

Secure Coding (CNT 4419) Assignment III

Objectives: To gain experience writing SQL statements.

Due Date: Sunday, November 26, 2023, at 11:59pm. 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 the 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. Unlike Paiza, SQL Fiddle does not have accounts, so be sure to save your queries on your own device. SQL Fiddle offers several DBMS options; please use the default MySQL option.

Create at least 3 tables, insert at least 5 unique rows into each of the tables, and perform 8 nontrivial queries on them. The queries should illustrate all of the following SQL keywords/features in practically useful ways.

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

Each of your queries must return a unique data set different from the result of any of your other queries. For example, your LEFT JOIN query should clearly demonstrate how it is different from an INNER JOIN.

Important: The example tables, data, and queries you create are up to you. This assignment requires you to be creative and come up with your own compelling examples. Do not use any examples from class or that you find online. Your examples should be different from those of your classmates and from examples we can find online.

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 two files to Canvas, one for the code in the left-side panel in the SQL Fiddle interface (call the file containing this code *schema.sql*) and one for the code in the right-side panel in the SQL Fiddle interface (call the file containing this code *queries.sql*). In total, you should submit 8 *unique* queries, one query for each feature/keyword listed above.