

DAD 220 Module Three Major Activity Template

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Overview

Complete these steps as you work through the directions for this activity. Replace the bracketed text with a screenshot and brief explanation where indicated. Each screenshot and its explanation should be sized to approximately one-quarter of the page with the description written below the screenshot. Review the Template Screenshot Example linked in the guidelines and rubric for this assignment to see how screenshots for your assignment should look.

Create a Database

- In your online integrated development environment (Codio), **create a database schema** called Quantigration RMA that can hold tables.
 - List the database name on the screen.
 - Provide the SQL commands you ran to successfully complete this step.

The screenshot shows a Codio IDE interface with a file explorer on the left and a terminal window on the right. The file explorer displays the 'DAD-220 SQL Lab Environment' with files like .settings, create, CREATE, customers.csv, describe, FleetMaintenanceRecords.csv, HRandIS-Employees.csv, mysqlsampledatabase.sql, orders.csv, quit, README.md, rma.csv, use, and USE. The terminal window shows the following output:

```
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 6.2.0-1017-aws x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage
*
* Welcome to the Codio Terminal!
*
* https://docs.codio.com/develop/develop/ide/boxes/overview
*
* Your Codio Box domain is: speechmaze-yogurtparody.codio.io
*
Last login: Sat Mar 23 18:11:25 2024 from 192.168.10.93
codio@speechmaze-yogurtparody:~/workspace$ .guides/content/startup.sh
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.31-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE Quantigration_RMA;
ERROR 1007 (HY000): Can't create database 'Quantigration_RMA'; database exists
mysql> USE Quantigration_RMA;
Database changed
mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| Cassello |
| DAD220   |
| Quantigration_RMA |
| cassello |
| codio    |
| information_schema |
| mysql    |
| performance_schema |
| sys      |
+-----+
9 rows in set (0.00 sec)

mysql>
```

Here I created the Quantigration_RMA database schema.

- Connect to the Quantigration RMA schema. **Create** the following **tables with the appropriate attributes and keys** in the Quantigration RMA database using the Quantigration RMA Entity Relationship Diagram (ERD) as a reference:
 - A table named **Customers** to store customer information with a primary key of Customer ID
 - Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

```

Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 6.2.0-1017-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
 *
 * Welcome to the Codio Terminal!
 *
 * https://docs.codio.com/develop/develop/ide/boxes/overview
 *
 * Your Codio Box domain is: speechmaze-yogurtparody.codio.io
 *
Last login: Sat Mar 23 18:11:25 2024 from 192.168.10.93
codio@speechmaze-yogurtparody:~/workspace$ .guides/content/startup.sh
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.31-0ubuntu0.22.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> CREATE DATABASE Quantigration_RMA;
ERROR 1007 (HY000): Can't create database 'Quantigration_RMA'; database exists
mysql> USE Quantigration_RMA;
Database changed
mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| Cassello |
| DAD220   |
| Quantigration_RMA |
| cassello |
| codio    |
| information_schema |
| mysql     |
| performance_schema |
| sys       |
+-----+
9 rows in set (0.00 sec)

mysql> CREATE TABLE Customers (
  -> CustomerID INT AUTO_INCREMENT PRIMARY KEY,
  -> FirstName VARCHAR(50),
  -> LastName VARCHAR(50),
  -> Email VARCHAR(100),
  -> Phone VARCHAR(20)
  -> );
Query OK, 0 rows affected (0.84 sec)

mysql> DESCRIBE Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerID | int | NO | PRI | NULL | auto_increment |
| FirstName | varchar(50) | YES | | NULL | |
| LastName | varchar(50) | YES | | NULL | |
| Email | varchar(100) | YES | | NULL | |
| Phone | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>

```

Here I created and described the Customers table.

- A table named **Orders** to store order information with a primary key of Order ID and foreign key of Customer ID
 - Provide the SQL commands you ran against MySQL to successfully complete this step.

```

mysql> CREATE DATABASE Quantigraton_RMA;
ERROR 1007 (HY000): Can't create database 'Quantigraton_RMA'; database exists
mysql> USE Quantigraton_RMA;
Database changed
mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| Cassello |
| DAD220   |
| Quantigraton_RMA |
| Cassello |
| codio    |
| information_schema |
| mysql     |
| performance_schema |
| sys       |
+-----+
9 rows in set (0.00 sec)

mysql> CREATE TABLE Customers (
  -> CustomerID INT AUTO_INCREMENT PRIMARY KEY,
  -> FirstName VARCHAR(50),
  -> LastName VARCHAR(50),
  -> Email VARCHAR(100),
  -> Phone VARCHAR(20)
  -> );
Query OK, 0 rows affected (0.04 sec)

mysql> DESCRIBE Customers;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| CustomerID | int | NO | PRI | NULL | auto_increment |
| FirstName | varchar(50) | YES | | NULL | |
| LastName | varchar(50) | YES | | NULL | |
| Email | varchar(100) | YES | | NULL | |
| Phone | varchar(20) | YES | | NULL | |
+-----+
5 rows in set (0.00 sec)

mysql> CREATE TABLE Orders (
  -> OrderID INT AUTO_INCREMENT PRIMARY KEY,
  -> OrderDate DATE,
  -> CustomerID INT,
  -> FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
  -> );
Query OK, 0 rows affected (0.71 sec)

mysql> DESCRIBE Orders;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'DESCRIBE Orders' at line 1
mysql> DESCRIBE Orders;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| OrderID | int | NO | PRI | NULL | auto_increment |
| OrderDate | date | YES | | NULL | |
| CustomerID | int | YES | MUL | NULL | |
+-----+
3 rows in set (0.00 sec)

mysql>

```

Here I created and described the Orders table.

- A table named **RMA** to store RMA information with a primary key of RMA ID and foreign key of Order ID
 - Provide the SQL commands you ran against MySQL to successfully complete this step.

```
Quantigration_RMA |
casello
codio
information_schema
mysql
performance_schema
sys
3 rows in set (0.00 sec)

mysql> CREATE TABLE Customers (
  -> CustomerID INT AUTO_INCREMENT PRIMARY KEY,
  -> FirstName VARCHAR(50),
  -> LastName VARCHAR(50),
  -> Email VARCHAR(100),
  -> Phone VARCHAR(20)
  -> );
Query OK, 0 rows affected (0.84 sec)

mysql> DESCRIBE Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerID | int | NO | PRI | NULL | auto_increment |
| FirstName | varchar(50) | YES | | NULL | |
| LastName | varchar(50) | YES | | NULL | |
| Email | varchar(100) | YES | | NULL | |
| Phone | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> CREATE TABLE Orders (
  -> OrderID INT AUTO_INCREMENT PRIMARY KEY,
  -> OrderDate DATE,
  -> CustomerID INT,
  -> FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
  -> );
Query OK, 0 rows affected (0.71 sec)

mysql> DESCRIBE Orders;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'DESCRIBE Orders' at line 1
mysql> DESCRIBE Orders;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| OrderID | int | NO | PRI | NULL | auto_increment |
| OrderDate | date | YES | | NULL | |
| CustomerID | int | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> CREATE TABLE RMA (
  -> RMAID INT AUTO_INCREMENT PRIMARY KEY,
  -> OrderID INT,
  -> FOREIGN KEY (OrderID) REFERENCES Orders(OrderID)
  -> );
Query OK, 0 rows affected (0.24 sec)

mysql> DESCRIBE RMA;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| RMAID | int | NO | PRI | NULL | auto_increment |
| OrderID | int | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

Here I created and described the RMA table.

- Manually add 10 records into the **Customers** table. For now, you can make up data. In a later assignment, you will use the CSV files provided to fill in all three tables.

```
Phone | varchar(20) | YES | | NULL | |
3 rows in set (0.00 sec)

mysql> CREATE TABLE Orders (
  -> OrderID INT AUTO_INCREMENT PRIMARY KEY,
  -> OrderDate DATE,
  -> CustomerID INT,
  -> FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
  -> );
Query OK, 0 rows affected (0.71 sec)

mysql> DESCRIBE Orders;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'DESCRIBE Orders' at line 1
mysql> DESCRIBE Orders;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| OrderID | int | NO | PRI | NULL | auto_increment |
| OrderDate | date | YES | | NULL | |
| CustomerID | int | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> CREATE TABLE RMA (
  -> RMAID INT AUTO_INCREMENT PRIMARY KEY,
  -> OrderID INT,
  -> FOREIGN KEY (OrderID) REFERENCES Orders(OrderID)
  -> );
Query OK, 0 rows affected (0.24 sec)

mysql> DESCRIBE RMA;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| RMAID | int | NO | PRI | NULL | auto_increment |
| OrderID | int | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> INSERT INTO Customers (FirstName, LastName, Email, Phone)
VALUES
  -> ('John', 'Doe', 'john.doe@gmail.com', '123-456-7899'),
  -> ('Alice', 'Wonderland', 'alice.wonderland@gmail.com', '123-456-9877'),
  -> ('Jane', 'Doe', 'jane.doe@gmail.com', '123-456-4361'),
  -> ('Tom', 'Cruise', 'tom.cruise@gmail.com', '123-456-1423'),
  -> ('Matt', 'Damon', 'matt.damon@gmail.com', '123-456-9435'),
  -> ('Bruce', 'Lee', 'bruce.lee@gmail.com', '123-456-8043'),
  -> ('Bob', 'Bobby', 'bob.bobby@gmail.com', '123-456-8293'),
  -> ('Will', 'Farrell', 'will.farrell@gmail.com', '123-456-3444'),
  -> ('Merid', 'Lurg', 'merid.lurg@gmail.com', '123-456-6222'),
  -> ('Michael', 'Adams', 'michael.adams@gmail.com', '123-456-7676');
Query OK, 10 rows affected (0.88 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

Here I added 10 different records into the Customer table.

- You've been asked to establish a database view called Collaborators based on the Customers table. **Create** the **Collaborators View** from the existing Customers table by using the SQL command below to say "Collaborators". The view should show all instances of "Customer" renamed as "Collaborator". Execute the following statements and provide one or more supporting screenshots showing the database view.
 - The following command is partially complete. Fill in the missing information in the brackets to complete then command and run it correctly:

```
CREATE VIEW Collaborator AS  
SELECT CustomerID AS CollaboratorID  
[Enter in the correct column names from the Customer table that you want to  
change in the Collaborator table]  
FROM Customers;
```

- DESCRIBE Collaborator;
- SELECT * FROM Collaborator LIMIT 5;

Filetree

JCASSELLO
DAD-220 SQL Lab Environment

- settings
- create
- CREATE
- customers.csv
- describe
- FleetMaintenanceRecords.csv
- HRandIS-Employees.csv
- mysqlsampledatabase.sql
- orders.csv
- quit
- README.md
- rma.csv
- use
- USE

Terminal

```
mysql> INSERT INTO Customers (FirstName, LastName, Email, Phone)
-> VALUES
-> ('John','Doe','john.doe@gmail.com','123-456-7899'),
-> ('Alice','Wonderland','alice.wonderland@gmail.com','123-456-9877'),
-> ('Jane','Doe','jane.doe@gmail.com','123-456-4356'),
-> ('Tom','Cruise','tom.cruise@gmail.com','123-456-1423'),
-> ('Matt','Damon','matt.damon@gmail.com','123-456-5435'),
-> ('Bruce','Lee','bruce.lee@gmail.com','123-456-9843'),
-> ('Bob','Bobby','bob.bobby@gmail.com','123-456-0293'),
-> ('Will','Farrell','will.farrell@gmail.com','123-456-3444'),
-> ('Mario','Luigi','mario.luigi@gmail.com','123-456-8222'),
-> ('Michael','Adams','michael.adams@gmail.com','123-456-7676');
Query OK, 10 rows affected (0.08 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> DESCRIBE Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerID | int | NO | PRI | NULL | auto_increment |
| FirstName | varchar(50) | YES | | NULL | |
| LastName | varchar(50) | YES | | NULL | |
| Email | varchar(100) | YES | | NULL | |
| Phone | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

mysql> CREATE VIEW Collaborator AS
-> SELECT CustomerID AS CollaboratorID,
-> FirstName,
-> LastName,
-> Email,
-> Phone
-> FROM Customers;
Query OK, 0 rows affected (0.07 sec)

mysql> DESCRIBE Collaborators;
ERROR 1146 (42S02): Table 'Quantigration_RMA.Collaborators' doesn't exist
mysql> DESCRIBE Collaborator;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CollaboratorID | int | NO | | 0 | |
| FirstName | varchar(50) | YES | | NULL | |
| LastName | varchar(50) | YES | | NULL | |
| Email | varchar(100) | YES | | NULL | |
| Phone | varchar(20) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT * FROM Collaborator LIMIT 5;
+-----+-----+-----+-----+-----+-----+
| CollaboratorID | FirstName | LastName | Email | Phone |
+-----+-----+-----+-----+-----+-----+
| 1 | John | Doe | john.doe@gmail.com | 123-456-7899 |
| 2 | Alice | Wonderland | alice.wonderland@gmail.com | 123-456-9877 |
| 3 | Jane | Doe | jane.doe@gmail.com | 123-456-4356 |
| 4 | Tom | Cruise | tom.cruise@gmail.com | 123-456-1423 |
| 5 | Matt | Damon | matt.damon@gmail.com | 123-456-5435 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

Here I created and described the Collaborator VIEW