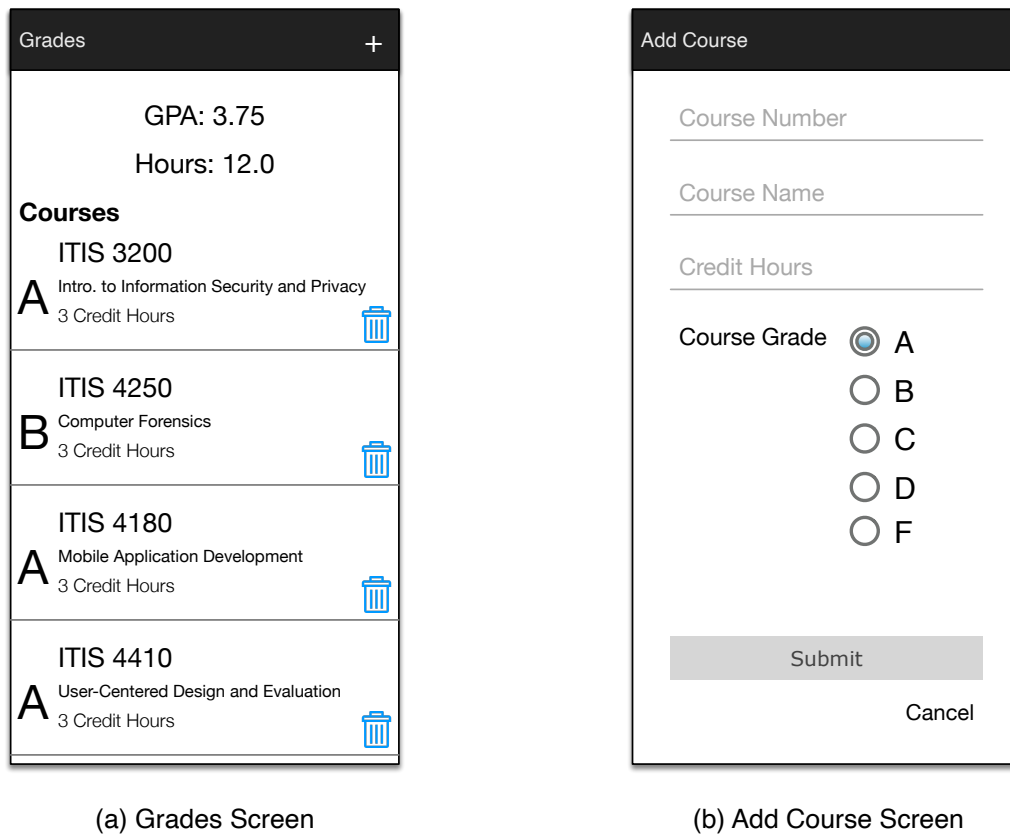**Basic Instructions:**

1. In every file submitted you MUST place the following comments:
   a. Assignment #.
   b. File Name.
   c. Full name of the student.
2. Each group is required to submit the assignment on Canvas.
3. Please download the support files which include a Java project to be used for this assignment.
4. Submit Codes:
   a. Zip all the project folder to be submitted on canvas.
5. Submission details:
   a. The file name is very important and should follow the following format:

   InClass11.zip
   b. You should submit the assignment through Canvas: Submit the zip file.
6. Failure to follow the above instructions will result in point deductions.

In Class 11 (100 Points)

In this assignment you will implement a grade tracking application. This app used local storage (SQLite) for data storage.

(a) Grades Screen   (b) Add Course Screen

Figure 1, Application Wireframe

Part 1 : Grades Screen (70 Points)

The interface should be created to match the UI presented in Figure 1(a). The requirements are as follows:

1. Design a SQLite database to store each user's courses separately. The user should be able to view the stored courses and grades, which should be retrieved and displayed in a list as shown in Figure 1(a).
   a. Each course should show the course letter graded, course number, course name, and number of course credit hours.
2. The overall GPA and number of course hours should be displayed as shown Fig 1(a).
   a. The next section describes how to to compute the GPA.
   b. If the number total number of hours taken is 0 then set the GPA to 4.0
3. Upon clicking the delete icon the following operations should be performed:
   a. The selected course should be deleted from the database.
   b. The courses list should be reloaded from database, and the GPA and the Hours should be updated.
4. Clicking the "+" button should transition to the "Add Course" screen.

How to compute the GPA?

The grade point average (GPA) is calculated by dividing the total amount of grade points earned by the total amount of credit hours attempted. Your grade point average may range from 0.0 to a 4.0. Each letter grade is assigned a grade point as shown below:
A = 4.0 grade points
B = 3.0 grade points
C = 2.0 grade points
D = 1.0 grade points
F = 0.0 grade points

Example Student Grades			
Course	Credit Hours	Grade	Grade Points
Biology	3	A	12
Biology Lab	1	B	3
English 101	3	C	6
Maths 101	3	A	12
10 Total Credit Hours Completed		33 Total Grade Points	
GPA = 33/10 = 3.3			

$$GPA = \frac{Total\ Grade\ Points}{Total\ Credit\ Hours}$$

Part 2 : Add Course Screen (30 Points)
The interface should be created to match the UI presented in Figure 1(b). The requirements are as follows:
1. This screen should enable the user to enter and add a new course to the user's course record.
    a. If the user enters all the course fields and clicks submit, the app should save the newly created course to the database.
        i. Make sure the number of hours is a valid positive number.
    b. Go back to the Grades screen, which should refresh the list to show the newly added course and update the GPA and hours listed on the page.