Concordia University
COEN/ELEC 390
Winter 2021
Technical Assignment 2

Deadline:	February 19, 2021 @ 11:55 pm

Objective

Design and implement an android mobile application with description given below. Using SQLite to save data and read data in an MVC structure with the use of DialogFragment.

Application Description

- Two Activities: mainActivity and assignmentActivity.
    - assignmentActivity is a child Activity to mainActivity (up navigation).
- mainActivity has:
    - A TextView that displays average of all the assignments stored in the database.
    - A ListView that displays all the courses stored in the database. For every course display the course title, code and average of the assignments for that course.
    - Every item in the list is clickable. When an item is clicked, go to assignmentsActivity.
    - Floating button that opens "Insert Course DialogFragment".
- Insert Course Dialog Fragment has:
    - 2 EditTexts for course title and course code.
    - 2 buttons for save course and cancel.
    - Save button: saves the input of the edit texts as a new course in the database then returns to main activity and reloads the listview.
    - Cancel button: closes the dialog and returns to main activity.
- assignmentActivity has:
    - TextView that displays the title and code of the course being displayed (the one clicked from the listview in the previous activity).
    - ListView displaying the assignments and their grades for that course.
    - Floating button that opens "Insert Assignment DialogFragment".
    - Delete button: deletes the course that is opened in the assignment activity then go back to the mainActivity and reloads the listview of the courses.

- Insert Assignment DialogFragment has:
    - 2 EditTexts for assignment title and grade.
    - 2 buttons for save assignment and cancel.
    - Save button: saves the input of the edit texts as a new assignment to the course that was open. Then returns to the assignmentActivity and reloads the listview.
    - Cancel button: closes the dialog and returns to assignment activity.

Note: the app should not crash under any circumstances.

This video shows what your application should look like:

https://youtu.be/Ky-pIHrEpeg

Things to help you with the assignment

Your database will have the following tables:

Course table:

- CourseID primary key
- CourseTitle
- CourseCode

Assignment table:

- AssignmentID primary key
- CourseID
- AssignmentTitle
- Grade

To select all the assignment for one course, you need to select assignments where CourseID in table "Assignment" is equal to the CourseID from "Course" table.

To insert an assignment for a course, you need to insert the assignment to the Assignment table with CourseID the same as the CourseID of the course this assignment is assigned for in the Course Table

To delete a course, you need to delete all the assignments that has the same CourseID as the course you are deleting from the Assignment table and then delete the course from the Course table.

Course Table		
CourseID	CourseTitle	CourseCode
1	Mini Caps	COEN390
2	Programming	COEN243

Assignment Table			
AssignmentID	CourseID	AssTitle	Grade
1	1	Sprint 1	100
2	2	ProgAss1	80
3	1	Sprint 2	90

In the above example, the first and third row in the Assignment table belong to the Mini Caps course because CourseID in the Assignment table has the value of the CourseID of that course from the Course table. And the the assignment with AssignmentID = 2 belong to COEN243 course because the CourseID = 2 which is the ID of that course in the Course table.

An example of a similar project with multiple tables and the android implementation can be found:

http://www.androidhive.info/2013/09/android-sqlite-database-with-multiple-tables/

If you have problems with SQLite, I recommend implementing the example project above and understand it well.

Assignment submission and procedure

You have to submit your assignment before 11:55pm on the due date via the Assessments tab on the eConcordia website. Students are required to submit to the link corresponding to their own tutorial section. Please see the Announcements for screenshots and instructions **(very important, a wrong submission might be considered a late submission)**. The file submitted must be a **.zip** file named **StudentID_Ass2** containing your android project. **Before submitting your code make sure you clean the project.**

```
Android Studio --> Build --> Clean
```

Evaluation criteria and grading scheme

Meeting the requirements and use cases   90%
Clean code: well commented, proper naming, easy to read and understand.   10%

If the project submitted does not compile and run the student will receive a grade of 0! So, make sure even if the assignment is not completely done that you submit an application that can be built and run. We will not grade none compiling code.