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Q1: Design an EER schema and give the corresponding relational schema for the following data requirements:

A student is examined in several courses. Each student is assigned a score in each of his/her courses. It is required to keep track of the number of students in each course. A student is described by student Id (unique), name, gender, birthdate and study year. A name of student is composed of first name and last name. An instructor is described by instructor Id (unique), name, gender, salary, academic rank, hire-date, and city. A course is described by course code (unique for all courses), course title, max score and min score. Each course can be taught by many instructors in different years.

(a) Design an EER schema for the above data requirements. Specify all key attributes and all structural constraints.

(b) Design the relational schema that corresponds to the required application system. Specify all the key, entity and referential constraints.

(c) Write SQL statements that creates the above school database.