**Term:** Fall 2025 **Subject:** Computer Science & Engineering (CSE) **Number:** 412

**Course Title:** Database Management (CSE 412)

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**Project Phase 02**
**Report and Video Demo Submission Instructions**

**Submission Deadline**: **November 9, 2025** (Submit to Canvas)
**Project Phase 02 (35 points):** Students (as a group) must deliver the following:

**What to Submit:**

1. **Report (PDF document)**
   - Each group must submit a detailed PDF report answering the required deliverables below for each question, containing:
     - Screenshots showing the results for each task (see deliverables below).
     - Short descriptions or explanations for each step.
     - All SQL scripts (DDL, INSERT, SELECT, UPDATE, DELETE) either directly in the relevant sections or in an appendix.
     - Ensure your report covers every rubric item described below.

2. **Video Demo**
   - Each group must also submit a recorded video (screen recording with narration) that walks through your database and SQL tasks using PostgreSQL.
   - The video should cover:
     - Showing your tables and schema (e.g., \d command or pgAdmin table view).
     - Running example SQL queries live (including SELECT, INSERT, UPDATE, DELETE).
     - Highlighting how data was imported into tables.
     - Explaining key data types used for attributes (e.g., why the price is float, dates are date).

   Video length should not exceed 10 minutes. Add the YouTube video link to the report. **All team members must contribute to the narration**.

**Required Deliverables**

1. **ER-to-Relational Model Transformation (5 points)**
   - Convert your ER diagram into SQL Data Definition Language (DDL) statements.
   - Define all tables, attributes, primary keys, foreign keys, and constraints.
   - Use appropriate PostgreSQL data types.
   - Report Requirement: Include screenshots of your DDL scripts and schema views (from \d or pgAdmin).
   - Video Requirement: Briefly show and describe your schema and table structures.

2. **Data Population (10 points)**
   - Populate your tables with synthetic data, scraped data, or open data sources.
   - Use SQL INSERT statements (or COPY if using bulk CSV import).
   - Report Requirement: Include screenshots of table contents (SELECT * FROM table_name) and sample insert commands.
   - Video Requirement: Show tables with data and demonstrate at least one import process.

3. **SQL Queries Covering Application Use Cases (20 points)**
   - Prepare at least five (5) queries relevant to your application. These must include:
     2 SELECT queries (showing different aspects of your data)
     1 INSERT query
     1 UPDATE query
     1 DELETE query
   - Report Requirement: Include screenshots showing query execution and results, with brief explanations of each query.
   - Video Requirement: Demonstrate these queries running in PostgreSQL.