Secure Coding (CNT 4419)
Assignment III

Objectives: To gain experience writing SQL statements.
Due Date: Wednesday, November 25, 2026, at 3pm. No late submissions will be accepted.

Assignment Description
Complete this assignment by yourself. While doing this assignment you will need a Database Management System (DBMS) to process SQL queries. To this end, please use SQL Fiddle (http://sqlfiddle.com/), a website that provides access to a DBMS and allows developers to test and share SQL statements. SQL Fiddle offers several DBMS options; please use the MySQL option.

Create at least 3 related tables for a realistic scenario that you invent. Do not use the purchases scenario from class. This assignment requires you to be creative and come up with your own compelling examples.

Your tables must:

- Include primary keys
- Include at least one foreign key relationship
- Contain at least 6 unique rows per table

Write 8 different SQL queries that illustrate the following features:

1. SELECT *
2. LIKE
3. GROUP BY
4. OFFSET
5. UNION
6. (INNER) JOIN
7. LEFT JOIN
8. RIGHT JOIN

Each of your 8 queries must be unique and must return a unique data set different from the result of all your other queries. For example, your LEFT JOIN (#7) should clearly demonstrate how it is different from an INNER JOIN (#6).

Explain each of your SQL statements by including a comment before that statement. Comments may begin with '`#`' or '`-- `' (note the space after the two hyphens) and continue to the end of the line, or may appear within the C-style delimiters '`/*`' and '`*/`'. Comments should include the number of the feature/keyword being used (e.g., "This query uses Feature 1 to …"). Comments must appear before, not after, each statement.

Submit your SQL code in Canvas in a file called *A3.sql*.