School of Information and Computer Technology Sirindhorn International Institute of Technology Thammasat University

CSS326 Database Programming Laboratory

Laboratory Assignment#3

Database Management with phpMyAdmin

Objectives: To introduce to phpMyAdmin user interface for MySQL.
To learn how to use phpMyAdmin user interface for MySQL.

1. According to the following entity-relationship diagram fig. 1, you have to generate the relation schema in phpMyAdmin. You are given the necessary data to be inserted in your tables by the Figure 2. The resulting relational schema should look like the fig. 3.**(Score: 5 marks)**

   *Remember: There are redundant data in the tables and derive the data that is necessary for your relation schema.

   ***Remember to attach the .sql file for this exercise.

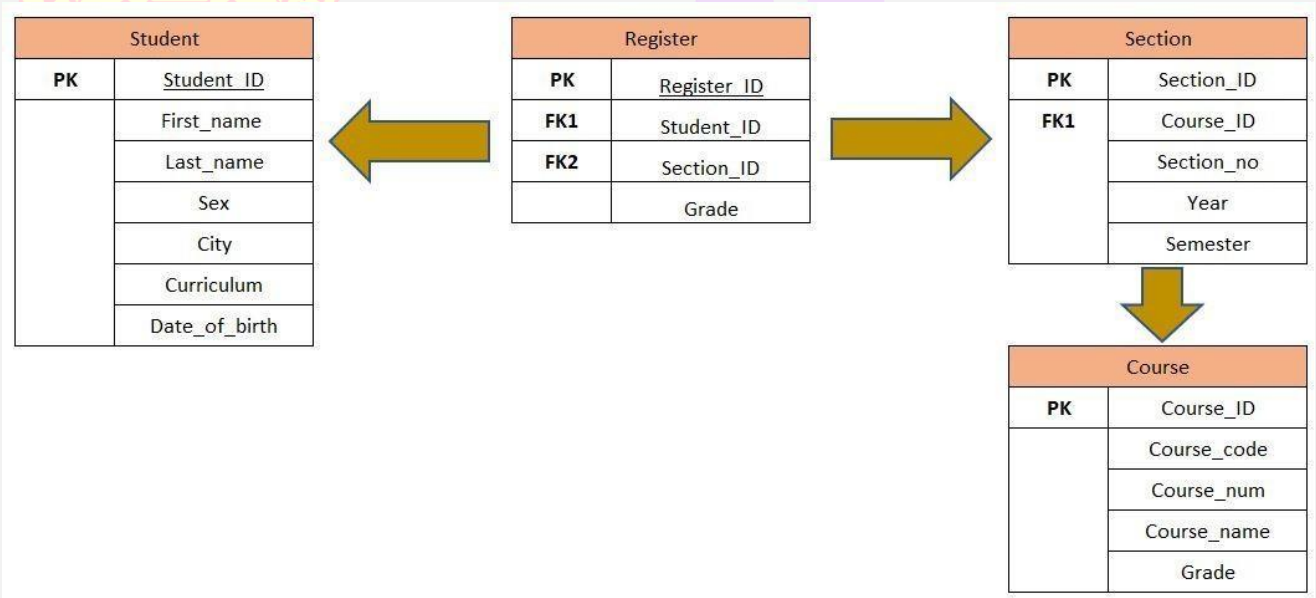

Figure 1: A simple E-R diagram for a school registration system
PK: primary key
FK1: Foreign Key 1
FK2: Foreign Key 2

Student Table

Student ID	First Name	Last name	Sex	City	Curriculum	Date of birth
6022040411	Adam	Phelps	Male	New York	ICT	7/24/2000
6022040412	Mark	Twain	Male	Los Angeles	ICT	9/13/2002
6022040413	Shania	Judith	Female	New York	CIVIL	5/19/2001
6022040414	Angelina	Rosswell	Female	California	MECHANICAL	7/27/2002
6022040415	Thomas	Hardy	Male	New York	MANAGEMENT	3/19/2006

Section Table

Student ID	First Name	Last name	Section ID	Section no.	Grade	Semester	Year
6022040411	Adam	Phelps	623	1	A	1	2019
6022040412	Mark	Twain	625	3	B	1	2019
6022040413	Shania	Judith	354	2	A	1	2019
6022040414	Angelina	Rosswell	267	1	C	2	2020
6022040415	Thomas	Hardy	147	2	A	2	2020

Course Table

Student ID	Shania	Last name	Course ID	Course no.	Course name	Course code	Grade
6022040411	Adam	Phelps	4576	45	Programming	ITS341	A
6022040412	Mark	Twain	4576	45	Programming	ITS341	B
6022040413	Shania	Judith	2345	24	Critical Thinking	GC124	A
6022040414	Angelina	Rosswell	1458	12	CAD/CAM	ME231	C
6022040415	Thomas	Hardy	2345	24	Critical Thinking	GC124	A

Registration Table

Registration ID	Student ID	Shania	Last name	Section ID	Grade
602	6022040411	Adam	Phelps	623	A
603	6022040412	Mark	Twain	625	B
604	6022040413	Shania	Judith	354	A
605	6022040414	Angelina	Rosswell	267	C
606	6022040415	Thomas	Hardy	147	A

Figure 2: The data that needs to be inserted in to your tables,* not all fields are necessary.

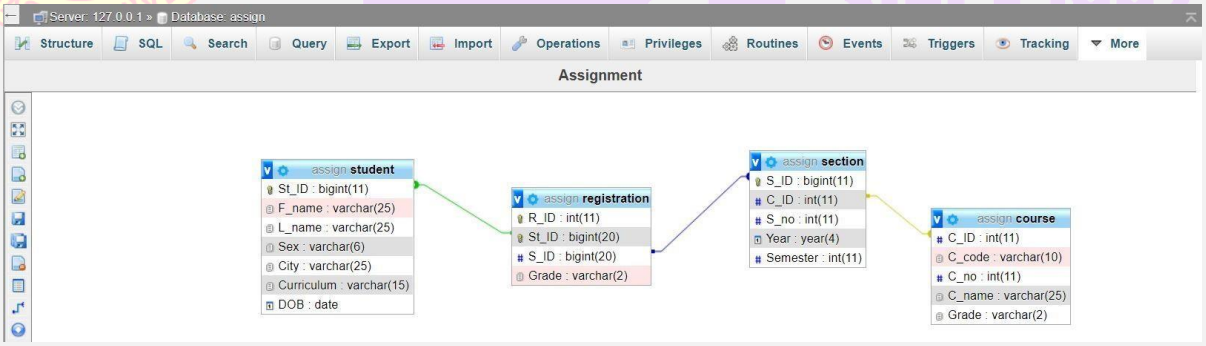

Figure 3: The expected output relation schema.

2. You are tasked with creating a database to manage a library's book inventory and borrowing system. The database should consist of two tables: Books and Borrowers. **(Score: 5 marks)**

   Book table:

Column	**Data Type**	**Description**
book_id	INT (Primary Key)	Unique identifier for the book
title	VARCHAR(255)	Title of the book
author	VARCHAR(255)	Author of the book
genre	VARCHAR(50)	Genre of the book
borrowable	BOOLEAN	Indicates if the book is borrowable

   Burrower table:

Column	**Data Type**	**Description**
borrower_id	INT (Primary Key)	Unique identifier for the borrower
name	VARCHAR(100)	Name of the borrower
email	VARCHAR(255)	Email address of the borrower
borrowed_book	INT (Foreign Key)	ID of the book borrowed by the borrower

   - You can insert 3 records to books table and 2 records to burrower's table (You can choose your own books, and imaginary burrowers).
   - You must have the foreign key relationship derived.
   - Update one of book to be unborrowable.

   ***Remember to attach the .sql file for this exercise as well.