ITIS/ITCS 5180 Mobile Application Development
In Class Assignment 8

Basic Instructions:

1. In every file submitted you MUST place the following comments:
   a) Assignment #.
   b) Full names of the students in the group.
2. This is a group assignment.
3. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will lose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
4. Please download the support files provided with this assignment and use them when implementing your project.
5. The min SDK version is 20, and the target SDK version is 25.
6. Submission details:
   a) Export your Android project and create a zip file which includes all the project folder and any required libraries.
   b) The file name is very important and should follow the following format: **InClass08_GroupNumber.zip.** You should submit the assignment through Canvas: Submit the zip file.
7. **Failure to follow the above instructions will result in point deductions.**

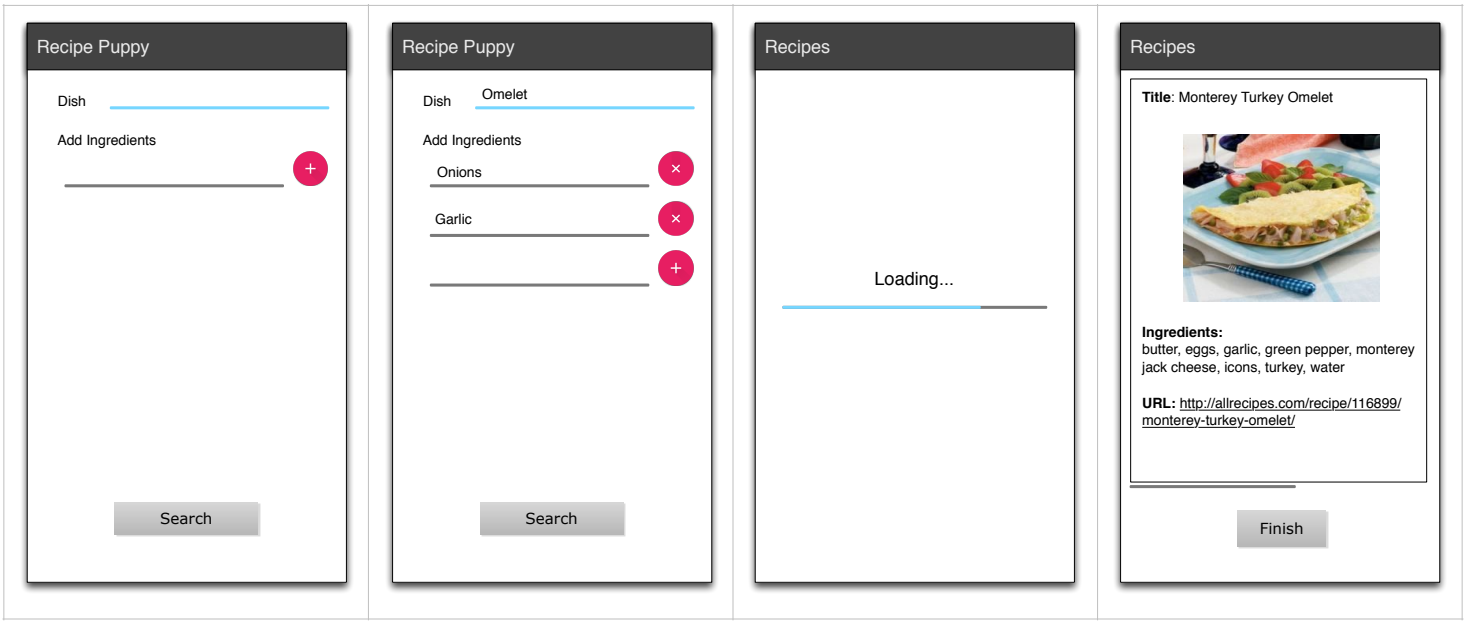
In Class Assignment 08 (100 Points)

In this assignment you will revisit “RecipePuppy recipe finder” app. The App displays recipes from Recipe Puppy (http://www.recipepuppy.com/). This allows you to search the recipes of the dish you are interested in, with proper ingredients. In this assignment, you will learn how to use fragments instead of multiple activities.

The base URL of the API is: http://www.recipepuppy.com/api/?i=<INGREDIENTS LIST, COMMA SEPARATED>&q=<DISH NAME>. An example URL is: http://www.recipepuppy.com/api/?i=onions,garlic&q=omelet .

You can load the URL in **codebeautify.org/jsonviewer** for better understanding of JSON you receive.

In this assignment we will build two fragments. The first screen is to search, and the



(a)Search Screen | (b) Added a list of ingredients | (c) Loading recipes | (d) Display recipes

Figure 1, App Wireframe

second screen is to display the results of the recipe search.

Search Screen (40 Points)

You need to implement the following:

1. An EditText to put the dish name.
2. A scrollable add ingredients panel which can **add up to 5 ingredients** in total.

3. The panel to add ingredients should be implemented using RecyclerView, see figure 1 (b).
4. It should display an empty EditText, and a floating action Add button. Once, you add one ingredient, the floating action button should be changed from Add to Remove button. Follow figure 1(b).
5. Then you need to create the URL as: http://www.recipepuppy.com/api/?i=<INGREDIENTS LIST, COMMA SEPARATED>&q=<DISH NAME>.
6. There should be a Search button. Clicking on that button should take you to the Display recipes screen where it displays a list of recipes.

Recipes Screen (60 Points)

1. Use an AsyncTask or Thread pool to communicate with the RecipePuppy api and to parse the result. Do not use the main thread to parse them.
2. In our example, we wanted to search for a Omelet recipe having two key ingredients: Onions, and Garlic.
3. In received JSON, you will find that there are two levels of the hierarchy. Inside “array”, you will find “results”. You need to **parse all the items in results**.
4. Use AsyncTask or Thread pool to retrieve and parse it.
5. You need to implement a ProgressBar to display the progress while it is parsing, see figure 1(c). You can do it using a different fragment.
6. Finally display your result. Please follow the instructions:
    1. The whole list of results should be displayed in a horizontal Recycler/CardView.
    2. You have four things to display in each item:
        1. Title (“title” in JSON)
        2. Recipe image (“thumbnail” in JSON)
        3. Ingredients (“ingredients” in JSON)
        4. URL (“href” in JSON)
    3. You need to use a separate AsyncTask when you load the image. Alternatively, you can use Picasso library to load the image. (http://square.github.io/picasso/).
    4. The URL should be clickable, use implicit intents to open it in browsers.
    5. f no recipe is found, return to the main screen and toast to report that there were no recipes found.
    6. Clicking on Finish button should Finish the second screen and return you to the main screen.
7. Do not use the default Back Button options, override the method to use the BackStack.