Lab 2

Oracle Review

Overview:
In this lab, you will demonstrate you are comfortable navigating the AWS Oracle RDS environment and creating basic Schema objects using SQL developer or similar tool. This lab is a review of basic SQL.

You must connect to the AWS Educate Oracle RDS environment and complete these task to earn credit for this lab.

Lab Requirements

1. Write and test a set of SQL statements that will drop the following tables:
    a. Engineers
    b. Faculty
    c. Classes
    d. ClassEnrollments

Be sure to use the exact table names as listed.

Note: Since you probably have not yet created there tables, you will receive an error which is Okay and expected.

2. Write and test a set of SQL statements that will create the following tables:
    a. Engineers

    Primary Key: EID

    Columns: Lastname, Firstname, Email, Graddate

    b. Faculty

    Primary Key: FID

    Columns: Lastname, Firstname, Email, Hiredate

    c. Classes

    Primary Key: CID

    Columns: Subject (e.g. SDEV), Catalognbr (e.g. 350), Title (e.g Database Security)

    d. ClassEnrollments
    Primary Key: EnID
    Foreign Keys: CID (from Classes), FID (from Faculty), EID (from Engineers)

Be sure table and column names **exactly** match the requirements.

3. Write and test a set of SQL statements that will insert the following quantity of records into each table
    a. 15 Engineers
    b. 3 Faculty

c. 3 Classes
d. 15 ClassEnrollments

Your Primary Key IDs should always start with 1 and increment by 1. You can use an Oracle sequence but it is not required. Just hardcoding the Primary Key ID is Okay for this exercise.

4. Write and test a set of SQL statements that will select **all** records from **each** table. The output should display the records in **descending** order by Primary key. The SELECTs of the populated tables should be done individually, not as a single multi-table join query.

5. Write and test a set of SQL statements that will Update records with the following specifications. The UPDATEs must be done based on using a primary key value.
    a. Update the Lastname of one faculty in the Faculty table to be "Friendship".
    b. Update the Firstname of one engineer in the Engineers table to be "Amadeus".
    c. Update the Subject of one class in the Classes table to be "IOT Cyber".

You may need to use these requirements as you design your insert statements for step 3.

6. Write and test a SQL statement that will Delete the ClassEnrollments record with the lowest EnID. The DELETEs must be done based on using a primary key value.

7. Write and test a SQL statement that creates a **view** joining the required tables such that a user can retrieve the Engineer's Lastname and Firstname, the Faculty Lastname and Email and the Classes's Subject and Title for each Course enrollment.

Deliverables (100 points total)

Three separate files should be provided with your name, date, course information (e.g. SDEV 350 6380) and professor name. Using a zip file to compress all three files into one file is recommended.

- One SQL file that contains all SQL statements used. Note: the statements to drop the tables must be at the beginning of the SQL script file. Comments must be included in the SQL file briefly describing groups of SQL statements. The SQL file should run without issue from start to finish and produce the SQL output file. (30 points)
- One SQL output results showing the results of running your SQL file (30 points)
- Screen capture(s) showing you successfully running the SQL file from the SQL Developer environment connecting to AWS Educate classroom environment (40 points).