CSIS 2175

Due date: Dec 07, 2022 (5:00PM)

Submission

You need to zip the Eclipse project folder for submission

You may submit your work multiple times, but only the last submission will be graded.

*Tutorial for zipping a folder:
https://www.youtube.com/watch?v=Ipn-T5Um3d4 for Windows
https://www.youtube.com/watch?v=V0wkG6zOpjA for Mac

Description

Database Information (Studentcourse.accdb):

The database (Studentcourse.accdb) contains one table called Grades. The table contains the following columns:

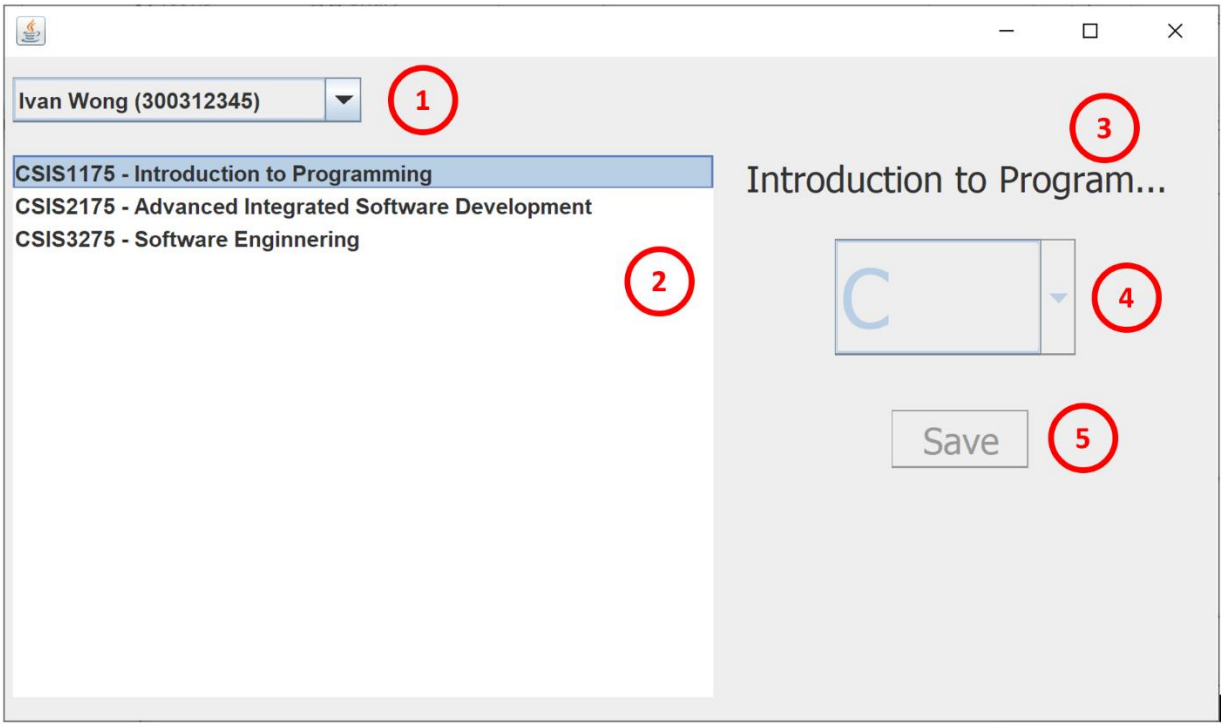
- ID: AutoNumber;
- sName: Short Text representing the student name;
- sId: Short Text representing the student ID;
- cCode: Short Text representing the course code;
- cTitle: Short Text representing the course title;
- grade: Short Text representing the grade achived by the student in the course
- Each student has a unique sID, and each course has a unique cCode

ID	sName	sId	cCode	cTitle	grade
1	Ivan Wong	300312345	CSIS1175	Introduction to Programming	C
2	Ivan Wong	300312345	CSIS2175	Advanced Integrated Software Development	B
3	Ivan Wong	300312345	CSIS3275	Software Enginnering	NA
4	Simon Li	300356789	CSIS1175	Introduction to Programming	A
5	Simon Li	300356789	CSIS2175	Advanced Integrated Software Development	A
6	Andy Paak	300398765	CSIS3175	Introduction to Mobile Application Development	F

Your Task

You are asked to create a GUI as follows:

1. The GUI contains components as shown in the picture below:



2. The ComboBox (No. 1) shows students' name and ID, but the first item must be blank; The students' name and ID are retrieved from the database.
3. The List (No. 2) shows the ID and title of the courses taken by the student; The List (No. 2) allows users to select one single course at a time only;
4. The JLable (No. 3) shows the course title;
5. The ComboBox (No. 4) contains all values stated in the enumerated data Grade, which will be described below
6. The Button (No. 5)

The windows runs as follows:

1. When running the program, it loads the records in the table into the program;
2. When selecting a student in the ComboBox (No. 1), the List (No. 2) shows the ID and title of the courses taken by the student; If the blank item in ComboBox (No. 1) is selected, the List (No. 2) should not show any courses;
3. When selecting a course in the List (No. 2):
4. the JLabel (No. 3) displays the course title. When no course is selected, the JLabel (No. 3) shows nothing.
5. the ComboBox (No. 4) select the grade achieved by the student in this course. If the grade is not "NA", the ComboBox (No. 4) and the Button (No. 5) are disabled. If the grade is "NA", the ComboBox (No. 4) and the Button (No. 5) are enabled.
6. If the grade is "NA", the user is allowed to change the grade of this student. When clicking the Button (No. 5), the program will update the database and show a message "Grade Updated!" The ComboBox (No. 4) shows the most-updated grade. If the updated grade is not "NA", the

ComboBox (No. 4) and the Button (No. 5) are disabled. If the updated grade is still "NA", the ComboBox (No. 4) and the Button (No. 5) are enabled.

Hints and Additional Requirement:

1. You MUST use the same type of components as described above;
2. The GUI should be as close to the one in the sample video as possible;
3. You MUST create Enumeration called Grade. It contains the following values: A, B, C, D, P, F, NA;
4. You MUST use the Enumeration Grade for the values in the ComboBox (No. 4);
5. You MUST design at least one separate class to store each record in the database;
6. Program that cannot be compiled or do not read data from the database will receive substantial mark deduction.
7. The following SQL statement can update the grade to "P" for third record in the above table:

```
UPDATE GRADES SET GRADE='P' WHERE SID='300312345' AND CCODE='CSIS3275'
```

Grading

- Correctness of the program: 90%
- Programming style/comment/clarity: 10%
- **Overall marks will not be more than 50% if not following the requirement.**

Assumptions

- You may assume that there will be no invalid input by the user.