Due:

Thursday 13 March 2025 by 23:59 MS Teams

Total Points: 150

Deliverables:

The following should be completed and submitted by the due date and time specified above. Submissions received after the deadline will be subject to the late policy described in the syllabus.

Acceptable formats for the submissions include:

- Microsoft Word, text, or PDF document
- Other similar methods

Database Structural Information:

The following tables form part of a Library database held in an RDBMS:

Teacher	**(TeacherID, Name, Surname, email, CV)**
Course	**(Department, Code, Title, AKTS)**
CourseSemester	**(Department, Code, Year, TeacherID)**
Student	**(StudentID, Name, Surname, Email)**
CourseRegistration	**(Department, Code, Year, StudentID, Score)**

where

Teacher	contains details of the teachers in the university and **TeacherID** is the key.
Course	contains details of courses offered and **Department/Code** forms the key.
CourseSemester	contains details of a specific offering of the course and **Department/Code/Year** forms the key. **TeacherID** is a foreign key identifying which Teacher is teaching the course in the given semester.
Student	contains details of the teachers in the university and **StudentID** is the key.
CourseRegistration	contains details of a student taking the course in a given semester. **Department/Code/Year/StudentID** forms the key. **StudentID** is a foreign key to the **Student** table.

Problem Set:

1. Create the five (5) tables including appropriate column types and necessary constraints. - 20 points

2. Assume only five (5) SQL statements were used to create the tables (one for each table). Give two (2) examples of one of the tables that must be created before one of the other ones. Explain why. - 15 points

3. Choose one of your responses for question 2 and explain how you could create table 2 before table 1 by using an extra SQL statement. Explain how the SQL statements would be changed. - 15 points

   Write SQL statements for the following questions. Each question has a number in parentheses. For full credit, you must provide that many substantially different SQL statements that would have the same result.

4. List all student details. (2) - 10 points

5. List all teacher names and surnames. (1) - 5 points

6. List the department and codes of all courses offered in 2025. (2) - 10 points

7. List all course titles that contain the word 'database' and are offered in 2025. (2) - 10 points

8. List all book courses (department, code, title) that have no students registered. (1) - 5 points

9. Remove all courses that have not been offered since 2020 from teh database. (1) - 5 points

10. List course department and code along with how many students area in each course? (1) - 5 points

11. How many courses are being taught by Joseph Ledet in 2025? (1) - 5 points

12. List the names of students who are not registered for any courses. (1) - 5 points

13. Give a list of students who are currently taking more than 30 AKTS and also list which courses they are registered for. (1) - 5 points

14. Assume you are registered for CSE 204 in 2025. Change your score for that course to be 100? (1) - 5 points

15. List the courses that are being taken by a student with email address cemyilmaz@email.com (1) - 5 points

16. For each course that has been offered at least 5 times, list the teachers who have taught them. (1) - 10 points

17. List student names, surnames and total AKTS for 2025 for each student. (1) - 5 points

18. There could be additional columns on these tables. Use SQL to add columns to two different tables that would seem reasonable. (2) - 10 points