Homework Assignment 3

[Posted Sunday, April 23, 2017, UPDATED Tuesday, April 25, 2017]

[DUE Sunday, April 30, 2017]

to your Canvas "Homework Assignment 3" by NO LATER THAN 11:59:00.00PM, [SHARP]

Preliminary Information: The goal of this assignment is to offer you yet another chance to "put the pieces together" as we have discussed them so far. You will be creating the tables to use, rather than having them provided.

Assignment Structure: There are two parts to this assignment. First, you will create the tables indicated, giving them the properties required, including Primary and Foreign keys, as needed. Second, there are a set of English-language questions that you will need to convert in to SQL statements (consistent with MariaDB/ MySQL) that we can run against the set of tables you have created to see if the correct information is retrieved.

Submission Process: Your assignment needs to be created using a MS Word-compatible word processor. This file needs to be submitted to your Canvas "Homework Assignment 3" assignment in the **Individual Homework ASSIGNMENTS group** no later than 11:59:00.00pm (SHARP) on Sunday, April 30, 2017. Be sure "**HW3**" is somewhere in **the filename** and that **YOUR NAME** is at the beginning of the document.

I. Creating the Tables [40 points: 4 CREATE statements x 5 points, 4 INSERT/UPDATE statements x 5 points].

To show you understand the power of SQL, you will submit the CREATE statements to create 4 new tables, according to the information provided below. You will then also submit your UPDATE statements for each of those 4 tables that will populate each table with the data that is also provided below. REMEMBER: if you do not submit the 4 CREATE and 4 INSERT/UPDATE statements, you will not be eligible for any credit for Part I.

Below are the definitions or sample schema for the four (4) tables of your new database. We have provided the properties and their data types and we have indicated the PK and FK relations for each. It is your task to create each of these tables with the appropriate SQL CREATE statements.

Professor	DataType
Prof_ID(PK)	int(10)
Prof_Name	varchar(50)
Prof_Email	varchar(50)
Prof_Office	varchar(100)

Student	DataType
Student_ID(PK)	int(10)
Student_Name	varchar(50)
Student_Email	varchar(50)
Student_Year	varchar(10)

Course	DataType
Course_ID(PK)	int(10)
Course_Name	varchar(50)
Department	varchar(50)

Enrollment	DataType
Student_ID(PK)(FK)	int(10)
Prof_ID(PK)(FK)	int(10) **[Corrected 4/25/17]**
Course_ID(PK)(FK)	int(10)
Semester(PK)	varchar(25)
Grade	varchar(3)

Once you have your tables created, you need to populate each of them with data using the appropriate SQL UPDATE or INSERT statement for each. Here is the data you MUST use for this assignment.

Professor

(0003438284,'Steve Smith','ssmith@college.edu','Flagler Building Room 201')
(0003040029,'Fred Stanza','stanf@college.edu','Library Room 104')
(0002938729,'Brandy Queens','queenb@college.edu','Union Starbucks')
(0003848738,'Brad Bradleson','bradbrad@college.edu','Flagler Building Room 222')
(0004938293,'Estabon Espenoza','eespenoza@college.edu','Library Starbucks')

Student

(0005993049,'Brent Bartles','bartleb@college.edu','Sophomore')
(0005586949,'Riley Moo','moomoo@college.edu','Freshman')
(0003849283,'Baxter Morris','baxtm@college.edu','Graduate')
(0005839299,'Georgio Estobane','geoest@college.edu','Freshman')
(0003929483,'Colin Farkone','farkone@college.edu','Junior')
(0003929283,'Jorge Bonametchio','bonametchio@college.edu','Senior')
(0004838293,'Alphonso Barone','baronea@college.edu','Junior')

Course

(129182829,'Physics 101','Physics')
(193929304,'Calc 212','Math')
(194958392,'Calc 213','Math')
(198483728,'Database Concepts','Csci')
(138493948,'English 400','Education')
(103858390,'Intro to Telecom','Telecom')
(193948392,'Stats','Math')

Enrollment

(0005993049,0003438284,129182829,'Spring 2014','A')
(0003849283,0003848738,138493948,'Fall 2013','C')
(0005586949,0002938729,129182829,'Fall 2012','B+')
(0003929483,0003040029,103858390,'Summer 2011','A')
(0003929283,0002938729,129182829,'Spring 2014','B-')
(0004838293,0004938293,138493948,'Fall 2012','A')
(0005993049,0002938729,129182829,'Fall 2014','B+')
(0003929283,0004938293,198483728,'Spring 2014','C')
(0005993049,0004938293,198483728,'Spring 2014','A-')
(0005839299,0004938293,198483728,'Spring 2014','F')
(0004838293,0004938293,198483728,'Spring 2014','A')
(0005586949,0002938729,198483728,'Fall 2012','A')
(0005993049,0003848738,138493948,'Summer 2011','D+')
(0003929483,0003438284,193948392,'Fall 2012','C-')
(0003929483,0002938729,129182829,'Summer 2013','D-')

Once you have this completed, you will be ready to complete Part II of this assignment. Again, be sure you include all 8 of these SQL statements for Part I of your Homework Assignment 3 document. That is the only way you will be eligible for any credit for Part I.

II. SQL Statements/Queries [60 points, 10 x 6 points/each].

1. Question/Task: List all student names who have received some form of an 'A'.
    - Your SQL Statement:

2. Question/Task: List all student names who took 'Database Concepts' in 'Spring 2014' and their corresponding grades.
    - Your SQL Statement:

3. Question/Task: List all professors who teach a 'Math' class.
    - Your SQL Statement:

4. Question/Task: List all students who have not failed any courses. (HINT: A **passing** grade is one that is C- or better)
    - Your SQL Statement:

5. Question/Task: What classes has 'Riley Moo' taken and list the corresponding semester and grade for each class.
    - Your SQL Statement:

6. Question/Task: List all student names and corresponding course who have retaken a course.
    - Your SQL Statement:

7. Question/Task: List all professors who teach more than one course in a semester.
    - Your SQL Statement:

8. Question/Task: List all student names and the corresponding number of courses they have taken, in ascending order.
    - Your SQL Statement:

9. Question/Task: What courses (display course names) were offered in 'Spring 2014'?
    - Your SQL Statement:

10. Question/Task: List all student names with corresponding professors (by name) that have taught them.
    - Your SQL Statement:

III. Handing in Assignment 3.

As noted above, all you need to do is copy this one MS Word file, **HW3.docx**, into your “Homework Assignment 3” assignment on Canvas before the deadline.