

DATABASE SYSTEMS DESIGN PROJECT

Project Milestone 3

In this milestone, you must convert your Entity Relationship Diagram (ERD) into a relational schema and physically implement the database. This includes documenting the conversion process, creating the database schema, and populating it with sample data.

Steps to Complete:

1. Document the ERD to Relational Schema Conversion:

Use the provided database design project template. Document the conversion process clearly, showing how each element of the ERD translates into a set of 3NF relations.

2. Implement the Database:

Create the database tables from the normalized set of relations. Provide sample data for each table. You have to create 3 script files, details of which are given below:

a. Creating DDL Script Filename: dbDDL.sql

Make a file containing the SQL statements that create your entire database schema, named dbDDL.sql. This includes the tables with their constraints, view, indexes, triggers, and all other database objects if you have them.

b. Creating DML Script Filename: dbDML.sql:

Make a file containing INSERT statements that populate the table created in point (a), named dbDML.sql. This script will contain SQL commands to fill data in your data. Each table should have a minimum of 15 rows of sample data. Other DML statements, such as UPDATE and DELETE, can be included here if needed.

c. Creating SQL Script Filename: dbSQL.sql

Create a script with queries named dbSQL.sql. This script should contain at least 10 queries on your database. Use the comment facility in SQL to write the English version of your query, followed by the SQL version of the query. These queries need to satisfy the following:

- Should be at least join queries (some involving more than 2 relations).
- At least two to four of them should be aggregate queries, including GROUP BY and HAVING clauses with ORDER BY clauses as well.
- At least two to three of them should have nested subquery.
- The purpose of having you write these is to make you think about slightly complex scenarios on your database schema and have you write queries involving join, aggregation and nesting that you have learned in the class.

d. Insert the relevant output in Chapter 4 of the Database design document.

Submission Guidelines:

1. Combine all your documents and scripts into a single zip file. Name the zip file appropriately, e.g., GroupNumber_DatabaseProject.zip.
2. Submit the zip file via QOBE by 10th June, 2024, Monday.
3. Late Submission will lead to marks deduction.