# Lab: Entity Relations

You can check your solutions here: <https://judge.softuni.bg/Contests/3202/Additional-Exercises>.

## One to Zero or One

Create database with two tables: **Students** and **Addresses.** The relationship of these tables should be one to one.

Use attributes wherever you can.

It should look like this:

Timeline

Description automatically generated with medium confidence

### Constraints

Your **namespaces** should be:

* P01\_StudentSystem – for your Startup class, if you have one
* P01\_StudentSystem.Data – for your DbContext
* P01\_StudentSystem.Data.Models – for your models

Your **models** should be:

* StudentSystemContext – your DbContext
* Student:
  + StudentId
  + Name (up to 100 characters, unicode)
  + PhoneNumber (exactly 10 characters, not unicode, not required)
  + RegisteredOn
  + Birthday (not required)
* Course:
  + CourseId
  + Name (up to 80 characters, unicode)
  + Description (unicode, not required)
  + StartDate
  + EndDate
  + Price
* Resource:
  + ResourceId
  + Name (up to 50 characters, unicode)
  + Url (not unicode)
  + ResourceType (enum – can be Video, Presentation, Document or Other)
  + CourseId
* Homework:
  + HomeworkId
  + Content (string, linking to a file, not unicode)
  + ContentType (enum – can be Application, Pdf or Zip)
  + SubmissionTime
  + StudentId
  + CourseId
* StudentCourse – mapping class between **Students** and **Courses**

Table relations:

* **One student** can have **many CourseEnrollments**
* **One student** canhave **many HomeworkSubmissions**
* **One course** can have **many StudentsEnrolled**
* **One course** can have **many Resources**
* **One course** can have **many HomeworkSubmissions**

You will need a constructor, accepting **DbContextOptions** to test your solution in **Judge**!

## One to Many

Create database with two tables: **Students** and **Grades**. The relationship of these tables should be one to many.

It should look like this:

Diagram

Description automatically generated with low confidence

1. **Many To-Many**

Create database with two three: **Students**, **StudentsCourses** and **Courses**. The relationship of these tables should be many to many.

It should look like this:

Graphical user interface, text, application

Description automatically generated