

San José State University
Department of Computer Engineering

CMPE 226
Database Systems
Spring 2017
Instructor: Ron Mak

Assignment #2

Assigned: Tuesday, February 14
Due: Tuesday, February 21 at 11:59 pm
Team assignment, 100 points max

Entity-relationship diagram

The purpose of this assignment is to give your team practice designing a database at the conceptual level and then visualizing the design as an entity-relationship diagram (ERD).

Describe your application in a few paragraphs. You may not have thought far enough yet, so use your imagination! You will not be held to any design decisions you make in this assignment.

List at least 10 of your database's requirements.

- What entities need to be in the database?
- What major attributes will the entities have?
- What relationships will be between entities?

Create an ERD for your team database project instead. Minimum requirements for your team database:

- At least 5 entities including at least one weak entity
- Different types of relationships (1-1, 1-M, M-N)
- A hierarchical relationship; (e.g., university → school → department)
- Optional and derived attributes
- Multivalued attributes (e.g., phone numbers)
- Composite attributes (e.g., address)

This ER diagram could be the first draft of your design. You can make changes to your design during the semester.

Drawing ER diagrams

Use standard Chen ER notation from the textbook and these slides. Recommendation:
The free ERDPlus drawing tool: <https://erdplus.com/#/>

Rubrics

Criteria	Maximum points
Requirements <ul style="list-style-type: none">At least 10 database requirements	10
Entities <ul style="list-style-type: none">At least 5 entitiesAt least one weak entity	20 <ul style="list-style-type: none">155
Relationships <ul style="list-style-type: none">One-to-oneOne-to-manyMany-to-manyHierarchical	35 <ul style="list-style-type: none">1010105
Attributes <ul style="list-style-type: none">OptionalDerivedMultivaluedComposite	35 <ul style="list-style-type: none">5101010

What to turn in

Create a zip file named after your team (e.g., **Supercoders.zip**) containing:

- The application description.
- The database requirements.
- A PDF of your ER diagram as saved by ERDPlus.

This is a team assignment. One submission only per team. Submit into Canvas:

Assignment #2: ER diagram.