

# Mobile Computing - Winter 2024

## Assignment 1 – The First Android App (60 marks)

Suppose you want to create an app to show the user about the route of journey, the stops, the distance between the stops, and the progress of the journey. There are at least 10 stops. 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 <sup>1</sup>.
4. If the route of journey has more 10 stops, then a lazy list needs to be used. For now, there should be two hardcoded entries of stops (within the code), one shown a normal list and one with a lazy list.
5. The app needs to be run on both an Android device and the Android emulator.

### What and How To Submit

- The Kotlin and Gradle program sources, along with XML. Composition needs to be used wherever appropriate. Use of XML files are also allowed, but their id's need to be used to make the changes wherever necessary.
- A readme text file, explaining the way the implementation has been done.
- Uploading to github via a private repository is a must. The submission needs to be made to BOTH Google Classroom and github.

### Grading Rubric

1. 10 marks for running an app on Android Emulator and smartphone.
2. 10 marks for creating an ordinary textbox.
3. 10 marks for creating a lazy textbox.
4. 10 marks for creating the right buttons and the conversion of units.

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<sup>1</sup><https://developer.android.com/reference/android/widget/ProgressBar>

5. 10 marks for creating a proper overall user interface, including a proper ProgressBar.
6. 10 marks for utilizing composition in code.

### **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.