

BD Alumnos

Create the following tables:

Student

Field	Type	Mandatory	Default Value	Related table	Comments
IES	Char(4)	Si	IF	PK	Código de Instituto
Nmat	Integer	Si			Número matrícula
DNI	Char(10)	SI			DNI
Nombre	Varchar(50)	No			Nombre del alumno
Tutor	Char(10)	No		Teacher	Código del profesor que es tutor del alumno

1:1

- An student can be identified:
 - IES, nmat (There can be the same nmat in different IES)
 - DNI: it's not allowed that an student could be registered in two IES
 - Between the previous two candidate keys, (IES,nmat) is chosed as Primary Key

Teacher

Field	Type	Mandatory	Default Value	Related table	Comments
DNI	Char(10)	Si		PK	DNI del profesor
Nombre	Varchar(50)	No			Nombre del profesor

1:N

- The PK is DNI
- A teacher cannot be deleted if there are related rows in student table
- The dni of a teacher cannot be modified once the teacher has been created.

Subject

Field	Type	Mandatory	Default Value	Related table	Comments
CodAsig	Char(5)	Si			Código de la asignatura
Creditos	Tinyint	Si			Créditos

- The PK is CodAsig

Marks

The students have marks in different subjects. We want to know the teacher who marked the student.

DNI - ESTUDIANTE

Field	Type	Mandatory	Default Value	Related table	Comments
Id	Integer	SI			Autoincrement, assigned by the system
IES	Char(4)	SI		Student	
NMat	Integer	SI		Student	
DNI	Char(10)	SI		Teacher	
Fecha	Date	NO	Sysdate		

- The PK is id
- The student who gets the mark must exist
- The teacher who marks the student must exist
- If a student is deleted, his marks are also deleted
- If a teacher has already marked any student he/she cannot be deleted

Tasks:

- DDL sentences in MySQL
- Identify the relationship type (1:N, N:M, 1:1) between
 - Student and Teacher
 - Student and Mark
 - Mark and Teacher
- The database design has to be altered. We want to know which is the representative student of the course
 - Which changes do we have to do?
 - What is the new relationship?
 - Write the according DDL sentences