

Project Relational Schema and Normalization

Submission: Submit the following to the assignment Project: Relational Schema and Normalization on Canvas:

Please number as in below:

1. Derive a relational database schema based on your ER diagram where each relation or table has the below form: (NOTE: To receive full credit it must be in the below format.)

Relation-name(attr1, attr2, ..., attrn)

Where *Relation-name* is the table name and attr1 represents the first attribute (column). You should indicate primary keys by underlining them and state which are foreign keys.

Example:

Registration(studentId, courseNo)

Student(studentId, lastName, firstName)

Course(courseNo, courseName)

The underscore above indicates a primary key (or composite primary key if more than one is underlined), and you can just state which attribute or attributes are foreign keys and which table they reference. In the above case, courseNo in table Registration is a foreign key to courseNo in the Course table, and studentId in the table Registration is a foreign key to studentId in the table Student.

2. Please provide a one sentence description for each table stating its purpose.

3. **Normalization** – Look for any violations of 1NF, 2NF, and 3NF and modify your relational schema (if necessary) to normalize it. List the functional dependencies and which normal form was violated. List your new relational-schema (if it changed) and provide a discussion as to the methods used to get the new tables/relations.

Note, to get credit on this part you must add a paragraph describing normalization even if you feel it is already normalized. Explain why you have no 2nf or 3nf violations.

4. Did you do any **denormalization**? Why/why not?

5. If you are in a group, only the team leader needs to submit but include a file stating which people in the group contributed to this part of the assignment. If a student

does not contribute to this part of the assignment, that student will receive a 0. If a student contributes much less than the other students in the group, points will be deducted accordingly.

Homework for Project	Points
Project Title, Project Summary	5
ER Diagram	15
Relational Database Schema & Normalization	15
Final Database Implementation	65
<i>TOTAL</i>	<i>100</i>