

CEGEP VANIER COLLEGE
Department of Computer Science
420-231-VA Database – Sec. 01 & 02

Team Project- Deliverable #2: Database Schema

Deliverable 2 Due: Monday, April 3

Teacher: Nagat Drawel

Instructions

The purpose of the team project is to practice designing databases through group discussion and to help you develop teamwork skills. In this project:

1. It is required that you and your group develop a miniature database system, as described below, and proceed to evaluate several queries and transactions against the database.
2. Team leader should be designated for each team to coordinate group meetings, allocate tasks, and submit project deliverables. However, team leaders have not yet been appointed, so please choose a leader amongst yourselves.
3. The tasks for each deliverable will be fairly allocated to each team member. Prior to attending group meetings, each member is expected to work independently on their allocated tasks.
4. Members in the same team may receive different grades based on their contribution to the projects and on the overall quality of the projects. For example, a member may receive less marks if they fail to meet deadlines, skip group meetings, make inadequate contributions, and so on. However, if a member fails to complete their assigned tasks, it will not have an impact on the grades of other members.
5. **Your deliverable must contain the following:**
 - a. Descriptions of any changes made to Deliverable 1 (based on the feedback)
 - b. Database Schema (SQL script file)

a) Changes from the Previous Deliverable

1. Please resubmit a modified version of the previous project deliverable showing the changes in the design of your project, if any. If you do, please highlight the changed requirements. All deliverables must be kept consistent.

b) Database Schema

1. Create a database schema for your project using SQL DDL (Data Definition Language) statements. Choose appropriate data types for each attribute and include Primary Key and Foreign Key constraints, Check, Unique, and Not Null constraints. Please assume defaults for ON DELETE clauses for FOREIGN KEYS.

2. Explain why you chose your ON DELETE actions. As an example: *“if we delete a customer then we delete their accounts”*).
3. Populate every relation with sufficient representative rows using DML (Data Manipulation Language) statements.
4. Create at least one SEQUENCE to generate values for one of the tables of your choice. Select the start value of your sequence and the increment by value. Do not cache any values, also do not cycle. You can add more sequences if you like. Also, at least one of your Primary keys should be defined as an IDENTITY property.
5. Create two indexes to your database. Select the one that you think will be beneficial. It is not critical that these be the most important indexes, but the choices should make good sense in terms of the queries that you expect will be run on the database
6. Write at least two ALTER statements to either add/modify columns or add constraints to any of the tables.

What you should submit

You should submit SQL declarations of the relations, and relations instances. Submit SQL scripts, containing all the DDL(s) and DML(s) that are needed for the creation of the database as well as the after mentioned requirements. This script file should be executed as a script using the selected DBMS. **In writing your DDL/DML statements, use a convention of CAPITALIZING all SQL reserved words and use indentation as necessary.**

Distribution of marks:

Topic	%
Changes in 1 st deliverable	20%
DDL Statements	30%
Create Indexes	10%
DML (Sample Test Data)	20%
Script File	5%
Individual Contribution	15%
Total	100%