

## Лабораторная работа 2. Моделирование данных

### 1) Exercise 1.

- a. Task 1: Определить сущности

Student, Tutor, Course, Place, Presentation

- b. Task 2: Добавить подходящие атрибуты

Student
<u>studentId</u>
studentName
studentAdress

Teacher
<u>teacherId</u>
teacherName

Course
<u>courseName</u>
courseCost
courseStartDate
courseFinishDate

Grade
<u>CourseName</u>
Grade
studentId

Первичный ключ выделен синим цветом

### 2) Exercise 2: Выявить взаимоотношения

- a. Task 1: Создать список именованных связей

Student-Grade

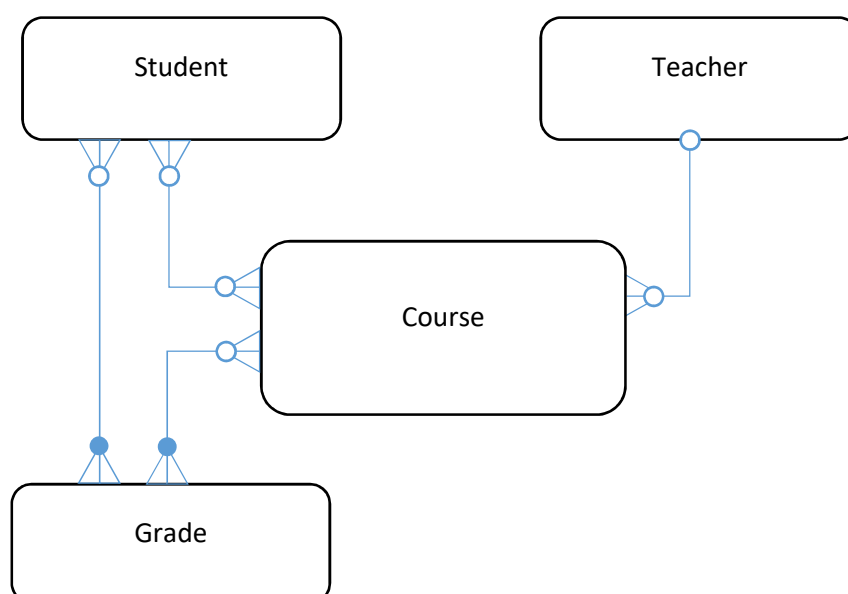
Student-Course

Teacher-Course

Course-Grade

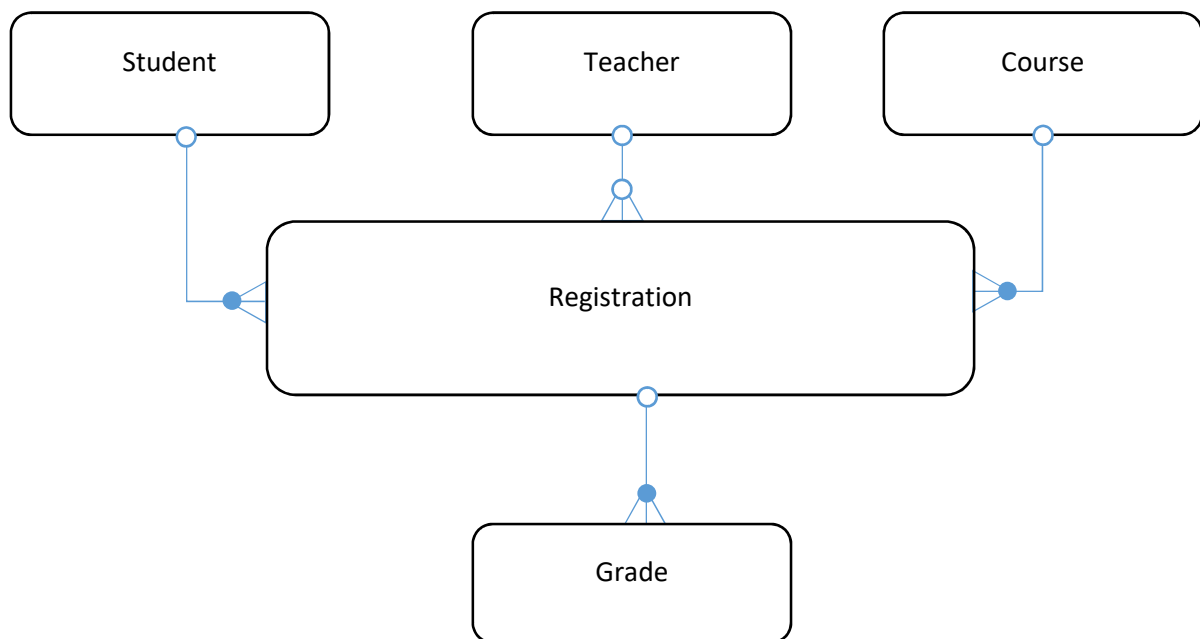
- b. Task 2: Построить E-R диаграмму

E-R Diagram (Initial)



## c. Task 3: Перестроить отношения многие-ко-многим

## E-R Diagram (Updated)



Student
studentId
studentFirstName
studentSecondName
studentAdress

Teacher
teacherId
teacherFirstName
teacherSecondName

Course
courseName
courseCost
courseStartDate
courseFinishDate

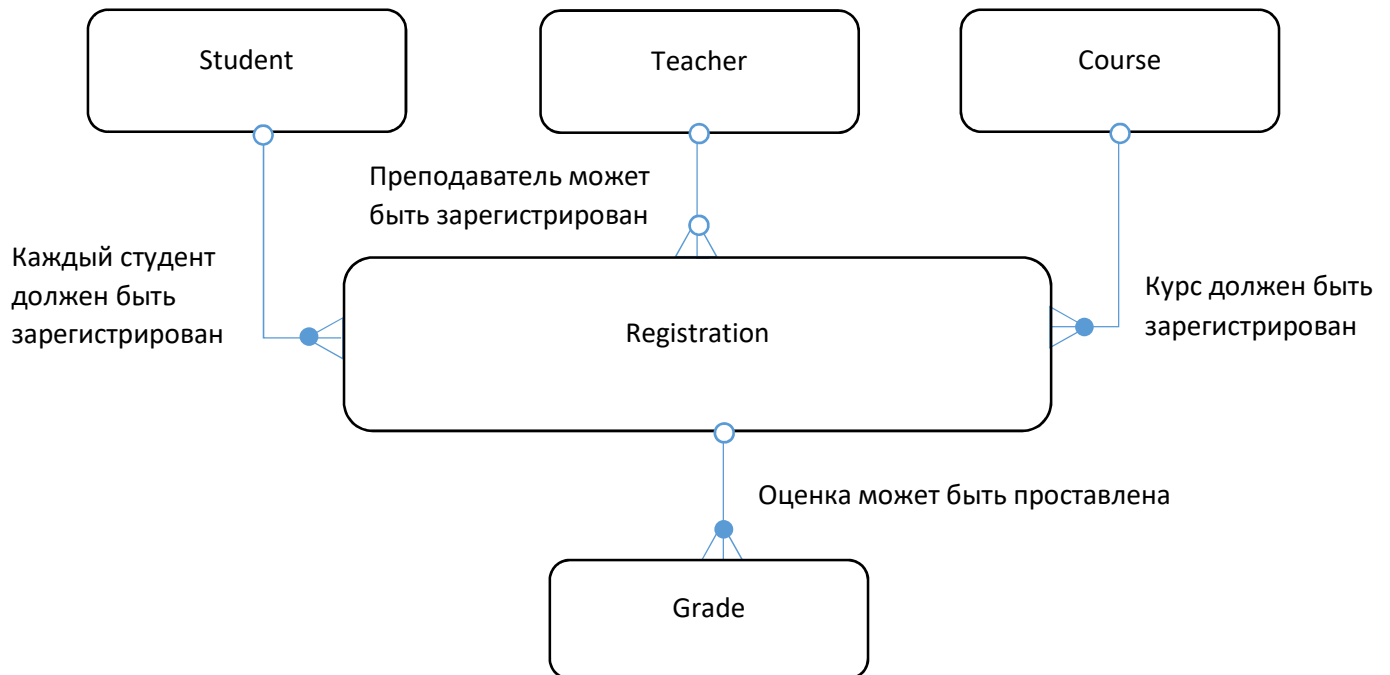
Grade
courseName
studentId
registrationId
grade

Registration
studentId
courseName
registrationId
teacherId

Первичные ключи выделены синим цветом

## Exercise 3: Закончить модель

## E-R Diagram (Final)



Student
<u>studentId</u>
studentFirstName
studentSecondName
studentAdress

Teacher
<u>teacherId</u>
teacherFirstName
teacherSecondName

Course
<u>courseName</u>
courseCost
courseStartDate
courseFinishDate

Grade
<u>courseName</u>
<u>studentId</u>
<u>registrationId</u>
grade

Registration
<u>studentId</u>
<u>courseName</u>
registrationId
teacherId

Переменная	Диапазон
studentId	0..999
studentFirstName	string
studentSecondName	string
studentAdress	string
teacherId	0..99
teacherFirstName	string
teacherSecondName	string
courseName	string
courseCost	0..99999
courseStartDate	01/01/2000
courseFinishDate	12/12/2050
registrationId	0...999