

Mobile Application Development  
Homework 2

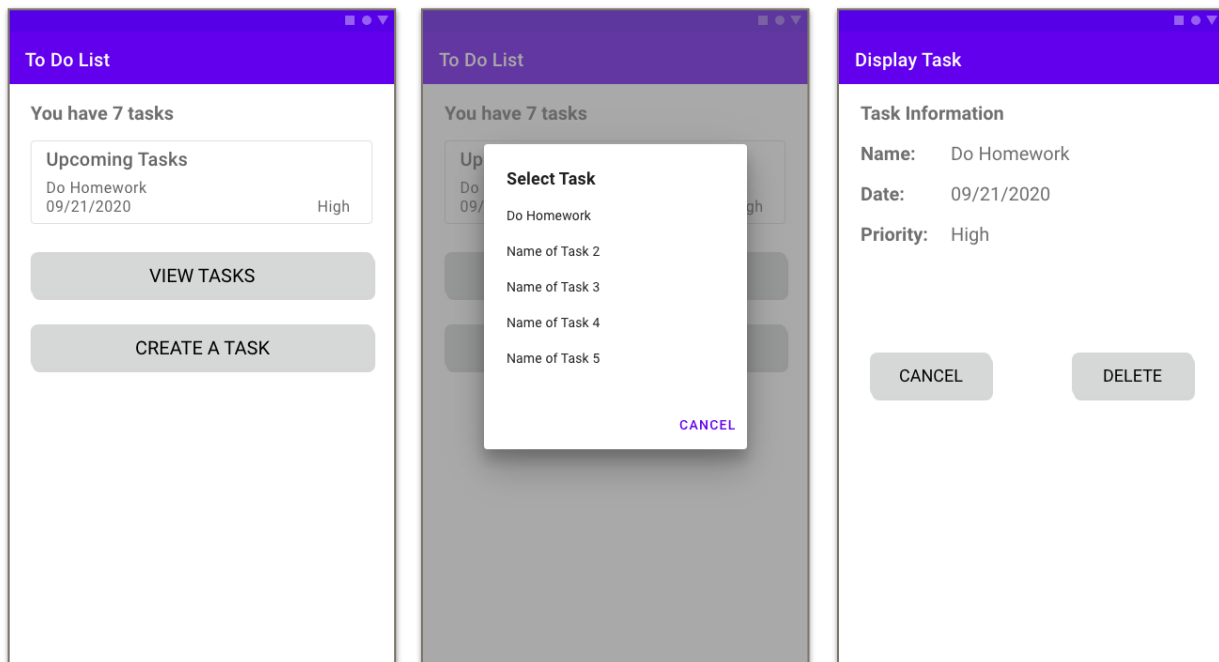
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**Basic Instructions:**

1. In every file submitted you **MUST** place the following comments:
  - a. Assignment #.
  - b. File Name.
  - c. Full name of the student.
2. Each group is required to submit the assignment on Canvas.
3. **Submit Codes:**
  - a. Zip all the project folder to be submitted on canvas.
4. Submission details:
  - a. The file name is very important and should follow the following format:  
**HW02.zip**
  - b. You should submit the assignment through Canvas: Submit the zip file.
5. **Failure to follow the above instructions will result in point deductions.**

## Homework 02 (100 points)

In this assignment you will get familiar with Android intents (Explicit/Implicit), data passing between activities, starting activity for result, and alert dialogs. This is a To Do List app.



(a) Main Activity

(b) Clicking on View Tasks

(c) Display Task Activity

**Figure 1, Application Screen Shots**

### Part 1 (50 Points): Main Activity

The Main Activity shows the number of tasks, the most recent task as shown in Fig 1(a). The activity requirements are as follows:

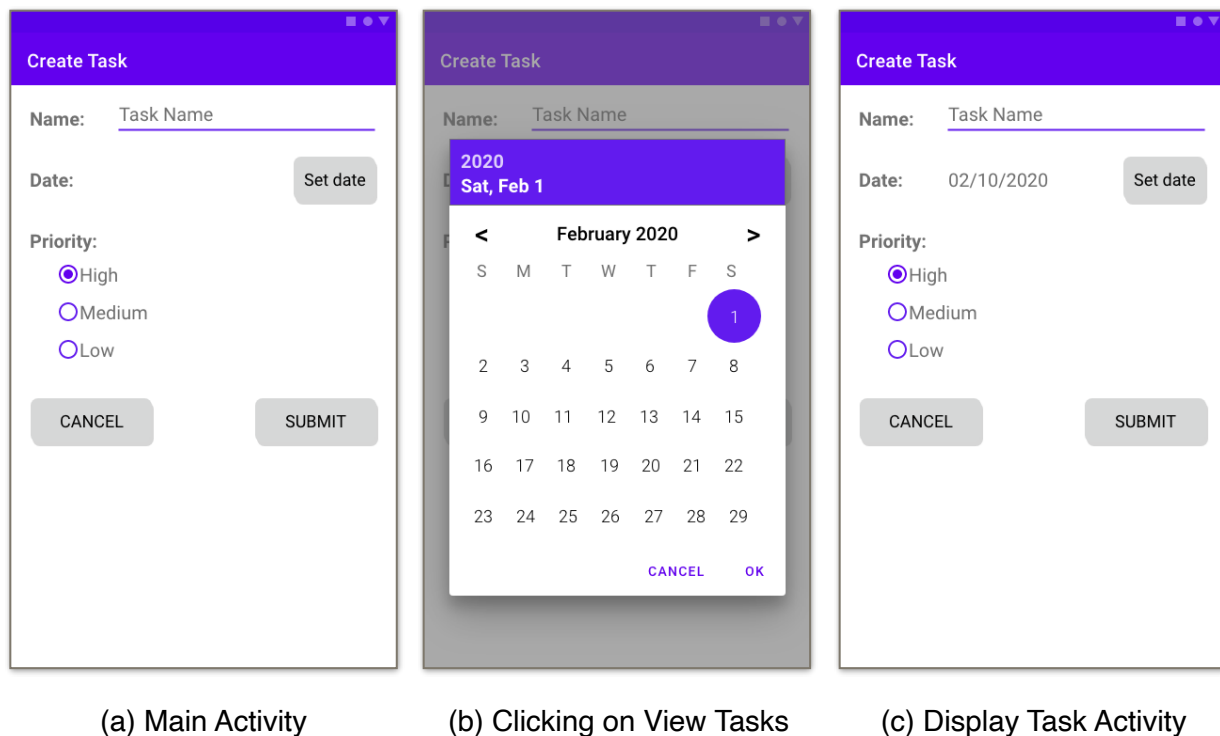
1. Create a Task class. The tasks list should be stored in an ArrayList of Tasks in the Main Activity.
2. The number of tasks currently in the list should be displayed in at the top of the activity as shown in Fig 1(a).
3. The most recent task, which is the task with the lowest date should be displayed at the top of the activity as shown in Fig 1(a). If the list is empty show the upcoming task as "None".
4. Clicking on the "VIEW TASK" button should display an AlertDialog showing the tasks list names as shown in Fig 1(b).
  - a. Check the example posted in <https://developer.android.com/guide/topics/ui/dialogs> in order to implement an AlertDialog with a list of choices.
  - b. Upon selecting a task from the list, the app should start the Display Task Activity for result, as shown in Fig 1(c) to display the details of the selected task.
  - c. Clicking cancel should dismiss the displayed AlertDialog.
5. Clicking on the "CREATE A TASK" button should display the Create Task Activity shown in Fig 2(a).

- The Create Task Activity should be started for result as it should return the created Task object to be stored in the Main activity list of tasks.
- Upon returning from the “Create Task Activity” the newly created task should be stored in the task list that is stored in the Main Activity. In addition, the number of tasks and upcoming task displayed should be updated to account for the newly added task.

### Part 3 (25 Points): Display Task Activity

The Display Task activity is shown in Figure 1(c). The requirements are as follows:

- The Display Task activity should receive the task to be displayed from the Main Activity. The task information should be displayed as shown in Fig 1(c).
- Clicking the “CANCEL” button should finish the Display Task activity, which should show the Main activity.
- Clicking the “DELETE” button should return the task object back as a result to the Main Activity in order to be deleted from the list maintained in the Main activity. Then finish the Display Task activity.



**Figure 1, Application Screen Shots**

### Part 2 (25 Points): Create Task Activity

The Create Task Activity allows the user to create a new task as shown in Fig 2(a). The requirements are as follows:

- Each task should have a name, date, and a priority as shown in Fig 2(a).
- Clicking the “Set date” button should show a Date Picker Dialog as shown in Figure 2(a). Upon selecting a date in the Date Picker and clicking “OK” then the selected

date should be displayed in the Create Task Activity as shown in Fig 2(c). Please use <https://developer.android.com/reference/android/app/DatePickerDialog> for information related to the date picker dialog.

3. Clicking the “SUBMIT” button:
  - a. Check that all the task entries are entered correctly. If not display a Toast message. If all the entries are entered correctly, then create a Task object and send it back as a result to the Main Activity, then finish the Create Task Activity.
4. Clicking the “CANCEL” button then finish the Create Task Activity, which should show the Main activity.