C2102-2310 Group Project

Part 2: ERD to Schema

Objective

In Part 1, you designed a database by drawing an Entity-Relationship Diagram (ERD) given an application description. The objective of Part 2 is to translate ERD into a relational database schema. To ensure more comparable results between project teams, you will not be using your own ERD for this task. Instead, all teams will be provided with the same ERD as starting point. Of course, this ERD is designed based on the original application description.

Similar to the ERD, your relational schema should capture as many of the application's constraints as possible. The application description from the handout of Part 1 is therefore still relevant here. As a hint, your schema might be able to capture applications constraint the ERD can not, but also might not be able to capture constraints the ERD can.

The main outcome of this task is a relational database schema in the form of `CREATE TABLE` statement reflecting a complete translation of the given ERD. The translation or mapping of an ERD to a schema was covered in Lecture 3. Recall that there exists a basic procedure for the translation, but also individual steps allow for some alternatives.

Submission

Deadline & Deliverable

The deadline for Part 2 is **Sep 27, 23.59**. This is a hard deadline, and late submissions will not be accepted and graded. The translation from the ERD to the schema is typically much more straightforward than the modeling ERD itself.

Each team is to upload a pdf file named `teamNNN.pdf` where `NNN` is the three digit team number according to your project group number. You should add leading zeroes to your team number (e.g., `team005.pdf`). Submit your pdf file on Canvas assignment named "Project - Part 2: Schema". Only one file is to be submitted per group. If there are multiple submissions for a group, the submission with the lower mark will be chosen.

The submitted pdf file must have a font size of at least 12 point for normal text and consists of the following:

- Project team number & names of all team members (on the first page)
- The relational database schema corresponding to the given ERD in the form of `CREATE TABLE` statements. You can make sure that our statements are valid SQL by actually creating the tables in PostgreSQL.
- Justification for any non-trivial design decisions made. This may include the use of non-standard approaches to translate ERD components into tables, or the inclusion of unspecified but reasonable real-world constraints
- List down up to 5 of the application's constraints that are not captured by the proposed relational schema. Like for the ERD, your schema should:
    - Capture as many of the application's constraints as possible
    - Not capture constraints not specified in the application's constraints

  Any constraints that can be captured but did not (or not specified in specification but erroneously added) may be penalized except for reasonable real-world constraints.

Grading

Part 2 of the project is worth 6 marks in total. The relational schema should translate the ER diagram as much as possible when the requirements match with the application's requirements. The relational schema should enforce as many of the application's constraints as possible. This includes reasonable real-world constraints