Computer Science Division
Department of Mathematics
Faculty of Science

Level 2- Spring Semester
Course: COMP 206
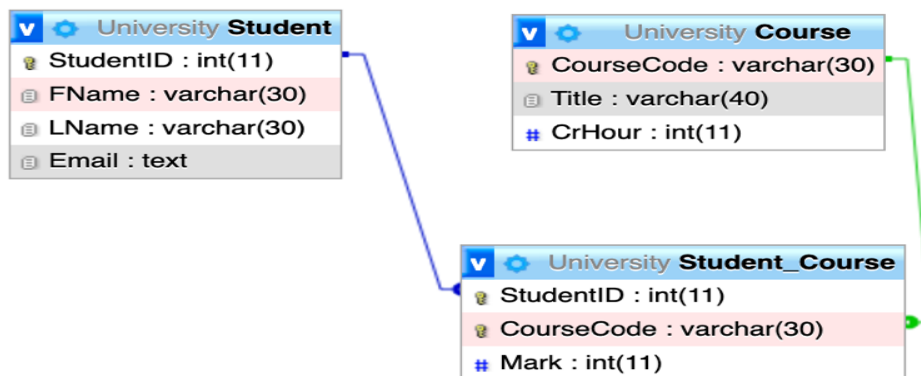Date: April 30, 2023

AIN SHAMS UNIVERSITY

Sheet 4

Objective: upon successful completion of this sheet, students should be familiar with Database connectivity in PHP and able to perform CRUD operations on Databases using PDO.
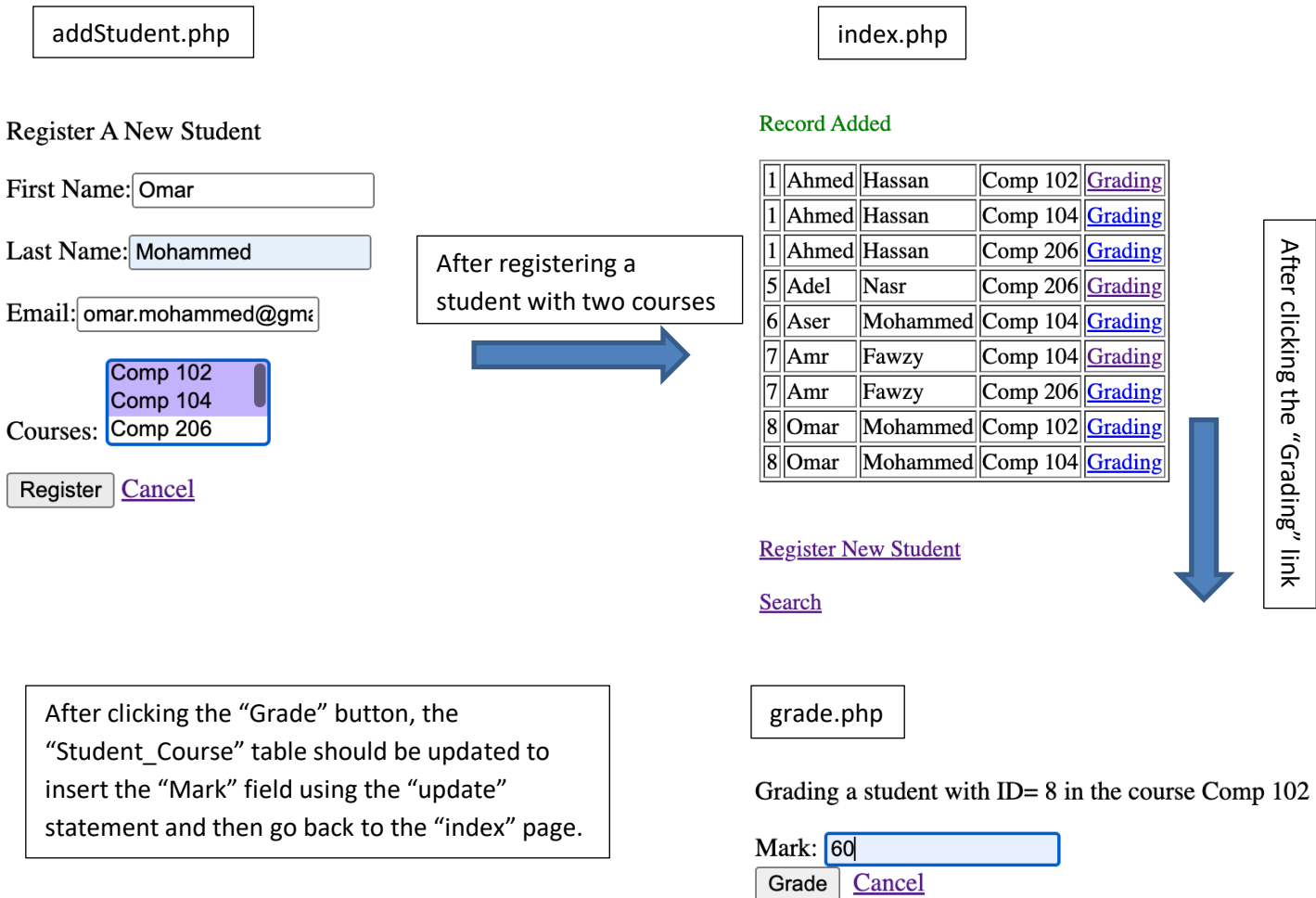
Use PHPMyAdmin to build a database named "University", which contain the following tables:

Then, create a PHP script file to perform each of the following using the appropriate form controls to add, update, delete, and search for students' data:

1. Connect to the database.
2. Insert a new student's data.
3. Update a student's data, for example entering marks for different courses.
4. Delete a student's data.
5. Search for a specific information, such as finding students enrolled in certain courses, finding students with a mark greater than or equal to 80 in some specific courses, and getting the number of credits for some courses. The output should be displayed in a tabular form.

Here are some figures to show the structure of forms used for performing some of the above-mentioned tasks.

| addStudent.php | | index.php |

Register A New Student

First Name: Omar

Last Name: Mohammed

Email: omar.mohammed@gma

Courses: Comp 102
Comp 104
Comp 206

[Register] Cancel

After registering a student with two courses →

Record Added

1	Ahmed	Hassan	Comp 102	Grading
1	Ahmed	Hassan	Comp 104	Grading
1	Ahmed	Hassan	Comp 206	Grading
5	Adel	Nasr	Comp 206	Grading
6	Aser	Mohammed	Comp 104	Grading
7	Amr	Fawzy	Comp 104	Grading
7	Amr	Fawzy	Comp 206	Grading
8	Omar	Mohammed	Comp 102	Grading
8	Omar	Mohammed	Comp 104	Grading

Register New Student

Search

After clicking the "Grading" link ↓

After clicking the "Grade" button, the "Student_Course" table should be updated to insert the "Mark" field using the "update" statement and then go back to the "index" page.

| grade.php |

Grading a student with ID= 8 in the course Comp 102

Mark: 60
[Grade] Cancel

Note that:

- At first, you should add some courses with their required information in the "Course" table.
- The "Student" and "Student_Course" tables are related through the "StudentID" field. To enter the course's data in the "Student_Course" table after inserting the student's data, you need to keep track the last entered id of the student. This can be done using the "lastInsertId()" function in the PDO object.
- To select multiple choices in the dropdown list, you have to use the property "multiple" and the "name" attribute of the form element has to be represented as an array.
- One of the SQL statements that can be used to select data from multiple related tables is:

```
SELECT column-name1 [, column-name2] ⋯
FROM table-name1
INNER JOIN table-name2
ON table-name1.column-name=table-name2.column-name
WHERE ⋯
```