EE5178
112-2 Homework 2

(end of lecture 4)
20220322

Homework 2

Build a database based on the ER model you built in Homework 1-C. We use ‘MySQL Command line client - Unicode’ in this homework. Export it as sql file and upload compressed zip file. Please do the following:

- Create a database for the ER model you built, give a proper name to the database.

Basic

In this database, create a ‘self’ table to describe yourself. The table should include your student ID, name, department, year, and other information you think are necessary.
    - Insert your self-information into the ‘self’ table.
- For each entity types that you designed in homework 1, create a table with the corresponding name, attributes, domains, and key constraints.

Schema size

    - You will have at least 5 tables or more tables.
    - You will have at least 3 attributes for each table.

- In addition, your tables must contain the following in the corresponding tables ------
- Regarding entity types

Primary Key

    - For each strong entity type, there must be the primary key

Weak entity

    - For each weak entity type, each partial key should be “turned” into a multi-attribute primary key (by adding additional column).
- Regarding attributes

Attrib

    - Define attribute and domain properly
    - For composite-valued attributes in ER, use string to as its domain for now.
    - For each multi-valued attribute in ER, find out a way to handle it that is consistent with RDB model

Attrib constraints

    - Use NOT NULL and DEFAULT constraints in at least once for each table
    - Define at least three attribute constraints in all tables using CHECK

Homework 2-2

- Regarding relationship

Recursive

For each recursive relationship, assign the foreign key properly for its corresponding table.

Foreign key

Each 1-1 or 1-n relationship in the ER diagram should be implemented as a foreign key constraint in a table

m-n

  - For each m-n relationship in the ER diagram, you need to create an additional table

- Enum

Enum

  - Look up and use enum type in at least three attribute domains

Table size

Insert at least 3 rows for each table.

Views

Create two views in your databases

  - Each view should be based on two tables
  - **At least three rows need to appear in each view**

- Union and specialization

Union

Overlapping specialization

Disjoint specialization

  - Implement the union and overlapping specialization and disjoint specialization you design in you ER model

Note:

- What you create in this homework may continue to be used by yourself in the future homework. So make sure you do a good job.

TA Grading Guidelines

- 5% Basic
- 10% Schema size, Table size
- 10% Primary Key
- 10% Foreign key
- 10% Recursive
- 10% m-n
- 10% Attrib
- 10% Attrib constraints
- 5% Views
- 5% Weak entity
- 5% Enum
- Subtotal 90%

- Advanced:
  - 4% Union
  - 3% Overlapping specialization
  - 3% Disjoint specialization
- Total 100%

HW2 submission

- **Detailed Rules : HackMD (Must Read!!)**
- Deadline: **04/04 Thu. 23:59 (GMT+8)**
- File name: hw2_{student_id}.zip, **ex. hw2_r12123001.zip**
- Submission: **NTU COOL**
- Delay
  - One day: original score * 0.8
  - More than two days: get no points
- TA hour: Tue. 16:20-17:00 at BL113 (原教室)
- TA mail: ntudb2024.ta@gmail.com