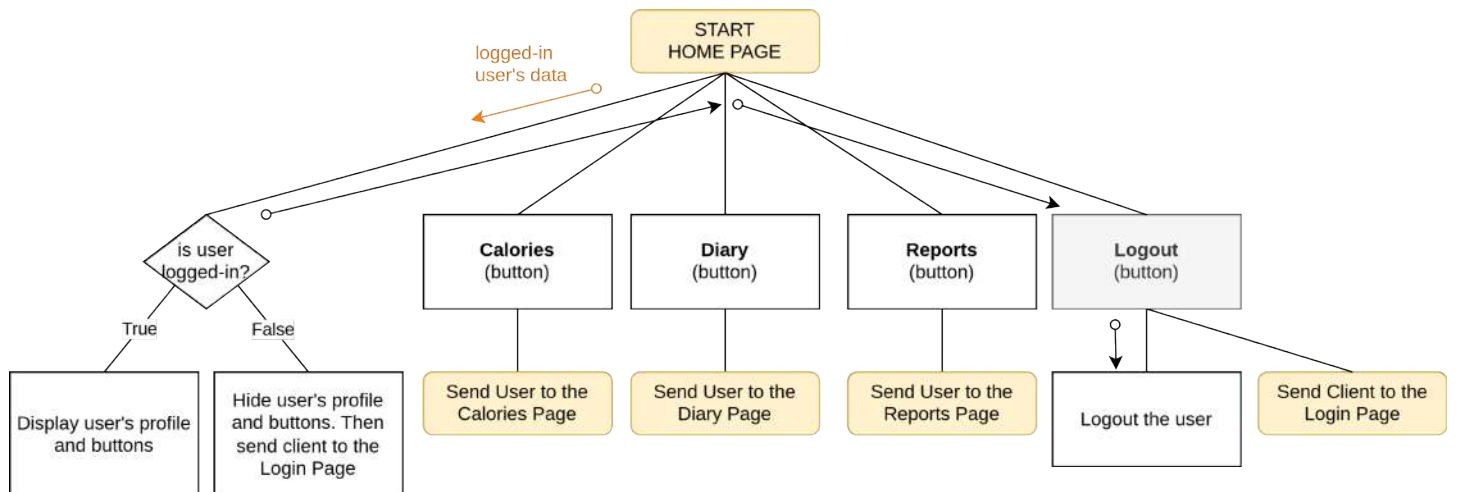
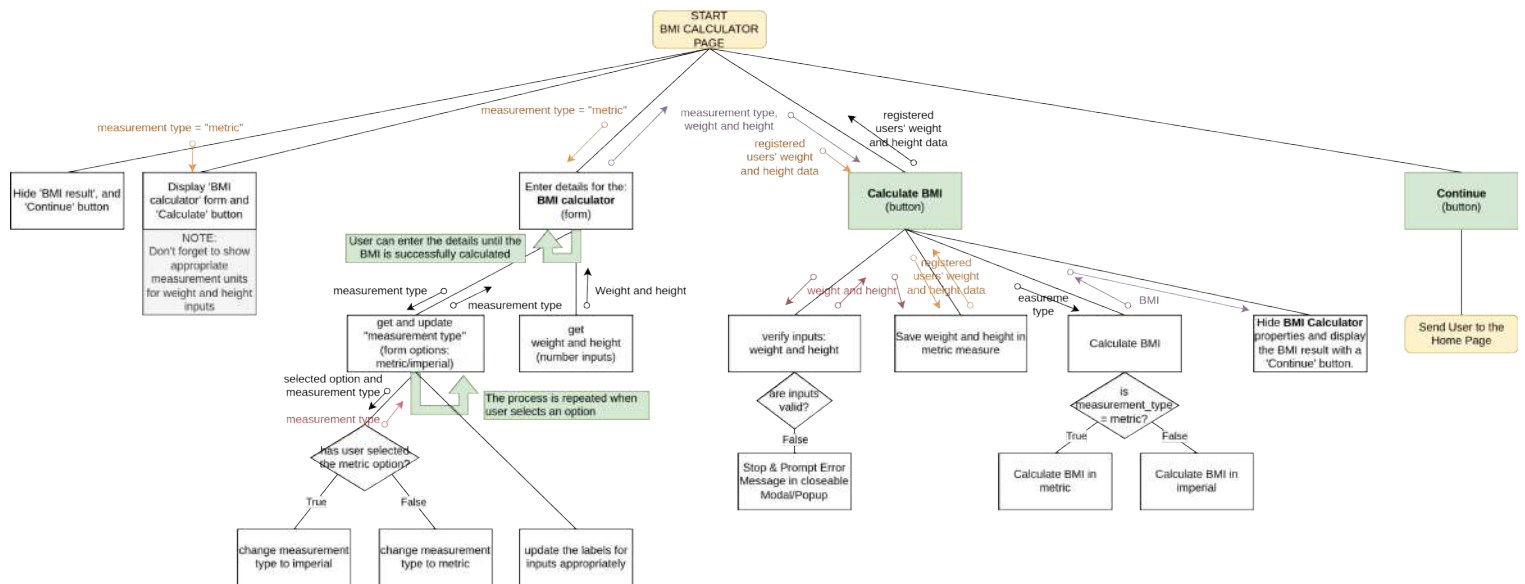
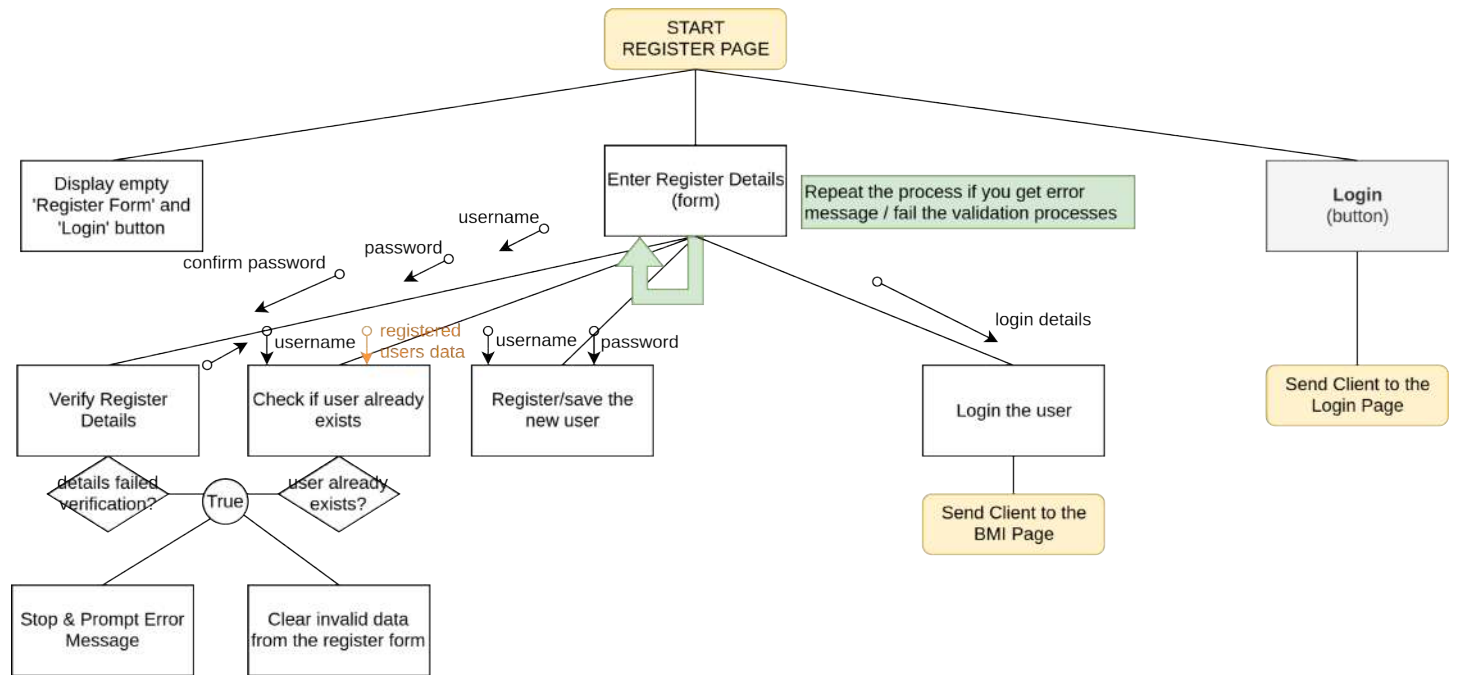


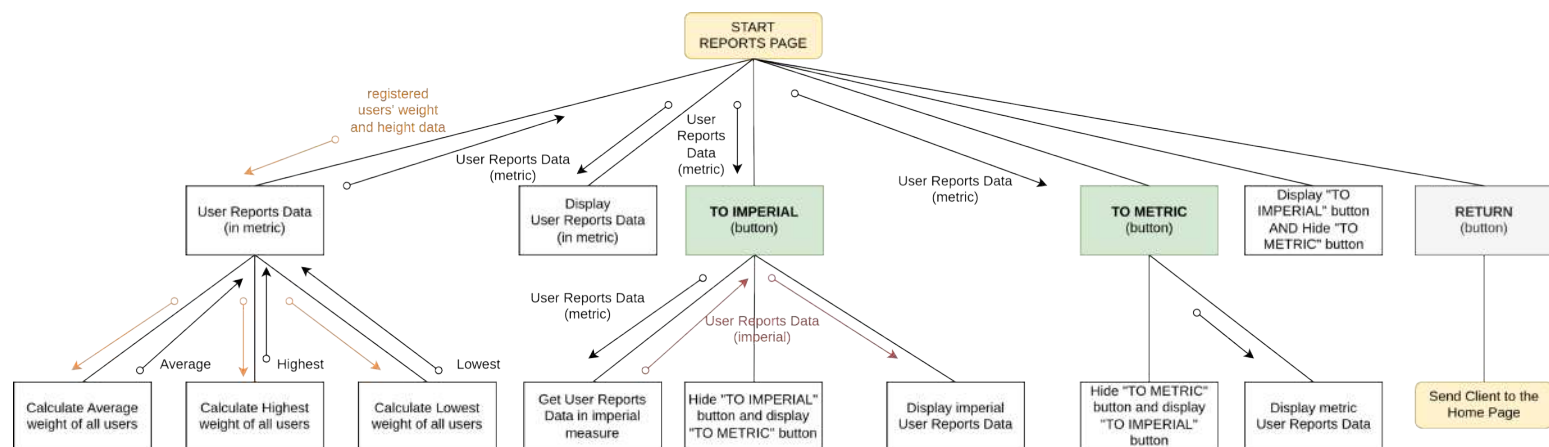
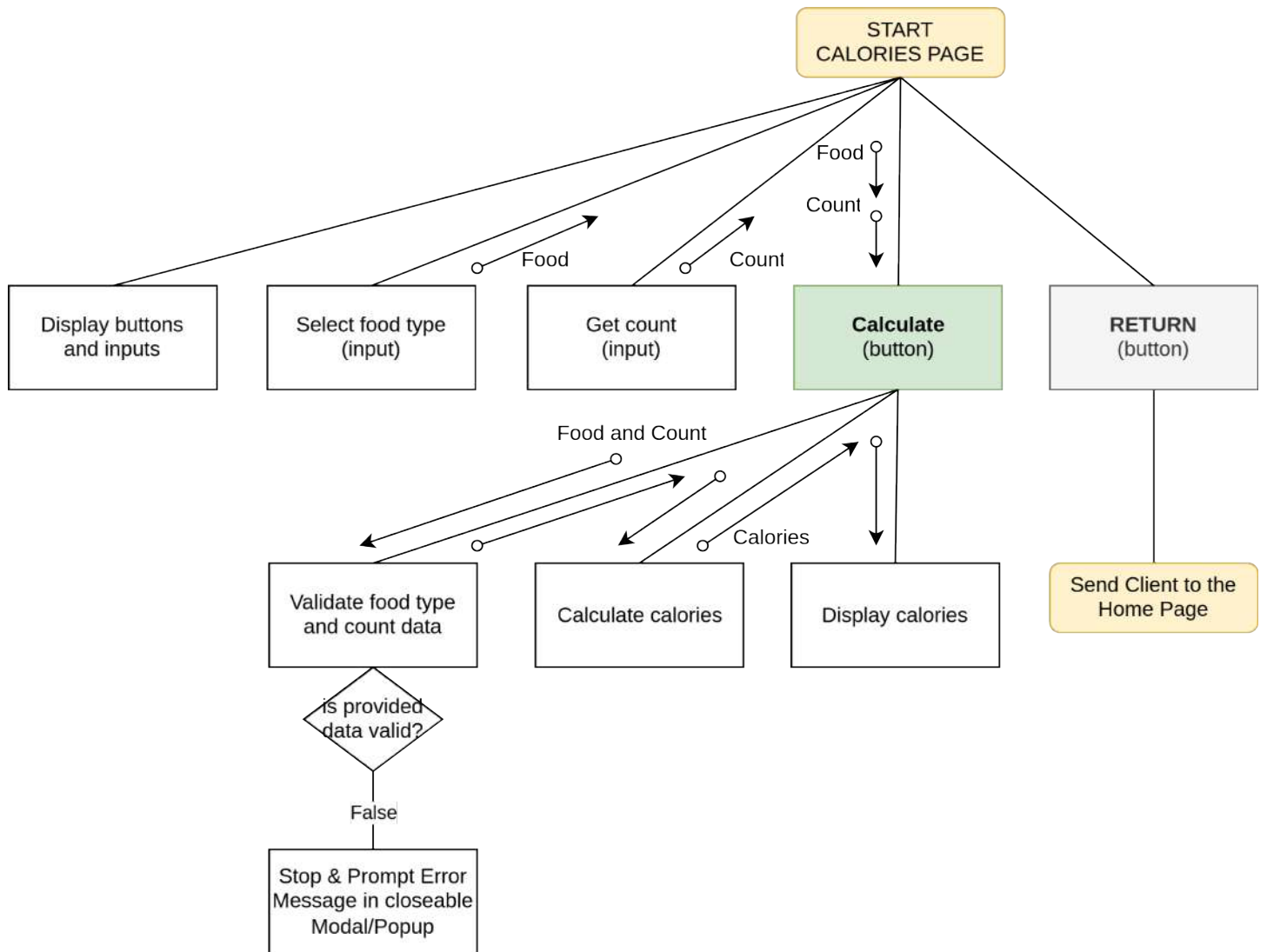
# Design Document

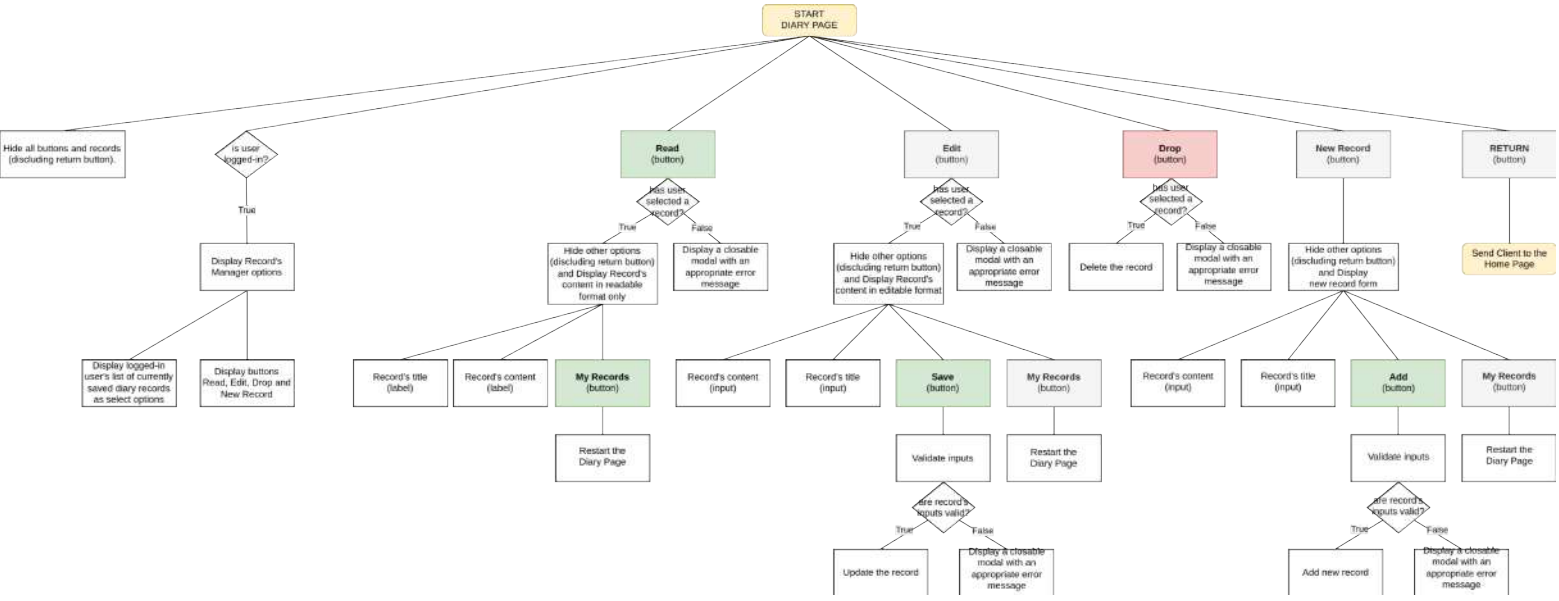
by Gabriel Ksiazek (2030089)

## Structure Charts



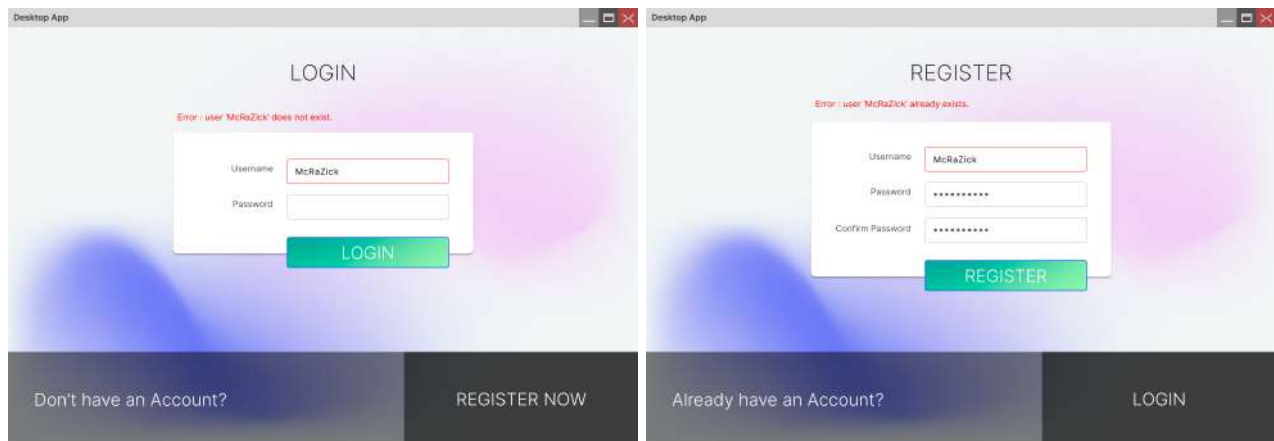






# Wireframes

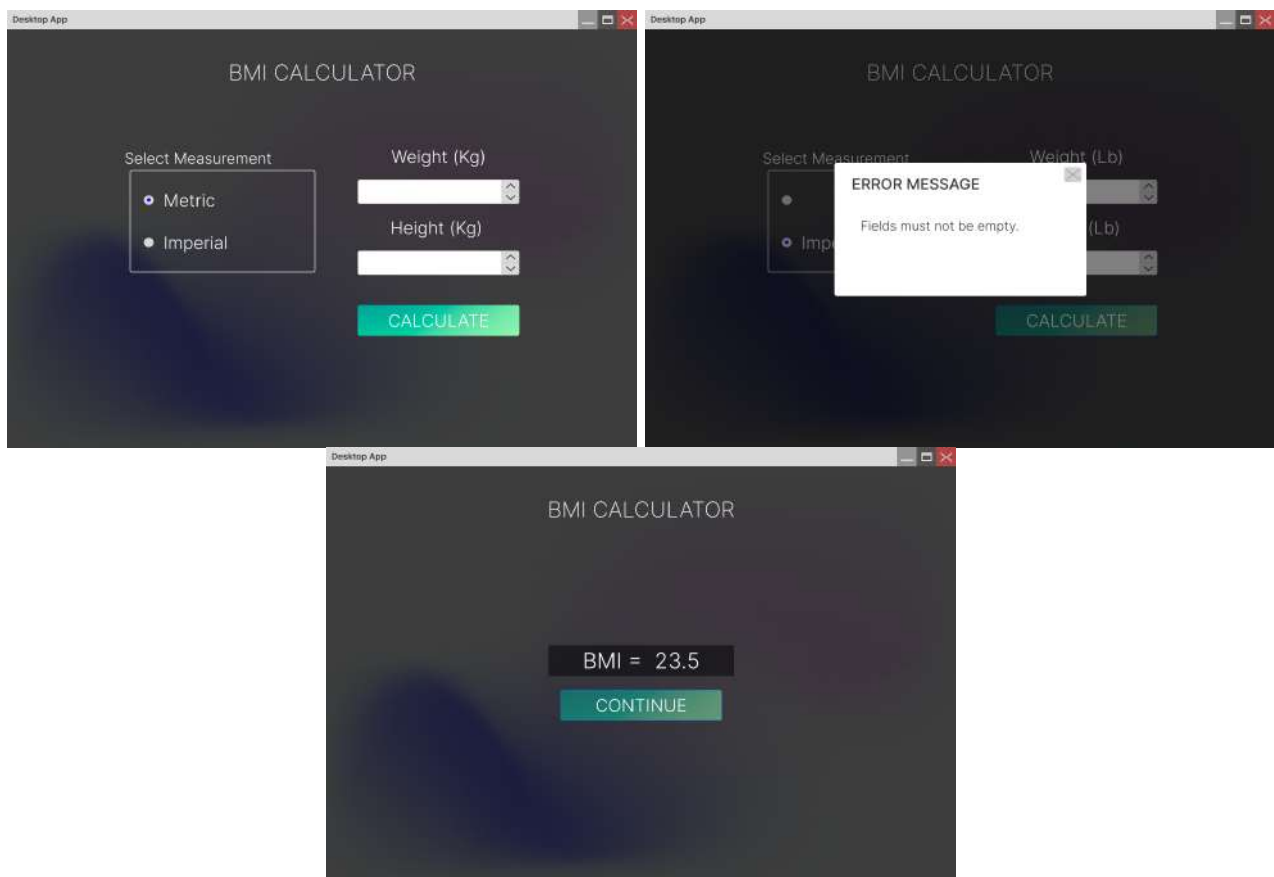
## Login & Register page



The image shows two side-by-side wireframes for a desktop application. The left wireframe is the 'LOGIN' page. It features a title 'LOGIN' at the top. Below it, a red error message reads 'Error : user 'McRaZick' does not exist.'. There is a form with two input fields: 'Username' (containing 'McRaZick') and 'Password'. A green 'LOGIN' button is at the bottom of the form. At the bottom of the page, there are two links: 'Don't have an Account?' and 'REGISTER NOW'. The right wireframe is the 'REGISTER' page. It features a title 'REGISTER' at the top. Below it, a red error message reads 'Error : user 'McRaZick' already exists.'. There is a form with three input fields: 'Username' (containing 'McRaZick'), 'Password' (containing '\*\*\*\*\*'), and 'Confirm Password' (containing '\*\*\*\*\*'). A green 'REGISTER' button is at the bottom of the form. At the bottom of the page, there are two links: 'Already have an Account?' and 'LOGIN'.

## BMI page

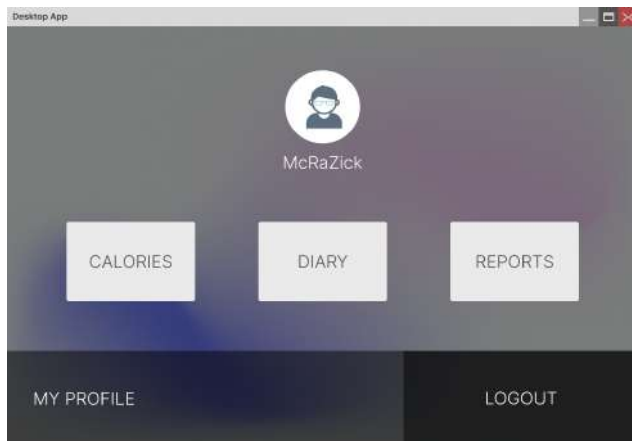
- Users are automatically logged-in after successful registration, and then are redirected to the BMI page.
- Upon successful submission, the BMI is displayed with the 'continue button', which redirects user to their **home page**.



The image shows three wireframes for a 'BMI CALCULATOR' desktop application. The top-left wireframe shows the initial form with 'Select Measurement' (radio buttons for 'Metric' and 'Imperial'), 'Weight (Kg)' and 'Height (Kg)' input fields, and a green 'CALCULATE' button. The top-right wireframe shows an 'ERROR MESSAGE' dialog box with the text 'Fields must not be empty.' over the form. The bottom wireframe shows the result 'BMI = 23.5' displayed in a dark box, with a green 'CONTINUE' button below it.

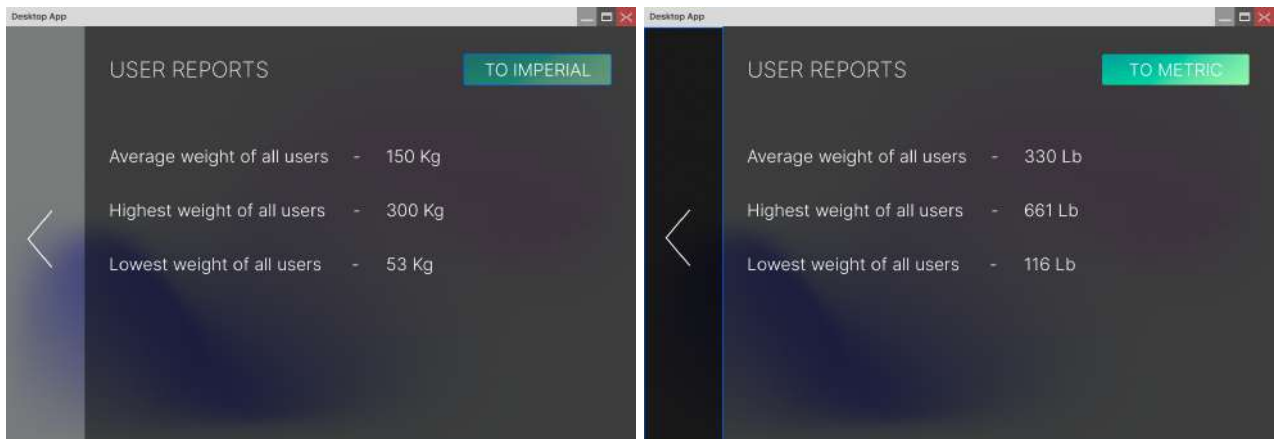
## Home page

- I decided to include this page to improve navigability.
- User can find navigation buttons to head to other pages.
- They can also logout from their profile.

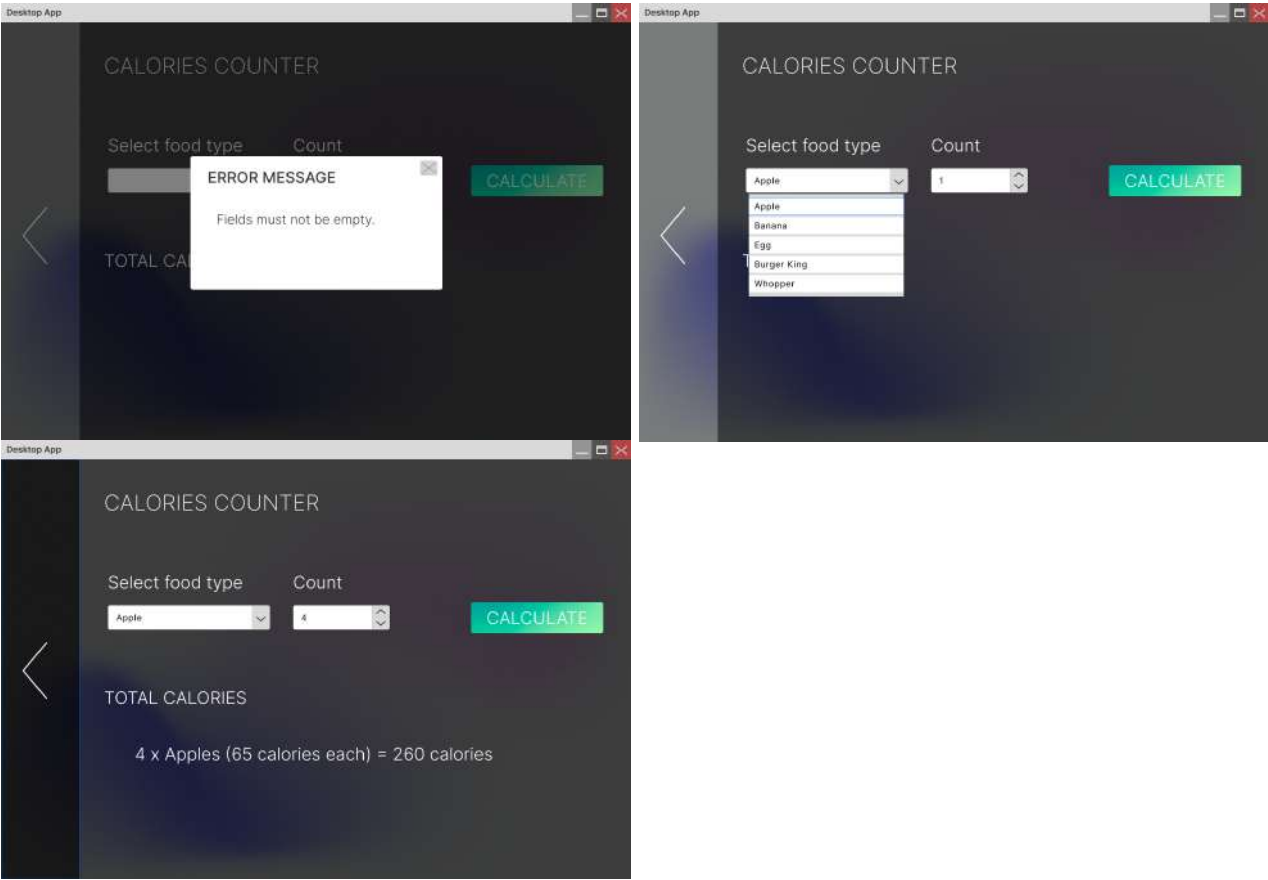


## Reports page

Note that the 'left-arrow' button is present on many different pages, it serves a function of returning the user back to the **home page**.



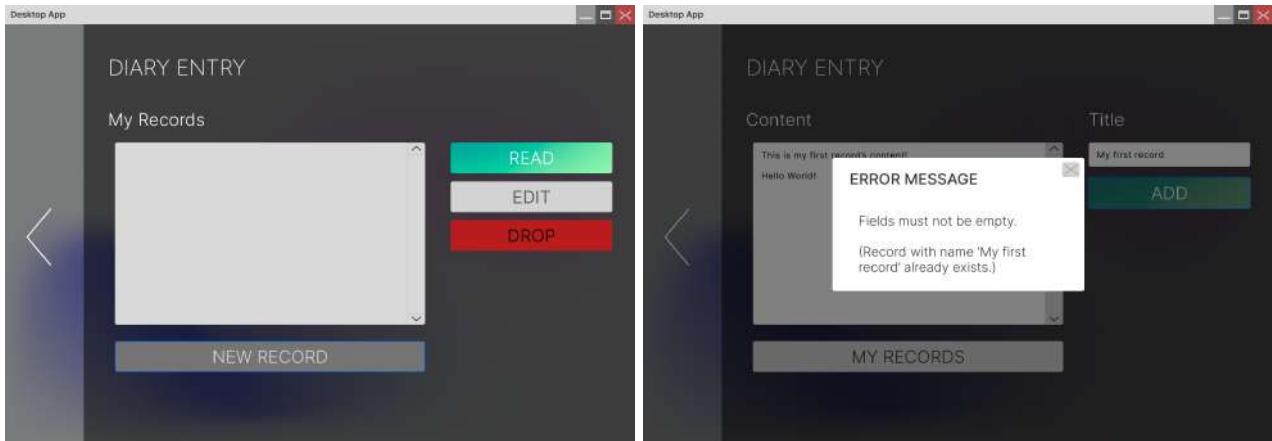
# Calories page



## Diary page

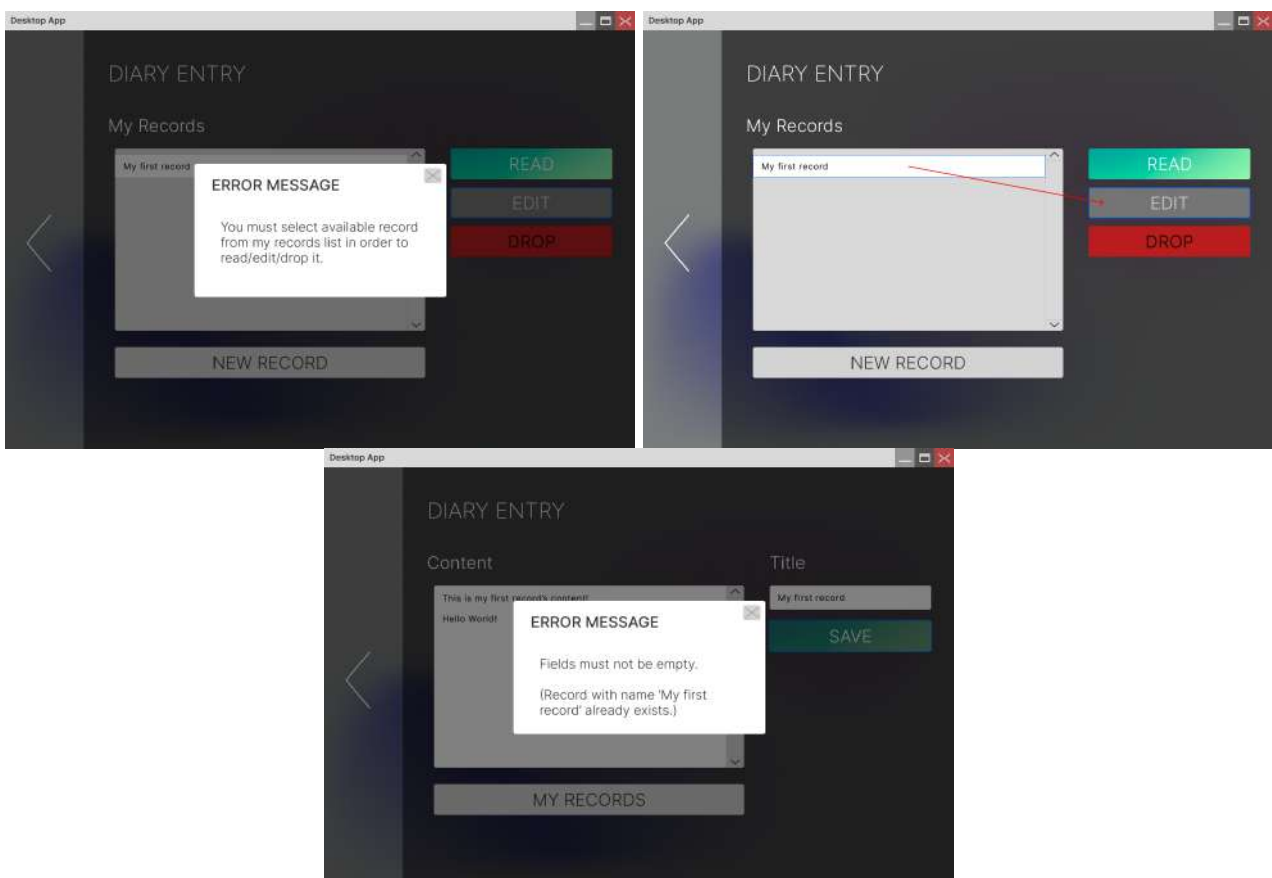
### Add Diary Record:

(Press 'New record' button, fill-out the form, and press 'Add' button to create a record.)



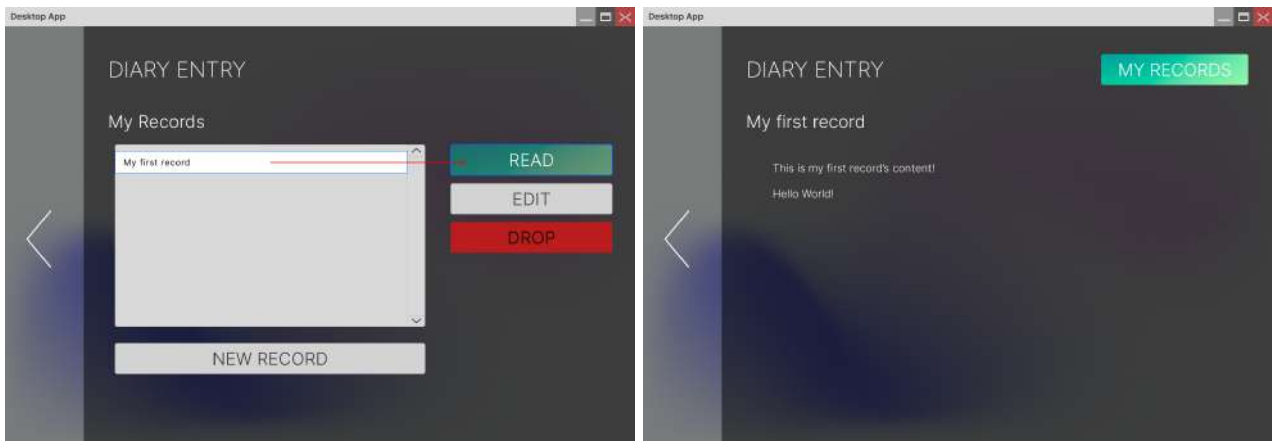
### Edit Diary Record:

(Select a record from my records list, and press 'Edit' option at the right side.)

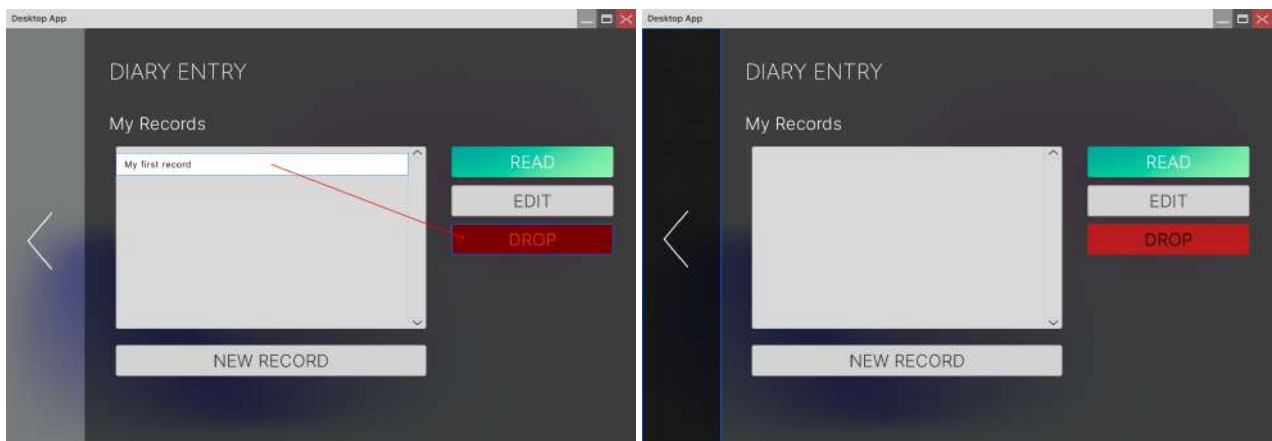




Read Diary Record:  
(Select a record from my records list, and press 'Read' option at the right side.)



Drop Diary Record:  
(Select a record from my records list, and press 'Drop' option at the right side.)



# Pseudocode

### NOTE: "weight\_list" is a list of weight's of all registered users

### START OF STANDARD\_ALGORITHMS -----

```
DEFINE FUNCTION get_average_weight(weight_list) AS {  
    SET total TO 0  
    SET count TO 0  
  
    REPEAT FOR EACH weight FROM weight_list {  
        SET total TO total + weight  
        SET count TO count + 1  
    }  
  
    RETURN total / count  
}
```

```
DEFINE FUNCTION get_highest_weight(weight_list) AS {  
    SET highest_weight TO 0  
  
    REPEAT FOR EACH weight FROM weight_list {  
        IF weight IS_GREATER_THAN highest_weight THEN {  
            SET highest_weight TO weight  
        }  
    }  
  
    RETURN highest_weight  
}
```

```
DEFINE FUNCTION get_lowest_weight(weight_list) AS {  
    SET lowest_weight TO get_highest_weight(weight_list)  
  
    REPEAT FOR EACH weight FROM weight_list {  
        IF weight IS_LOWER_THAN lowest_weight THEN {  
            SET lowest_weight TO weight  
        }  
    }  
  
    RETURN lowest_weight  
}
```

### END OF STANDARD\_ALGORITHMS -----

### START OF CONVERSION\_ALGORITHMS -----

```
DEFINE FUNCTION kg_to_lb(kg) AS {  
  SEND ERROR IF kg IS_NOT_A_NUMBER  
  RETURN kg MULTIPLY_BY 2.20462262  
}
```

```
DEFINE FUNCTION lb_to_kg(lb) AS {  
  SEND ERROR IF lb IS_NOT_A_NUMBER  
  RETURN lb DIVIDE_BY 2.20462262  
}
```

```
DEFINE FUNCTION lb_weight_list_to_kg(weight_list) AS {  
  SET new_weight_list TO EMPTY_LIST  
  
  REPEAT FOR EACH weight FROM weight_list {  
    ADD ITEM lb_to_kg(weight) TO new_weight_list  
  }  
  
  RETURN new_weight_list  
}
```

```
DEFINE FUNCTION kg_weight_list_to_lb(weight_list) AS {  
  SET new_weight_list TO EMPTY_LIST  
  
  REPEAT FOR EACH weight FROM weight_list {  
    ADD ITEM kg_to_lb(weight) TO new_weight_list  
  }  
  
  RETURN new_weight_list  
}
```

### END OF CONVERSION\_ALGORITHMS -----