Lab Session 8

Objectives

- To consolidate the main concepts in the process of representing an Entity-Relationship model using tables.

Environment

The materials are in the *lab8* folder. Copy this folder into the BBDD folder from lab session 1.

Exercise

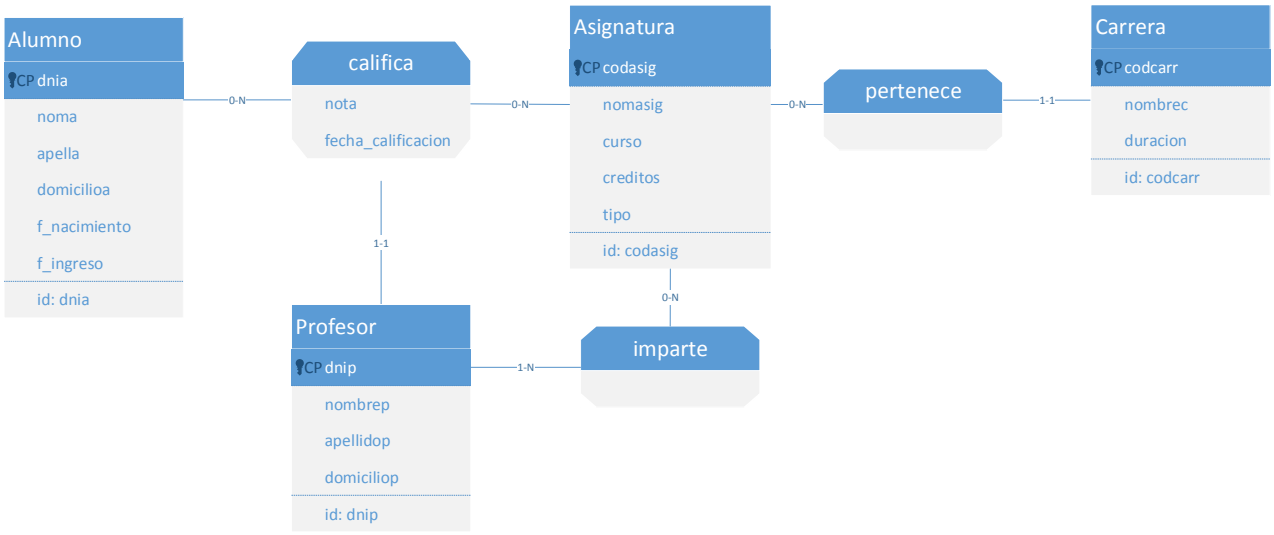
Using this requirements specification:

- A student can be enrolled (*matriculado*) in many courses (asignaturas). Data about students: DNI (`dnia`), name (`noma`), date of birth (`f_nacimiento`), and start date of studies (`f_ingreso`). It is assumed that the DNI uniquely identifies a student.
- A course belongs to only one degree (*carrera*). Data about courses: code (`codasig`), description (`nomasig`), year for the course (`curso`), number of credits (`creditos`) and its type (`tipo`). The code of a course is a unique identifier.
- A degree has many courses. Data about degrees: code (`codcarr`), description (`nombrec`), and length of studies (`duracion`). The code of a degree is a unique identifier.
- The courses can be: mandatory, elective, or free elective.
- A course can be taught by many lecturers (but not at the same time) as it is possible to have several groups for a course.
- Data about lecturers: DNI (`dnip`), name (`nomp`), surname (`apellidop`), and address (`domiciliop`). DNI is assumed to be a unique identifier.
- The courses where a student is enrolled are recorded. The grades (*notas*), the lecturers that have graded (*profesores calificadores*), and the date of the grade (*fecha_calificacion*, the system date by default) are also recorded.
- The courses (and groups) taught by the lecturers have to be recorded, even when no students are enrolled in his group.
- No two courses can have the same name.
- A student cannot be enrolled in the same course with two different lecturers.

and using the associated Entity-Relationship models in the next page:

1. Identify and analyze differences between the models.
2. Reduce Model 1 to tables, identifying primary keys, foreign keys, and additional checks needed.
3. Reduce Model 2 to tables, identifying primary keys, foreign keys, and additional checks needed.

Model 1



Model 2