Food Diary

CSE 438

## Spring 2019

1 Setup

Navigate to the repository for this assignment and make a fork. When making the fork, include your last name in the name of the repository, and make sure the repository is marked private. To submit your project, commit and push your code to the repository by the due date.

2 Introduction

In this assignment you will be building a food diary app to keep track of calorie intake. At the start of the app, the user should be able to enter in an initial total calorie amount that they want to keep track of.
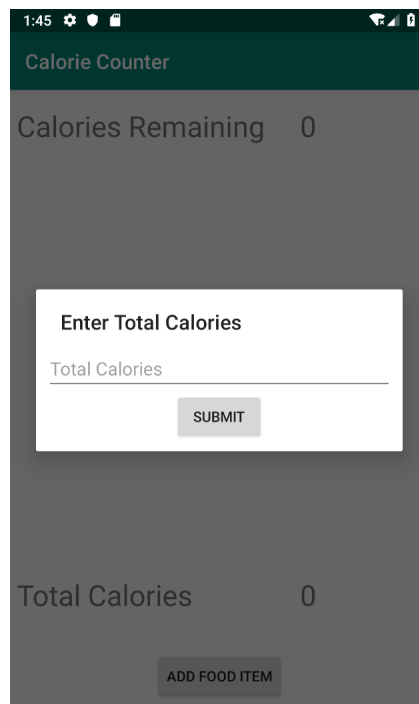
The user should then have the ability to add foods to the diary. The app should take the user to a second activity where they can enter the name of the food and the number of calories. On successful submission, the app should return to the main activity and update the screen to reflect the total number of calories they still have available, the total number of calories they have consumed, and a list of the foods they have eaten with their respective calorie amounts.
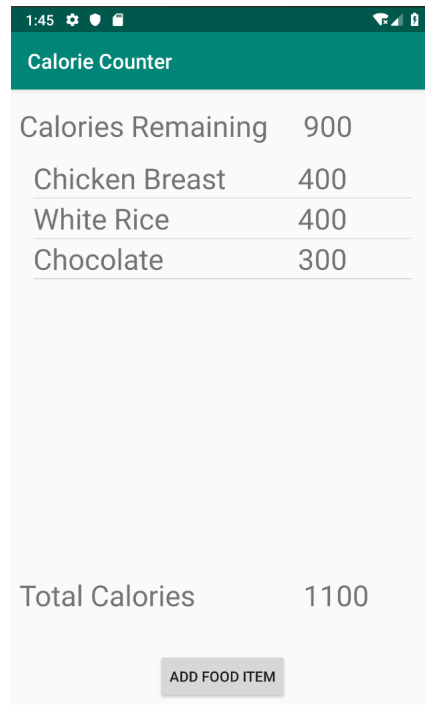
If the number of calories remaining becomes negative, this should be reflected in the app through a change in the text color to red.
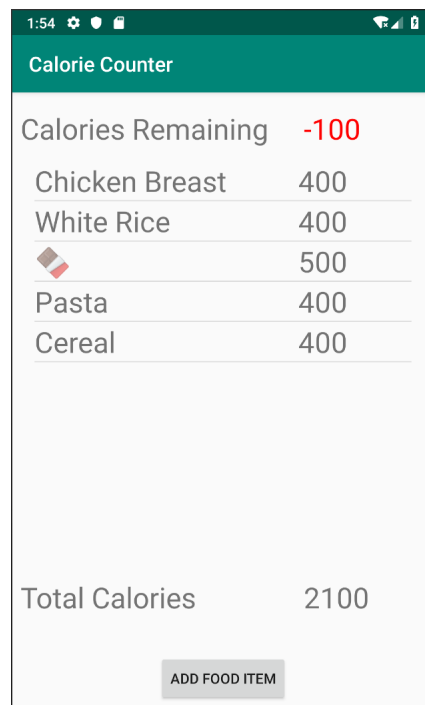
3 Tips

1. Remember to sanitize inputs and consider edge cases!

2. For the list of food items, you are going to want to review ListViews and designing your own Adapters to create the view.

3. Recall the use of onActivityResult and startActivityForResult for communicating between activities.

4. If you choose to use a dialog box, AlertDialog is recommended.

5. Remember to review best coding practices for Kotlin.

4   ListView

The ListView is a new view you will be working with for this lab. It is exactly what it sounds like - it creates a list of items based on an array. For the purposes of this lab, you will probably want to create a custom ListView row which will be used to display the food items. This will give you the view you want, and more control over what happens with the ListView. To do this, you will need to extend the ArrayAdapter class. Take a look at the documentation here.

More specifically, you will want to create a simple class to hold a row. This class will be nothing more than a container for the food name and calorie values. In your adapter class should have an array of food items as one of its properties. You will then need to override the `getView` function to properly display the item at the given position.

Additionally, another important tool you will need is the LayoutInflater. This will come in handy when you design the view that will be the row of your ListView and use it to populate the Adapter itself.

Take a look at this example of creating a custom adapter and use it as a guide for this part of the assignment.

5   Creative Portion

For every homework assignment, you will be asked to think of an additional feature to be added to the application that will improve the user experience and provide you an opportunity to learn about concepts that you are personally interested in. Put yourself in the shoes of your users: what features would they like to see in an app like this? Try to make it something new and substantially different from what the app already does - do not just rehash existing requirements.

When you submit your assignment, please include a ReadMe.txt file that explains your creative portion. You should explain what the feature is, why you chose to implement that particular feature, and how you went about implementing it.

To recieve full credit, your feature needs to be substantial as compared to the rest of the assignment. Examine the rubric below to get a feel for how much weight we are putting on the creative portion of the assignment.

6   Rubric

1. (10 Points) User can enter total calorie amount on start up

2. (8 Points) User can add new food item by name

3. (8 Points) User can add new food item by calorie

4. (4 Points) Adding new food items is done in a second activity

5. (5 Points) Calories remaining is updated with each new food item

6. (5 Points) Calorie consumed is updated with each new food item

7. (10 Points) The list of food items displays foods and their respective calories amounts

8. (10 Points) Color change when calorie count becomes negative

9. (10 Points) All inputs are filtered and error messages are displayed accordingly

10. (2 Points) Code is clean and commented

11. (3 Points) App is visually appealing

12. (15 Points) Creative portion - design your own feature(s)!