CSI T5300: Advanced Database Systems

E02: Relational Data Model - Exercises

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Exercise #1

• Convert the following E-R diagram into tables and identify the primary keys
Exercise #2

- Convert the following E-R diagram into tables and identify the primary keys
We want to design a relational database schema to represent information about an internal training program of a large company.

Design an E-R diagram based on the description given below:
- The database keeps information about every employee in the company. Each employee has a name and a unique employee number.
- Each course of the training program has a unique course number and a name.
- The courses are taught and taken by employees of the company.
- A course can be offered many times. Each offering has an offering number, which is unique within each course, a day and time.
- An offering is taught by exactly one employee.
- The database stores the grades of employees who took courses.

Convert the E-R diagram to tables and identify the primary keys.
Consider the following relational schema:

\[ B(X, W) \]
\[ C(P, Q, X), \text{ where } X \text{ is defined as NOT NULL}, \]
\[ D(P, X, R) \]

Give an ER diagram for the above relational schema.