

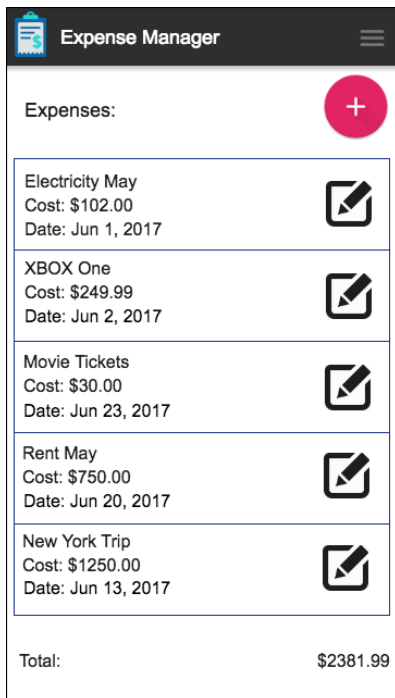
## ITIS/ITCS 5180 Mobile Application Development Homework 5

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### Basic Instructions:

1. In every file submitted you **MUST** place the following comments:
  - a. Assignment #.
  - b. File Name.
  - c. Full name of all the students in the group.
2. This is a group assignment. Only one member in the group should submit it in Canvas.
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. Export your Android project and create zip file which includes all the project folder and any required libraries.
6. Submission details: The file name should follow the following format:  
**Group#\_HW05.zip**
7. **Failure to follow the above instructions will result in point deductions.**

## Homework 05 (100 points)



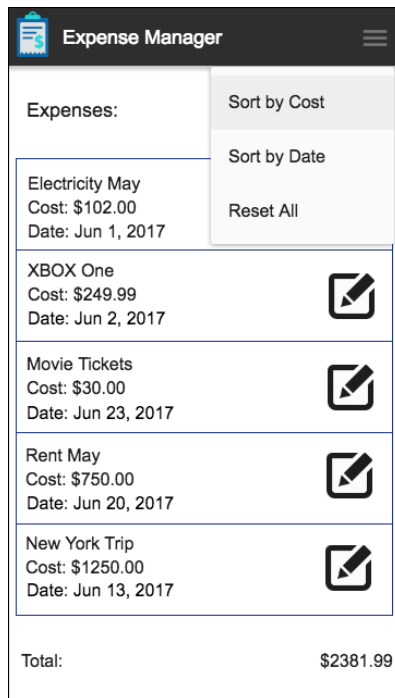
Expense Manager

Expenses: +

Electricity May Cost: \$102.00 Date: Jun 1, 2017	
XBOX One Cost: \$249.99 Date: Jun 2, 2017	
Movie Tickets Cost: \$30.00 Date: Jun 23, 2017	
Rent May Cost: \$750.00 Date: Jun 20, 2017	
New York Trip Cost: \$1250.00 Date: Jun 13, 2017	

Total: \$2381.99

(a) Main Screen



Expense Manager

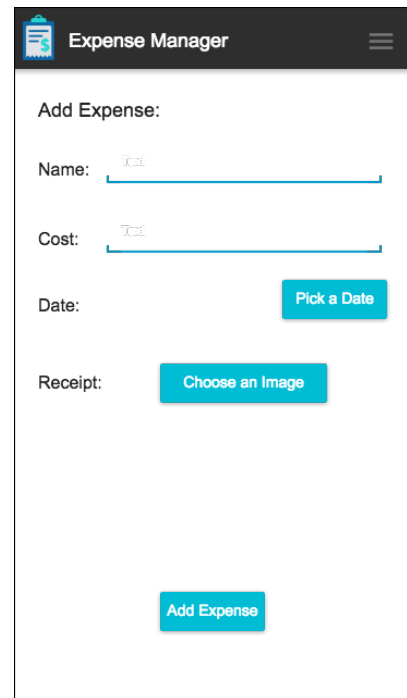
Expenses:

- Sort by Cost
- Sort by Date
- Reset All

Electricity May Cost: \$102.00 Date: Jun 1, 2017	
XBOX One Cost: \$249.99 Date: Jun 2, 2017	
Movie Tickets Cost: \$30.00 Date: Jun 23, 2017	
Rent May Cost: \$750.00 Date: Jun 20, 2017	
New York Trip Cost: \$1250.00 Date: Jun 13, 2017	

Total: \$2381.99

(b) Menu buttons



Expense Manager

Add Expense:

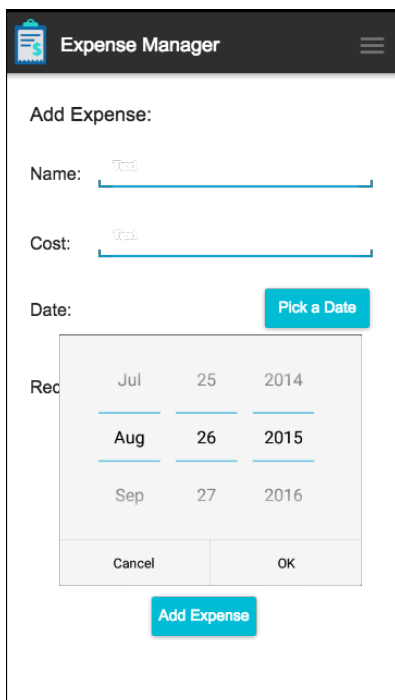
Name:

Cost:

Date:

Receipt:

(c) Add Expense



Expense Manager

Add Expense:

Name:

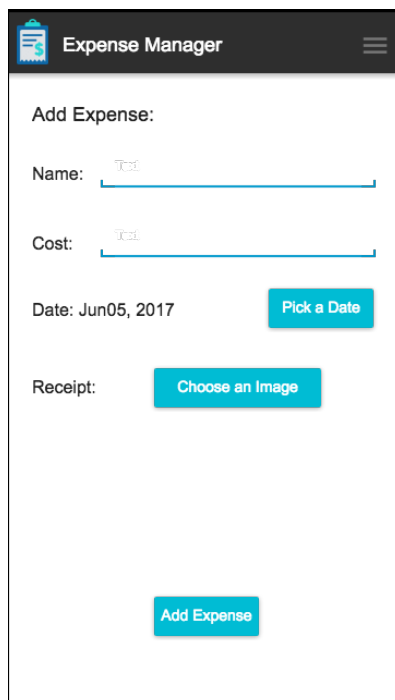
Cost:

Date:

Rec: 

Jul	25	2014
Aug	26	2015
Sep	27	2016

(d) Date Picker



Expense Manager

Add Expense:

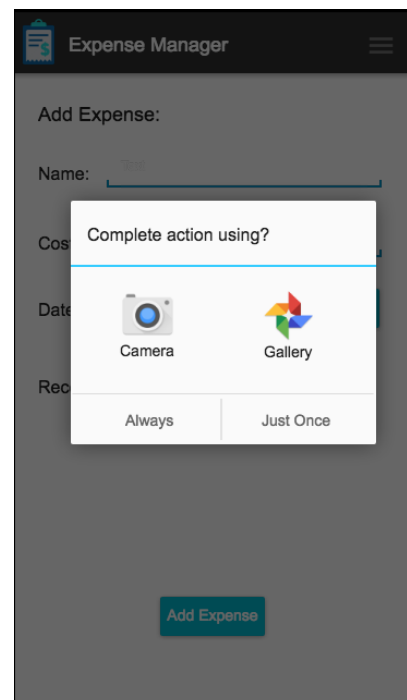
Name:

Cost:

Date: Jun05, 2017

Receipt:

(e) Date selected



Expense Manager

Add Expense:

Name:

Cost:

Date:

Rec:

Complete action using?

Camera Gallery

(f) Implicit Intent for Choosing an Image (Receipt)

Figure 1: App wireframes

We will develop a new expense manager application in this assignment. Here, we will be using RecyclerView, Firebase, Date Picker, and several System apps, such as Camera and Gallery.

### **Main Screen (30 Points):**

Please follow the instructions:

1. There should be a Floating Action button for adding a new expense, see Figure 1(a).
2. Below the Add button, your app should display a RecyclerView with Expense items.
3. Each of the item contains Expense Name, Cost, Date, and an Edit icon, see figure 1(a).
4. Your app should have a menu having three options: Sort by Cost, Sort by Date, and Reset All.
5. The default sorting sequence should be Sort by Date. (The most recent at first).
6. If you click on the Sorting options, it should sort the list of expenses accordingly.
7. If you click on the Reset All option, **it should ask you if you really want to reset the expenses or not**. Use an alert dialog to do that. If you confirm, it should delete all the expenses and refresh.
8. At the bottom of the main screen, there should be a textview to display the total expense amount, see figure 1(b).
9. All the expenses should be saved to Firebase, and retrieved from there.
10. If you click on the Floating Action button, it should start the Add Expense screen.
11. If you click on any of the Edit Image Button in one of the items in the list, it should start Edit Screen to let you edit the expense.

### **Add Expense (30 points):**

Please follow the instructions:

1. The Add screen should include two Input Texts for Name of the expense and Cost.
2. It should display a button that says, "Pick a Date." Clicking on this button should open a date picker. Please read <https://developer.android.com/guide/topics/ui/controls/pickers.html> for details. See figure 1(d).
3. After selecting the date, you should display the date in a TextView, see figure 1(e).
4. Now, you need to add a receipt for the expense. You can either get an image from Camera or Gallery.
5. If you click on the button named "Choose an Image", it should ask you to select the system app to choose an image (Camera, or Gallery) and upload. See figure 1(f). Use implicit intent here.
6. After you select an image either from camera or Gallery, you should display it in a ImageView just below the "Choose an Image" button.
7. At the bottom of this screen, there is a button named, "Add Expense." Clicking on the button should save the expense in Firebase, and upload the image in Firebase storage. After you upload the image to Firebase, you should get a downloadable URL. Save it to Firebase too for future use. After all these, it should take you to the main screen, with refreshed list. Always use the default sorting option after refreshing.

**Edit Expense (30 points):**

The GUI for this screen is identical to Add Expense screen. Preload the saved values for the particular expense item, and provide edit functionalities. It should display the saved date, and receipt image along with the other elements. Use Picasso to load the image. There should be a button named "Save Changes" instead of "Add Expense" button. Clicking on this button should update everything in Firebase. Then it should take you to the main screen.

**Display Expense (10 points):**

Clicking on any item in the list from the Main Screen should take you to the Display Expense Screen. Include Name, Cost, Date, and Image of the receipt in this Screen. Finishing this screen takes you to the main screen.

**Happy Coding!**