

Assignment # 02

SQLiteDatabase – GradingApp

Due: August 10, 2022, 11:30 PM

In this assignment, you have to integrate an SQLite database into your app. You can customize your application to how you see fit. The only stipulation is that you must use an SQLite database to store your information. This is an individual assignment.

Scenario:

You currently work for the mobile app development company **AppForAll** and you have been tasked by your manager to create a custom app that will be used by professors to keep track of student grades. This document will serve as a requirements document for the necessary functionality for this app.

Functional Requirements:

The following functional requirements must be implemented to complete the assignment.

- You will create an SQLite database 'School.db'
- Create two tables in this database:
 - **Grades** (StudentId, StudentName, Program, Course1, Course2, Course3, and Course4). The StudentId field will be auto-generated. The fields Course1, Course2, Course3, and Course4 stores the marks scored in different courses out of the maximum mark of 100 for each course.
 - **Improvement** (ImprovementId, StudentId, Course, and Marks). The ImprovementId field will be auto-generated.
- Your interface will have to implement a navigation drawer menu with the following options:
 - Enter Grades
 - Enter Improvement
 - Search Grade
 - List Students
- Each Menu option will load the corresponding screen. These screens should be implemented using fragments.
- The Enter Improvement option should load a screen for entering the student id, selecting one of the courses for which improvement was done from a drop-down menu consisting of the options Course1, Course2, Course3, and Course4, and entering the improvement mark. The mark of the course in the Grades table for the related student and course should be incremented by the improvement mark. The new mark of the course after adding improvement mark should not exceed 100.
- The Search Grade option should load a screen where you will enter the Student Id to search for a student. The student details should be populated including the total mark of all the courses.
- The List Students option should implement the RecyclerView to list the student details including total mark as a scrollable view.
- You must use a SQLiteOpenHelper class and use content values wherever applicable.
- Input validations should be implemented wherever applicable.

- You must provide meaningful comments to every class, method, and every and any significant code segment.
- Snackbar Messages should be used wherever applicable.

What to Submit:

- The entire application package as a zipped file.
- A Word document consisting of screen shots of the running application and the commented Java code. Commented code should be pasted as text. **Submission will not be considered for evaluation if commented code is pasted as an image and a grade of 0 (zero) will be awarded for the assignment. Submission without the Word document will be awarded a grade of 0 (zero).**
- Follow the naming convention for both the files as 'YournameAssignment2', for example 'PeterAssignment2'.

Rubrics:

- Late penalty will be applied for late submission as described in the document 'Late Penalty – Assignments'.
- A separate rubric as found in the document 'Rubrics- Assignment 2' is applicable for the evaluation.

Due Date: 10-August-2022 (Wednesday) 11:30 PM