1. List the members of your group below. Underline your name.

2. Consider a database with relations `Students(id, name, year)`, `Courses(id, title, credits)`, and `Enrolls(student, course)`. A tuple $(i, n, y) \in$ `Students` denotes a student with student-identifier i, name n, and year y. A tuple $(i, t, c) \in$ `Courses` denotes a course with course-identifier i, title t, and c credits. A tuple $(s, c) \in$ `Enrolls` denotes the enrollment of the student with identifier s in the class with identifier c. Write a SQL query for a list, sorted by student IDs, of the total number of credits for which each student is enrolled, along with the student's name and ID.

3. For the database of Question 2, write two different SQL query that return the student IDs that are in Courses but not in Students. (Make the queries as different as possible.)

4. Write a SQL query that generates a list of course IDs, course names, and the enrollment in each course with fewer than 10 students enrolled. The desired output is a list of tuples of the form (i, t, n) where i is a course identifier, t is that course's title, and n is the number of students enrolled in that course. If there is an enrollment record for a course with no known title then t should be null for that tuple.

5. Answer the following based on Codd's paper.[1]

   (a) How many paths are needed to support symmetric exploitation of an n-ary relation? Explain your answer.

   (b) Provide a relational algebra expression (using the algebra defined in class) for the active domain of a database composed of a single relation $R(A, B, C)$.

   (c) Justify the claim made by Footnote 6 (page 382). Provide examples in SQL to support your answer.

[1] Edgar F. Codd, "A Relational Model of Data for Large Shared Data Banks," *Communications of the ACM* 13/6 (1970).