

## Relational schema

User(id, first\_name, last\_name, password, gender, email, address)

User\_mobile(user, mobile\_number)

.....  
User\_mobile.user references User.id

Student(id, gpa)

.....  
Student.id references User.id

Where Student.gpa = average(Instructor\_teaches\_Student.final\_grade) where  
Instructor\_teaches\_Student.student = Student.id

Admin(id)

.....  
Admin.id references User.id

Instructor(id, rating)

.....  
Instructor.id references User.id

Where Instructor.rating = average(Student\_rate\_Instructor.value) where  
Student\_rate\_Instructor.instructor = Instructor.id

Promo\_code(code, issue\_date, expiry\_date, discount\_amount, issuer)

.....  
Promo\_code.issuer references Admin.id

Credit\_card(number, card\_holder\_name, expiry\_date, cvv)

Course(id, accepted, name, likes, credit\_hours, description, price, content, creator)  
.....

Course.creator references Instructor.id

Comment(course, id, text)  
.....

Comment.course references Course.id

Assignment(course, number, deadline, full\_grade, content, weight, type)  
.....

Assignment.course references Course.id

Student\_Promo(student, code)  
..... ..

Student\_Promo.student references student.id

Student\_Promo.code references Promo\_code.code

Student\_rate\_Instructor(student, instructor, value)  
..... ..

Student\_rate\_Instructor.student references student.id

Student\_rate\_Instructor.instructor references Instructor.id

Student\_Card(student, card)  
..... ..

Student\_Card.student references student.id

Student\_Card.card references Credit\_card.number

Student\_pays\_Course(student, course, card)  
..... ..

Student\_pays\_Course.student references student.id

Student\_pays\_Course.course references Course.id

Student\_pays\_Course.card references Credit\_card.number

Student\_Certificate(student, course, issue\_date)  
..... ..

Student\_Certificate.student references student.id

Student\_Certificate.course references Course.id

Instructor\_teaches\_Student(instructor, student, course, final\_grade)

Instructor\_teaches\_Student.instructor references Instructor.id

Instructor\_teaches\_Student.student references Student.id

Instructor\_teaches\_Student.course references Course.id

Where `Instructor_teaches_Student.final_grade = weighted_sum(Student_Assignment.grade)`

```
Student_Assignment(student, course, assignment_id, grade)
```

Student\_Assignment.student references Student.id

Student\_Assignment.course references Course.id

Student\_Assignment.assignment\_id references Assignment.number

```
Instructor_Add_Instructor(id1, id2, course)
```

Instructor\_Add\_Instructor.id1 references Instructor.id

Instructor\_Add\_Instructor.id2 references Instructor.id

Instructor\_Add\_Instructor.course references Course.id

```
Student_comment(student, course, comment_id, text)
```

Student comment.student references Student.id

Student\_comment.course references Course.id

Student\_comment.comment\_id references Comment.id

```
Prerequisite(id1, id2)
.....
```

Prerequisite.id1 references Course.id

Prerequisite.id2 references Course.id