IS230: Introduction to Database Systems

Project 1– Phase II

**The project will be carried out by groups each containing AT MAXIMUM 5 students.**

**Remark**: should follow the project report template to not loose marks during grading.

Using JDBC, write a Java program (**no GUI will be used**) which will allow the interaction with MariaDB. First, create the following table in MariaDB:

STUDENT

|  |  |  |  |
| --- | --- | --- | --- |
| StudentID | Name | Department | GPA |

1. Your program must provide the following options as the first screen, The user can choose any of the options by entering the corresponding number:

|  |
| --- |
| **Student tables:**  **1) Insert new student**  **2) Display all the students**  **3) Alter GPA**  **4) Exit**  **Choose an operation:** |

1. For each INSERT operation, your program must prompt for the value of each attribute, one by one:

|  |
| --- |
| **Student - INSERTION:**  **StudentID:111**  **Student name: Ahmad**  **Department: IS**  **GPA: 4.5**  **Insert another record (Y/N)?:** |

1. For the DISPLAY operation, your program must display all the records inserted so far.
2. For Alter GPA, the user is asked for a value (between 0-5) any student with a GPA above that value will have their GPA lowered 0.10 points, and any student below that value is increased 0.10 points. Display the values before and after they are altered. (you do not have to check if the new value is out of bounds of 0-5) *[do this efficiently]*
3. Once an operation has completed, (i.e. after displaying records or choosing “N” after being asked to insert another record) your program has to return back to the first screen.

**NB**:

* You should use the report template (**ProjectPart 2 Template.docx**) provided with the project when submitting your work.
* You must submit your java files as well.
* You may be asked to discuss your work, failure to display an adequate comprehension of your answer may result in being marked 0.
* Any indication that the solution is not yours or that you have received assistance from outside your group, such as using statements not covered in the course, will result in being marked 0.

**مع التمنيات بالتوفيق والنجاح**