



Electrical and Computer Engineering Department
ENCS5150 – Advanced Computer Systems Engineering Laboratory
Android Project
Summer Course - 2023

Submission Deadline: September 9, 2023

Discussion Date: September 11, 2023

Team Work: Teams of two students

Total Points: 100; 40% out of the final grade

Project Description:

We want to create a Note App for multiple users. Each user should sign up using an email address and password. When users are logged in, they should be able to add notes, view/edit/delete their own stored notes, and also set some notes as favorite.

The application should have the following functionalities:

1. Signup, Sign in, and Logout [25 points]

This layout should have a “Sign in” and “Sign Up” buttons.

- a. In the main page (first page), the user can enter his or her e-mail and password that are registered in the database to sign in. This layout must have a check box called “remember me” which will save the email in shared preferences, so that next time the user does not need to re-type the email address.
- b. The “Sign Up” button redirects the user to a sign-up form which has the following required fields:
 - I. **Email address.** Must be in a correct email format. It is the primary key of the user.
 - II. **First name.** Minimum 3 characters and maximum 10 characters.
 - III. **Last name.** Minimum 3 characters and maximum 10 characters.
 - IV. **Password.** Minimum 6 characters and maximum 12 characters. It must contain at least one number, one lowercase letter, and one uppercase letter.
 - V. **Confirm password** field.

If all required fields in the sign-up form are filled with valid data, then and only then the user can be registered. Otherwise, an error message is displayed, and the missing or invalid fields are colored in red.

2. Main Features [75]

- a. The main design for your app should be a Navigation Drawer Activity with the following main options in the navigation bar (you can add more options depending on your design preferences):
 - **All:** displays all the stored notes (main page). You should display only the notes title. The content should show up only when you click on a specific note.
 - **Favorites:** displays favorites notes.
 - **Sorted:** displays all notes sorted by either creation date or alphabetically (the user should be able to choose the sorting criteria).
 - **Profile:** allows users to view and edit their profiles. For example, changing their first name, last name, or password
- b. The user should have the ability to add a new note and store in the database. The note should have a title, content and the creation date.
- c. The user should have the ability to modify, delete, and send by email any of the displayed notes, whether it is in the main page, favorite page, or the sorted page.
- d. Favorite notes: the user should be able to add/remove any note to the favorite list. Implement away to differentiate those notes in the list.
- e. Search: allow the users to search for notes either by title or by content.
- f. The sorting order preference (creation date or alphabetically) in the Sorted page should be saved.
- g. Animation: try to use animation in your App. For example, when choosing a note as a favorite, a heart image appears and starts getting bigger, then returns to its original size.
- h. Fragments: Use fragments in your App. For example, when displaying the content of a note.
- i. Note Categorization: Allow users to categorize notes by adding tags or labels. Implement a way to filter notes by tags.
- j. The user should be able to logout from the application.

We would like to leave the application UI design up to your preference. Nice UI design will be rewarded.