Mobile Computing - Winter 2024

Assignment 2 – Utilizing Android Database, Network and Background Jobs (80 marks – 30 + 30 + 20); Deadline: Apr 7, 9pm

1. Assume that you are interested in tracking the journey of a close friend. You take the details of the flight number. You then track on a minute-by-minute basis the location of the flight.
2. Now, assume that you also want to recommend the average time taken experienced by passengers on a flight. You gather the data for one week, and then identify the average time. Create a background job to collect at least three flights per day going from one location to another, store them in a database and identify each flight's average time taken. Note that this time taken should take into account the delays that happen on each flight.

What and How To Submit

- The Kotlin/Java 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 is a must. The submission needs to be made to BOTH Google Classroom and github.

Grading Rubric

For Q1,

1. Utilizing the utilizing the API and downloading the data – 5 marks
2. Creation of the UI – 5 marks
3. Parsing of JSON files – 5 marks
4. Proper output and running code – 10 marks
5. Validation of user input, proper error messages and running app – 5 marks

For Q2,

1. Creation of database and schema – 10 marks
2. Insertion of data into the database and sending queries – 10 marks
3. Identification of cases where calculation is necessary, and computing it – 10 marks
4. Creation of background jobs – 10 marks
5. Correct output – 10 marks

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.