CSC 540 Project 1

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# ER Diagram

Before describing details about each table, there are some notation quirks I would like to touch on. The tool that we chose for this diagram did not allow for relationships to be diamonds so instead they will be described in this document. Also, we in lined all attributes of entities and relationships to make the diagram cleaner. Primary keys have key icons next to them. Foreign fields are denoted in red, blue fields must not be null. Crows foot notation is used to relate entities and relationships. The diagram can be found on the last page (Figure 1).

### User

Description: The base user model. Contains login information, first name, and last name.  
Keys: **id**  
Constraints: All fields must be non-null

### Graduate

Description: Users that are graduate students.  
Keys: **grad\_id** (FK on User.id)  
Constraints: None

### Instructor

Description: Users that are instructors.  
Keys: **inst\_id** (FK on User.id)  
Constraints: None

### Student

Description: Users that are students (graduate and undergraduate).  
Keys: **student\_id** (FK on User.id)  
Constraints: None

### TAFor

Description: A **relationship** table, relates graduate students to courses that they TA for.  
Keys: **ta\_id** (FK on Graduate.grad\_id), **course\_id** (FK on Course.course\_id)  
Constraints: None

### EnrolledIn

Description: A **relationship** table, relates students to courses that they are enrolled in.  
Keys: **student\_id** (FK on Student.student\_id), **course\_id** (FK on Course.course\_id)  
Constraints: On courses where graduate is true, student\_id must exist in graduate table.

### Course

Description: The base user model. Contains login information, first name, and last name.  
Keys: **course\_id**  
Constraints: id must be unique, all fields must be non-null

### Exercise

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### ExQuestions

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### Question

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### Answer

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### Parameters

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### AttAnswers

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### Attempt

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### Topic

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

### CourseTopic

Description: The base user model. Contains login information, first name, and last name.  
Keys: id  
Constraints: id must be unique, all fields must be non-null

# Constraints

Asdasd

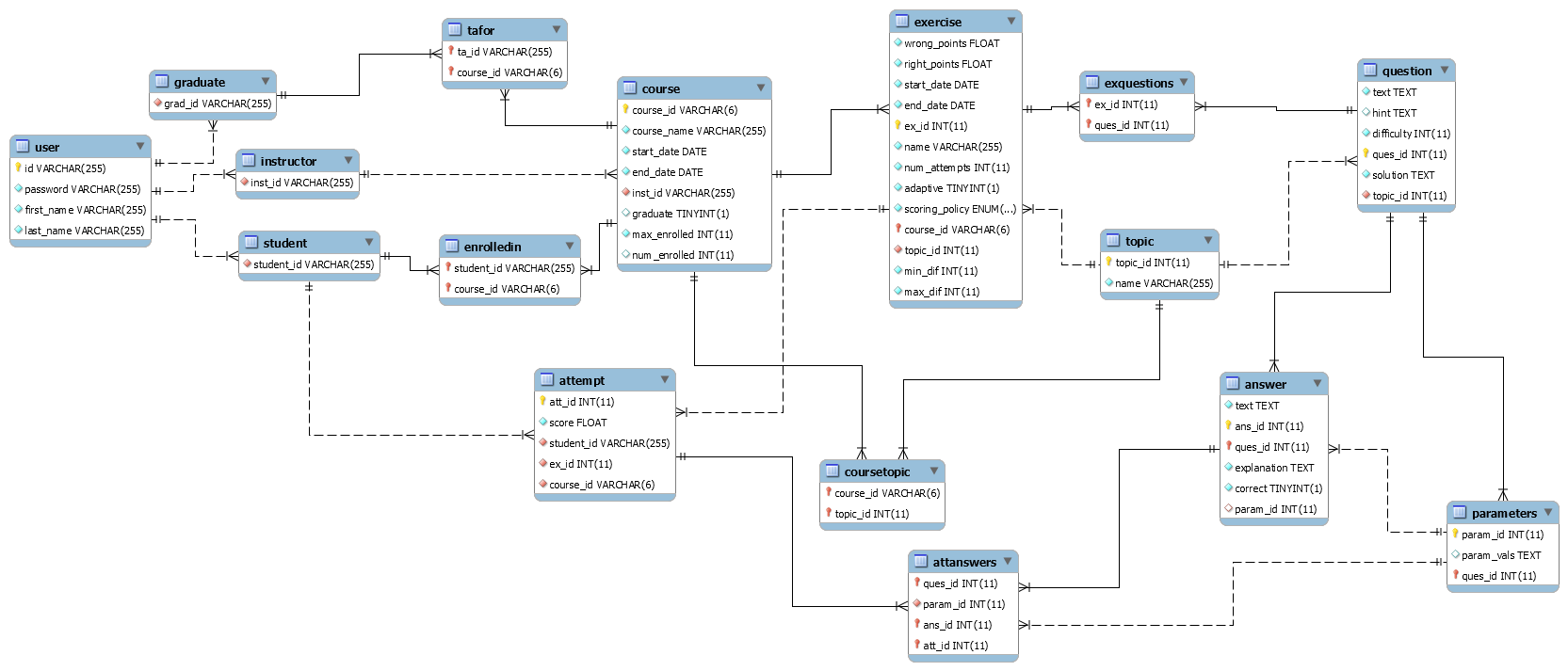


Figure . An EER diagram for our database.