Mobile Computing - Winter 2024
Assignment 1 – The First Android App (60 marks)

Assume that you are traveling by plane from one place to another, with multiple stops and (possibly) transit visa requirements. You want to create an app to show the user about the route of journey, the stops along with their visa requirements, the distance and time left between the stops, and the progress of the journey. Create an app that shows all the above details with the following guidelines in mind:

1. The distances need to be shown in both kilometers and miles. There should be a button to switch between the two units.

2. A second button should indicate to the app (from the user) that the next stop has been reached.

3. The progress of the journey should consist of a Textbox indicating each stops, and their distances, total distance covered, the total distance left and a Progress Bar [1].

4. If the route of journey has more than 3 stops, then a lazy list needs to be used. You need to read the list of stops from a text file, which would be added as a resource.

5. The app needs to be run on both an Android device and the Android emulator.

Note that you need to create two version of the apps. The first version should use XML and Kotlin (in this case, the ID's should be used to refer to UI elements from Kotlin). The second version should use the Compose technique. Both the apps should be functional, and each of them should be kept on git in two separate branches.

What and How To Submit

- The Kotlin and Gradle program sources, along with XML.

- A readme text file, explaining the way the implementation has been done.

- Uploading to github via a private repository in two distinct branches is a must. The submission needs to be made to BOTH Google Classroom and github.

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[1] https://developer.android.com/reference/android/widget/ProgressBar

Grading Rubric

1. 10 marks for creating a textbox (both traditional and lazy).

2. 10 marks for creating the right buttons and the conversion of units.

3. 10 marks for creating a proper overall user interface, including a proper ProgressBar.

4. 10 marks for the Compose version in code.

5. 10 marks for readme, proper packaging of APK

6. 10 marks for properly running app

Late Submission Policy

- -0.25 per hour for the first 96 hours.

- Submissions beyond 4 days of delay would only be accepted with official leaves of absence.