

### Introduction

The first challenge was an introductory one. You learned how to pass information in both activities and fragments, how to mess around with views, among other things. In this second challenge you will have to implement data persistence, but now with the proper tools. Nowadays, almost every phone has an application for you to take notes. You can give a title/label for the note, write text for its content, search for entries, and perform other operations. Thus, the objective of this challenge is for you to replicate a note-taker app with the characteristics detailed below.

For any questions or doubts, you can send an e-mail to [tjcruz@dei.uc.pt](mailto:tjcruz@dei.uc.pt).

### Milestone 2

This milestone is to be done in **groups** and the objectives are:

- Have an application where you can take or erase notes.
- It contains, at least, three fragments (dynamic). If you use only activities or static fragments, you will be penalized by -5%.
  - One fragment will contain a login/registration form where the user must input its username and password.
    - The user can register if doesn't have an account already.
    - The user can login:
      - If the login is successful, the user will be redirected to the next fragment.
      - If the login fails, the users will be informed and stay in the same fragment.
  - One fragment shows a list of the notes, with the title.
    - If you click on a note, it will open it (new fragment).
    - If you do a long-press (long-click), it will pop a dialog box to choose if you want to erase the note or change the title of the note (or not).
    - You must use an AppBar to be able to create new notes. You must also be able to search by note's title.
  - One fragment shows the text of the note.
    - In the AppBar, you have two buttons (use `ifRoom` as the option) where one allows you to "Save" and the other to go "Back" to the first fragment (without saving).
- You must have data persistence using Internal Storage and the **Firestore Database** (<https://firebase.google.com/docs/firestore/quickstart?authuser=0#java>).
  - You must store all the information from the notes (titles and body) into the Internal Storage of the device (The use of a Database is not required). When there is an active network connection, the information should be persisted using Firestore Database. When the app is opened and if the network connection was restored it should persist all to the Firebase.
  - **Network reads and writes should be done with Executors/Handlers.**

### Evaluation Criteria

Description	Value
<b>Fragment 1</b>	
Login	5%
Register	5%
User's Feedback	5%
Input validation	5%
<b>Fragment 2</b>	
List of notes	5%
Search form which updates list of notes	10%
Click and Long press	10%
AppBar	5%
<b>Fragment 3</b>	
Show Note	5%
AppBar	5%
<b>Networking and Data Persistence</b>	
Correct use of Executors/Handlers	15%
Data Persistence into Firebase Database	20%
<b>Use of Dynamic Fragments</b>	5%

### Deadlines and Evaluation

#### Milestone 2 (2pts)

- The deadline is on November 14<sup>th</sup>.