**Database Title**

# Project Team (3 students)

|  |  |  |
| --- | --- | --- |
| **No** | Stu-Number | Name Surname |
| 1 | 17070001002 | Selin Çetiner |
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| 3 |  |  |

**PHASE 1-Database Design**

# Planning Summary

Write a paragraph to answer the questions below:

Define your fictitious Information System; What is your project; Purpose of the database; Who can use such a database; How much data you need; Description of why and what tables are required for the storing information; Identification of the primary keys; Design relationship between the tables

We have college database system. We aim to organize and manage the lessons, grades and user relations. This type of database can be used in collages and information systems. There are 3 types of users in our database. These are admin, student and teacher. They have addresses that can be one or more. Each student has a lesson schedule. The lesson schedule can be same in different students. Faculties has different types of departments and then departments includes many lessons. One lesson can be placed in lesson schedules and lesson schedules has many lessons. Moreover, Faculty must include one or more teacher. However, Every teacher has one title. We should keep all these data to identify relations and attributes. Each table has unique primary key with Id forename. Only many to many relation and Adress relations has strong relationship because address is a weak entity. Others are strong entity and has weak relationship.

# Requirement Analysis

## Address

|  |
| --- |
| IdAddress |
| Type |
| Text |

## Admin

|  |
| --- |
| IdAdmin |
| UserName |
| Password |
| Name |
| Surname |
| PhoneNumber |
| Email |
| Status |

## Teacher

|  |
| --- |
| IdTeacher |
| Password |
| Name |
| SurName |
| PhoneNumber |
| Email |
| Status |

## Student

|  |
| --- |
| IdStudent |
| Password |
| Name |
| Surname |
| PhoneNumber |
| Email |
| BirthDate |
| Class |
| Status |

## TeacherTitle

|  |
| --- |
| IdTeacher |
| Title |

## LessonSchedule

|  |
| --- |
| IdLesson |
| DateTime |

## Lesson

|  |
| --- |
| IdLesson |
| LessonName |

## Grades

|  |
| --- |
| QuizGrade |
| HomeworkGrade |
| MidtermGrade |
| FinalGrade |
| Attendence |
| EnterDate |

## Department

|  |
| --- |
| IdDepartment |
| DepartmentName |

## Faculty

|  |
| --- |
| IdFaculty |

What are your contraints? List them one by one

admin

--------------------------

id = int(11)

username = varchar(255)

password = varchar(255)

name\_surname = varchar(255)

phone = varchar(255)

email = varchar(255)

status = tinyint(4)

address

--------------------------

id = int(11)

type = tinyint(4) [0 = Admin] [1 = Teacher] [2 = student]

user\_id = int(11)

address = text

teacher

--------------------------

id = int(11)

username = varchar(255)

password = varchar(255)

name\_surname = varchar(255)

phone = varchar(255)

email = varchar(255)

department\_id = int(11)

title\_id = int(11)

faculty\_id = int(11)

create\_user = id(11)

create\_date = datetime

status = tinyint(4)

faculty

--------------------------

id = int(11)

faculty = varchar(255)

create\_user = int(11)

create\_date = datetime

department

--------------------------

id = int(11)

faculty\_id = int(11)

department = varchar(255)

create\_user = int(11)

create\_date = datetime

teacher\_title

--------------------------

id = int(11)

department\_id = int(11)

title = varchar(255)

create\_user = int(11)

create\_date = datetime

student

--------------------------

id = int(11)

username = varchar(255)

password = varchar(255)

name\_surname = varchar(255)

phone = varchar(255)

email = varchar(255)

birth\_date = datetime

identity\_id = int(11)

faculty\_id = tiny(1)

department\_id = int(11)

period\_year = year

class = tinyint(4)

status = tinyint(4)

lesson

--------------------------

id = int(11)

faculty\_id = tinyint(4)

department\_id = int(11)

lesson = varchar(255)

teachers\_id = int(11)

grades

--------------------------

id = int(11)

lesson\_id = int(11)

student\_id = int(11)

homework\_grade = tinyint(4)

midterm\_grade = tinyint(4)

final\_grade = tinyint(4)

quiz\_grade = tinyint(4)

attendance = tinyint(4)

create\_date = datetime

lesson\_schedule

--------------------------

id = int(11)

lesson\_id = int(11)

schedule\_date = datetime

# Cardinality:

How did you do that? Explain table by table according to your relations?

Each people like admin, student, teacher has many address. Each teacher has only one teacher title. Student and Lesson tables has many to many relation because student may have many lesson also a lesson includes many students. Every Department must have many teacher as many titles. In addition, many number of teacher must enroll faculty. Because of student takes many lessons, Student has many grades that grades for one lesson.

# Entity-Relationship Diagram (Example)

