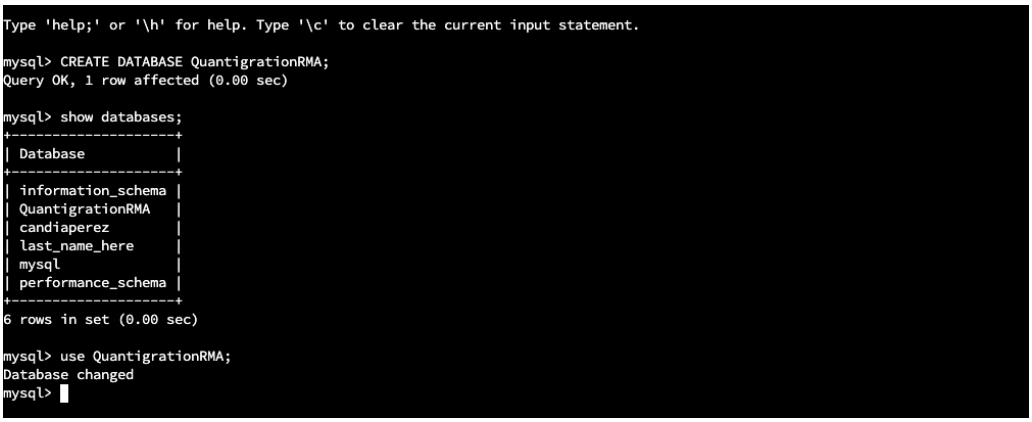
DAD 220 Module Three Major Activity Database Documentation Template

Overview

Complete these steps as you work through the directions for this activity. Replace the bracketed text with your screenshots and brief explanations of the work they show. Each screenshot and its explanation should be sized to approximately one quarter of the page, with the description written below the screenshot. Follow these rules for each of the prompts and questions below. Review the example document for help.

Create a Database

1. In your integrated development environment (IDE), **create a database schema** called QuantigrationRMA. List out the database name. Provide the SQL commands you ran to successfully complete this in your answer, then connect to it:



Here, I started with using mysql to get going in Codio. Then, I created the database QuantigrationRMA using the CREATE DATABASE command. I then used the command show databases to make sure that the database is in there. Finally, I initiated use QuantigrationRMA so that I can start working in this database.

2. Using the entity relationship diagram (ERD) as a reference, **create** the following **tables with the appropriate attributes and keys**:

    a. A table named **customers** in the QuantigrationRMA database as defined on the project ERD. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

```
mysql> CREATE TABLE Customers (
    -> CustomerID INT NOT NULL PRIMARY KEY,
    -> Telephone VARCHAR(15),
    -> FirstName VARCHAR(30),
    -> LastName VARCHAR(40),
    -> Street VARCHAR(40),
    -> City VARCHAR(25),
    -> State VARCHAR(25),
    -> ZipCode INT);
Query OK, 0 rows affected (0.05 sec)

mysql> describe Customers;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| CustomerID | int(11)     | NO   | PRI | NULL    |       |
| Telephone  | varchar(15) | YES  |     | NULL    |       |
| FirstName  | varchar(30) | YES  |     | NULL    |       |
| LastName   | varchar(40) | YES  |     | NULL    |       |
| Street     | varchar(40) | YES  |     | NULL    |       |
| City       | varchar(25) | YES  |     | NULL    |       |
| State      | varchar(25) | YES  |     | NULL    |       |
| ZipCode    | int(11)     | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

Here, I used the command CREATE TABLE to create table “Customers” and input the appropriate attributes. I made sure that each attribute either was an integer or a string and put restrictions on the string length. Also, I made sure to make the Customer ID the primary key, and added NOT NULL so as to not repeat the same Customer ID. Finally, I described the table using the command describe Customers to make sure that it populated correctly.

b. A table named **orders** in the QuantigrationRMA database as defined on the project ERD. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

```
mysql> CREATE TABLE Orders (
    -> OrderID INT NOT NULL PRIMARY KEY,
    -> CustomerID INT,
    -> SKU VARCHAR(20),
    -> Description VARCHAR(50),
    -> FOREIGN KEY(CustomerID) REFERENCES Customers(CustomerID));
Query OK, 0 rows affected (0.07 sec)

mysql> describe Orders;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| OrderID     | int(11)     | NO   | PRI | NULL    |       |
| CustomerID  | int(11)     | YES  | MUL | NULL    |       |
| SKU         | varchar(20) | YES  |     | NULL    |       |
| Description | varchar(50) | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

Here, I created the table Orders by using the CREATE TABLE command again. I listed the attributes required and gave them the appropriate integer and string values with limits. I assigned Order ID as the primary key and made it NOT NULL so that there cannot be duplicate values. I also created the Foreign Key of Customer ID so as to reference CustomerID from the Customers table. Finally, I described the table to make sure that everything populated correctly.

c. A table named **rma** in the QuantigrationRMA database as defined on the project ERD. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

```
mysql> CREATE TABLE RMA (
    -> RMAID INT NOT NULL PRIMARY KEY,
    -> OrderID INT,
    -> Step VARCHAR(50),
    -> Status VARCHAR(15),
    -> Reason VARCHAR(15),
    -> FOREIGN KEY(OrderID) REFERENCES Orders(OrderID));
Query OK, 0 rows affected (0.05 sec)

mysql> describe RMA;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| RMAID   | int(11)     | NO   | PRI | NULL    |       |
| OrderID | int(11)     | YES  | MUL | NULL    |       |
| Step    | varchar(50) | YES  |     | NULL    |       |
| Status  | varchar(15) | YES  |     | NULL    |       |
| Reason  | varchar(15) | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

Here, I again used the command CREATE TABLE to create the table RMA. I added the appropriate attributes and created them as an integer or string with limits. I also made RMAID the primary key and put NOT NULL as to prevent duplicate information in that field. I added a foreign key from Order ID to link it to the Orders table. Afterwards, I described the table to make sure everything populated correctly.

3. Manually **add 10 records** into the **Customers table**. The data can be made up for now, as you you'll populate all three tables later from the provided CSV files.

[Insert screenshot and brief explanation here.]

```
mysql> INSERT INTO Customers VALUES (100, '888-456-1459', 'John', 'Smith', '123 High street', 'Chicago', 'IL', 45687);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Customers VALUES (101, '888-731-4937', 'Paul', 'Bell', '45 Hart street', 'Newport', 'RI', 41245);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Customers VALUES (102, '888-221-3792', 'Jesus', 'Perez', '45 Topping street', 'Manhattan', 'NY', 14925);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Customers VALUES (103, '888-924-6845', 'Nicole', 'James', '32 Marcelle Ave.', 'Portland', 'ME', 64256);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Customers VALUES (104, '888-954-1384', 'Paula', 'Hamilton', '577 Main Street', 'Compton', 'CA', 67234);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Customers VALUES (105, '888-346-9834', 'Jeff', 'Bob', '1057 Maple Street', 'Miami', 'FL', 26866);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Customers VALUES (106, '888-369-6713', 'Cory', 'Norcliffe', '789 Low Street', 'Canterbury', 'CT', 46982);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Customers VALUES (107, '888-365-6564', 'Courtney', 'Marie', '153 Upper Ave.', 'Hartford', 'CT', 95436);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Customers VALUES (108, '888-789-4569', 'Amanda', 'Simmons', '4976 Left Street', 'Omaha', 'NE', 12798);
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Customers VALUES (109, ‘888-124-4598', 'Luis', 'Trujillo', '78 78th Street', 'Bronx', 'NY', 10489);
ERROR 1054 (42S22): Unknown column ''888' in 'field list'
mysql> INSERT INTO Customers VALUES (109, '888-124-4598', 'Luis', 'Trujillo', '78 78th Street', 'Bronx', 'NY', 10489);
Query OK, 1 row affected (0.02 sec)
```

```
mysql> select * from Customers;
+------------+--------------+-----------+-----------+------------------+------------+-------+---------+
| CustomerID | Telephone    | FirstName | LastName  | Street           | City       | State | ZipCode |
+------------+--------------+-----------+-----------+------------------+------------+-------+---------+
|        100 | 888-456-1459 | John      | Smith     | 123 High street  | Chicago    | IL    |   45687 |
|        101 | 888-731-4937 | Paul      | Bell      | 45 Hart street   | Newport    | RI    |   41245 |
|        102 | 888-221-3792 | Jesus     | Perez     | 45 Topping street| Manhattan  | NY    |   14925 |
|        103 | 888-924-6845 | Nicole    | James     | 32 Marcelle Ave. | Portland   | ME    |   64256 |
|        104 | 888-954-1384 | Paula     | Hamilton  | 577 Main Street  | Compton    | CA    |   67234 |
|        105 | 888-346-9834 | Jeff      | Bob       | 1057 Maple Street| Miami      | FL    |   26866 |
|        106 | 888-369-6713 | Cory      | Norcliffe | 789 Low Street   | Canterbury | CT    |   46982 |
|        107 | 888-365-6564 | Courtney  | Marie     | 153 Upper Ave.   | Hartford   | CT    |   95436 |
|        108 | 888-789-4569 | Amanda    | Simmons   | 4976 Left Street | Omaha      | NE    |   12798 |
|        109 | 888-124-4598 | Luis      | Trujillo  | 78 78th Street   | Bronx      | NY    |   10489 |
+------------+--------------+-----------+-----------+------------------+------------+-------+---------+
10 rows in set (0.00 sec)

mysql>
```

Here, I added 10 customers into the database Customers by utilizing the INSERT INTO command and appropriately ordering the details for each customer to then be added to the database. I used a select statement to make sure that the table came out as intended.

4. Create a view from the **existing Customers table** by using the SQL command provided below to say "Collaborators." The view should show all instances of "Customer" renamed as "Collaborator."

```
mysql> CREATE VIEW Collaborators AS
    -> SELECT CustomerID AS CollaboratorID, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109
    -> FROM Customers;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> SELECT * from Collaborators limit 5;
+----------------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| CollaboratorID | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
+----------------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|            100 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
|            101 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
|            102 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
|            103 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
|            104 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 |
+----------------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

```
mysql> describe Collaborators;
+----------------+---------+------+-----+---------+-------+
| Field          | Type    | Null | Key | Default | Extra |
+----------------+---------+------+-----+---------+-------+
| CollaboratorID | int(11) | NO   |     | NULL    |       |
| 100            | int(3)  | NO   |     | 0       |       |
| 101            | int(3)  | NO   |     | 0       |       |
| 102            | int(3)  | NO   |     | 0       |       |
| 103            | int(3)  | NO   |     | 0       |       |
| 104            | int(3)  | NO   |     | 0       |       |
| 105            | int(3)  | NO   |     | 0       |       |
| 106            | int(3)  | NO   |     | 0       |       |
| 107            | int(3)  | NO   |     | 0       |       |
| 108            | int(3)  | NO   |     | 0       |       |
| 109            | int(3)  | NO   |     | 0       |       |
+----------------+---------+------+-----+---------+-------+
11 rows in set (0.00 sec)
```

For this question, I initialized CREATE VIEW to create Collaborators, and selected all of the current Customer ID's as the CollaboratorID's. Once I used the select statement for Collaborators to see how the table came out, it did populate Collaborator ID with all the Customer ID's underneath it, so it checked out where all the Customer ID's show as Collaborator ID's. I found this one to be a bit confusing because it says for it to be "Collaborators" and "Collaborator" but I think because it says "Collaborator ID" it makes sense, but I am still not quite sure.