

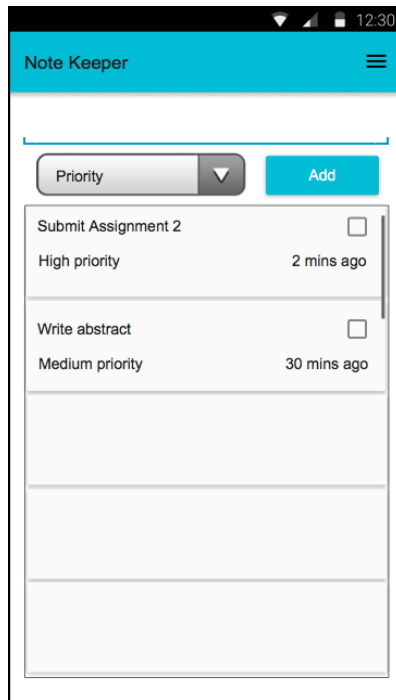
ITIS/ITCS 4180/5180 Mobile Application Development  
In Class Assignment 13

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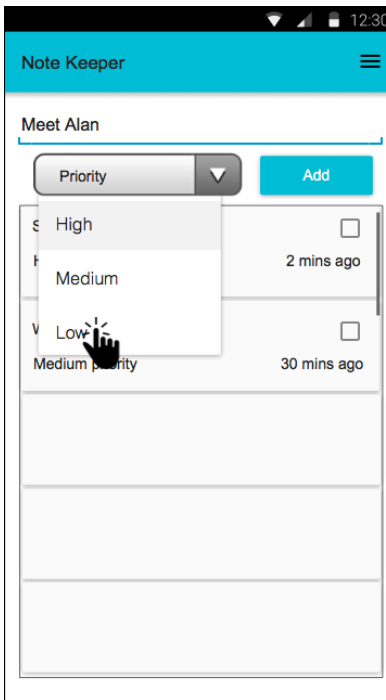
**Basic Instructions:**

1. In every file submitted you **MUST** place the following comments:
  - a. Assignment #.
  - b. File Name.
  - c. Full name
2. Each team is required to submit the assignment on Canvas.
3. Please download the support files provided (if there is any) with this assignment and use them when implementing your project.
4. Submission details:
  - a. Compress the contents of your project folder. The file name is very important and should follow the following format: **InClass13\_Group#.zip**
  - b. Only one group member is required to submit on behalf of the whole group.
  - c. You should submit the assignment through Canvas: Submit the zip file.
  - d. You will have two zip files in this assignment. So, zip them again into one zip to submit.
5. The required Android Virtual Device (AVD) should have **minimum SDK version set to 14 and target SDK at 23**.
6. **Failure to follow the above instructions will result in point deductions.**

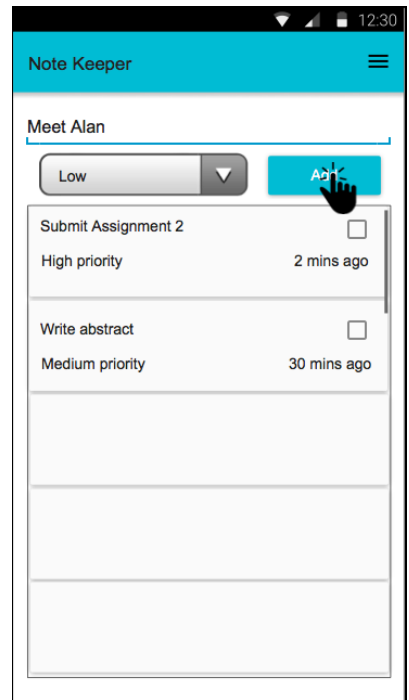
## In Class Assignment 13



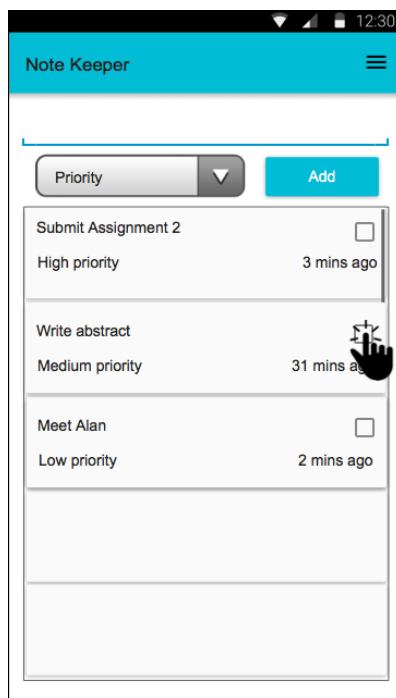
(a) Main Activity, Tasks sorted by Priority



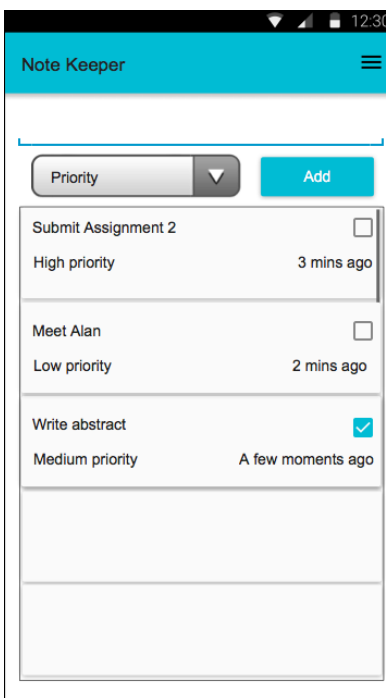
(b) Priorities for Notes



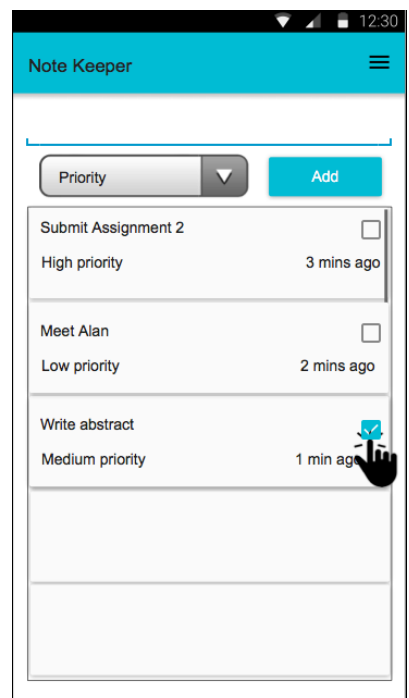
(c) Add Note for a task to do



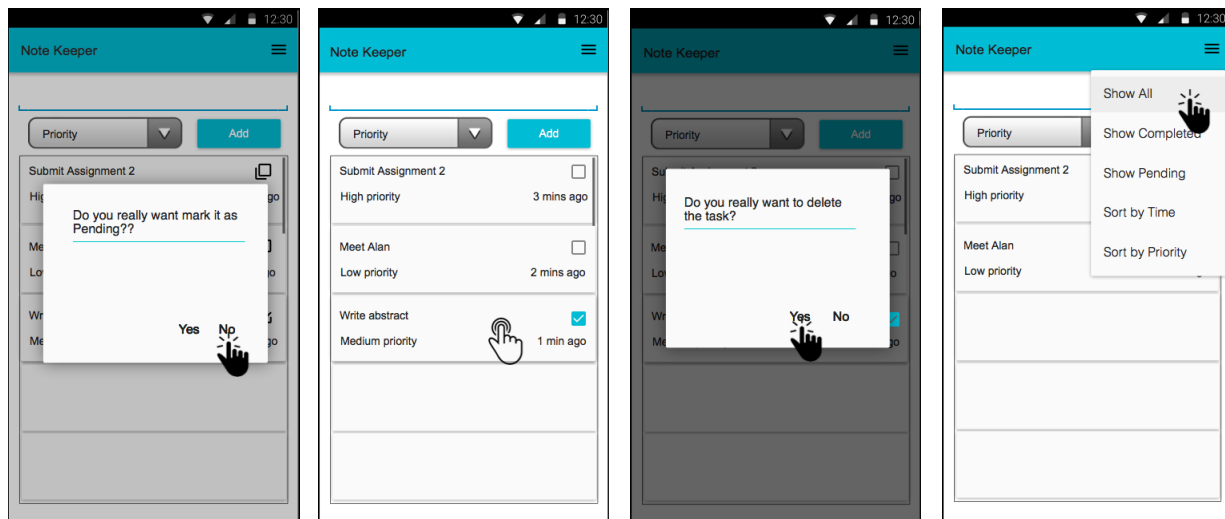
(d) Mark task as Complete



(e) Completed tasks will be displayed below the pending tasks



(f) Try to unmark a Completed task to Pending task



(g) Alert Dialog

(h) Long Click to delete a Completed task.

(i) Alert Dialog

(j) Menu options

**Figure 1: Note Keeper App**

In this assignment you will be developing a “Note Keeper” application, where you can add notes, set their priorities, mark them as Complete, Delete the completed tasks and if you mistakenly mark one task as Complete, you can unmark it as still Pending. You will keep all the notes and their status in Realm. Please follow the instructions below:

1. This app includes one activity. On the top there should be an Input EditText field.
2. Below that, there should be one drop down menu for priority selection. and an Add button, see Figure 1(a).
3. Next, there should be a RecyclerView having all the Pending and Completed tasks. There will be two parts of the list. At the top it should display all the pending tasks, and below that all the completed tasks. By default, sort the list by Priority, see instruction 14.
4. In each element in the RecyclerView, there are four things that should be displayed:
  1. Task note.
  2. Checkbox for marking the task as completed.
  3. Priority.
  4. Time the note was posted.
5. In Realm database, you should store id, note, priority, update\_time, and status. Check the documentation provided at <https://realm.io/docs/java/latest/> to store and retrieve the objects from Realm.
6. To add a new note, a user should write the note into the EditText, set the priority from the dropdown menu, and finally click on the Add button. Clicking on the Add button should store the Note object in Realm including unique id, text for the note, priority, time and the **status (pending or, completed)**.
7. You should display all the items in the database in the RecyclerView, see Figures 1(b, c, d and e).

8. The user should be able to mark a task as Completed, see Figure 1(f). It should pop up an alert dialog to confirm, see Figure 1(g). It needs to update the database accordingly to mark its status as completed, and also update the time.
9. A user can delete the task. Long press on an item should ask if the item should be deleted or not, see Figure 1 (h, i). If clicked on Yes, the record should be deleted from database and it should disappear from the list.
10. **Menu buttons:** there are five buttons in the menu at the Action Bar: Show All, Show Completed, Show Pending, Sort by Priority, and Sort by Time, see Figure 1(j).
11. Show All: Clicking on Show All button should display the whole list of tasks, including both, Pending or Completed. Pending tasks will be at the top followed by the Completed tasks.
12. Show Completed: Clicking on Show Completed should display only the Completed tasks.
13. Show Pending: Clicking on Show Pending should display only the Pending tasks.
14. Sort by Priority: First display the list of Pending tasks, then below that display the list of completed tasks sorted by Priority. High priority tasks will be displayed on top. **Use Realm sorting functionality here instead of Java's native sorting functionality. HINT: add new attribute in the table of the database for numeric representations of priorities.**
15. Sort by Time: This is the alternate sorting order. Same as the previous one, but, sort by time. In this case, the most recently updated task will come first. **Use Realm's sorting functionality.**

#### **IMPORTANT NOTES:**

1. **Use Prettytime library to display time.**
2. **You should keep an eye on your GUI, Keep the alignments according to the Figures.**