HW2: MySQL Queries

1. Database (METUSIS)

In this homework, you will work on the relational database **metusis** with seven tables. In the table below, data types and relationships of columns of each table are given, respectively.

	Name	Data Type		Name	Data Type
INSTRUCTOR	InstructorIDID	INT	**DEPARTMENT**	DepartmentCode	INT
	Name	VARCHAR(45)		Name	VARCHAR(225)
	Surname	VARCHAR(45)		Faculty	VARCHAR(225)
	Title	VARCHAR(45)		Institute	VARCHAR(225)
	Department	INT	**COURSE**	DepartmentCode	INT
	Email	VARCHAR(45)		CourseCode	INT
	Office	VARCHAR(45)		InstructorID	INT
	OfficePhone	VARCHAR(45)		Name	VARCHAR(25)
TA	TAID	INT		Credit	INT
	Name	VARCHAR(45)	**OFFERED COURSES**	CourseCode	INT
	Surname	VARCHAR(45)		DepartmentCode	INT
	Department	INT		Semester	INT
	Email	VARCHAR(45)		Section	INT
	Office	VARCHAR(45)		Instructor	INT
STUDENT	StudentID	INT		TA1	INT
	Name	VARCHAR(45)		TA2	INT
	Surname	VARCHAR(45)	**ENROLLED COURSES**	StudentID	INT
	BirthDate	DATE		CourseCode	INT
	Email	VARCHAR(45)		DepartmentCode	INT
	Address	VARCHAR(45)		Semester	INT
	StartingSemester	INT		Section	INT
	Advisor	INT		Category	VARCHAR(45)
	Department	INT		Letter	DECIMAL(10,2)

You are required to design queries to create and alter the database, its tables, and columns. You will submit all your queries in a **single .sql file**, adding a comment at the top of each query as described below.

2. ASSIGNMENT

2.1. Query 1 (15 pts)

Design a query that creates a database (schema) named **metusis**. Then, you should create all above tables in your database. Do not forget to add the necessary foreign key constraints. Make sure that you use CONSTRAINT keyword in your query.

Add a comment at the top of your query as **-- Query 1**.

2.2. Query 2 (15 pts)

Design a query to insert the rows given below into TA table. Note that you can also consider multiple rows syntax of INSERT statement.

TA ID	TA Name	TA Surname	Department	E-mail	Office
200001	Beril	Akkaya	568	akkaya@metu.edu.tr	319
200002	Çiya	Aydoğan	568	aydogan@metu.edu.tr	325
200003	Ayser	Akgüneş	568	akgunes@metu.edu.tr	137
200004	Melis	Boran	568	boran@metu.edu.tr	325
200005	Gözdenur	Büyük	568	buyuk@metu.edu.tr	137
200006	Tuğçe	Canbilen	568	canbilen@metu.edu.tr	137
200007	Günsu	Dağıstanlı	568	dagistanli@metu.edu.tr	320
200008	Can	Er	568	er@metu.edu.tr	136
200009	Yasin Taha	Gürlesin	568	gurlesin@metu.edu.tr	321
200010	Utku	Girit	568	girit@metu.edu.tr	138
200011	Gülten	Gökayaz	568	gokayaz@metu.edu.tr	136
200012	Tolga	Karabaş	568	karabas@metu.edu.tr	321
200013	Melissa	Karagür	568	karagur@metu.edu.tr	214
200014	Şakir Buğra	Kollar	568	kollar@metu.edu.tr	318
200015	İlyas Alper	Şener	568	sener@metu.edu.tr	138
200016	Hasan	Taş	568	tas@metu.edu.tr	327
200017	Mehmet Sencer	Zengin	568	zengin@metu.edu.tr	324
200018	Ali Yücel	Türegün	568	turegun@metu.edu.tr	327
200019	Sıdıka	Tunç	568	tunc@metu.edu.tr	214

Add a comment at the top of your query as **-- Query 2**.

2.3. Query 3 (10 pts)

The database designer notices that "BirthPlace" attribute is missing in Student table. Design a query that adds a column named "BirthPlace" between columns "BirthDate" and "Email". Set the data type of this column as VARCHAR(45).

Add a comment at the top of your query as **-- Query 3**.

2.4. Query 4 (15 pts)

The database designer finds out some mistakes in Course table: s/he notices that "InstructorID" is redundant and the data type of "Name" is not appropriate. As you may have noticed "InstructorID" attribute is a foreign key here. So, first give a query to drop this Foreign Key constraint from the table. Then, design a query to drop the "InstructorID" column, and change the type of "Name" to VARCHAR(225).

Add a comment at the top of your query as **-- Query 4**.

- ➢ *Before Queries 5,6 and 7, you can execute the dump file to get the metusis schema on your local server. You can check whether your queries are working correctly from HW2_Data.xlsx.*

2.5. Query 5 (15 pts)

Report the instructors who offered any course after the semester 20142. List the instructor's name, instructor's surname, course code and the semester. Please make sure that there are no completely identical rows.

Add a comment at the top of your query as **-- Query 5**.

2.6. Query 6 (15 pts)

Report the students who have passed a must course in a given semester among the students who stayed at METU Dormitories (If a student takes a course more than once and passes in each time then they both will be represented in the displayed list.). List the followings: Student's name and surname together in one column named as Name&Surname, Course Code, Semester and Letter.

Add a comment at the top of your query as **-- Query 6**.

2.7. Query 7 (15 pts)

Write a query to find the ids, and the letter grades of the students who have a higher grade than any one of the students who stays at dormitories, for the semester 20151. Note that there are more than one student whose address is METU Dormitories.

Add a comment at the top of your query as **-- Query 7**.

3. SUBMISSION

Note that this is a group assignment of **three**. The deadline is Friday, **28-04-2023, 23:59**.

Upload **only** a file named as "**studentID1_studentID2_studentID3. sql**" on ODTÜCLASS.

(e.g., 2021254_2023456_2023864.sql)

4. GRADING

No partial points will be given unless your query result does not match the requirement. The points of the queries are indicated above the query description.