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DAD-220 Intro to Struct Database Env

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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:

```
mysql> CREATE DATABASE QuantigrationRMA;
Query OK, 1 row affected (0.26 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| DAD220   |
| QuantigrationRMA |
| codio    |
| information_schema |
| merren   |
| mysql    |
| performance_schema |
| sys      |
+-----+
8 rows in set (0.38 sec)

mysql> 
```

Code used: CREATE DATABASE QuantigrationRMA;
This command creates a database called QuantigrationRMA that can hold tables.

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,
  -> FirstName VARCHAR(25),
  -> LastName VARCHAR(25),
  -> Street VARCHAR(50),
  -> City VARCHAR(50),
  -> State VARCHAR(25),
  -> ZipCode INT,
  -> Telephone VARCHAR(15),
  -> PRIMARY KEY (CustomerID)
  -> );
Query OK, 0 rows affected (10.01 sec)

mysql> DESCRIBE Customers;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CustomerID | int           | NO   | PRI | NULL    |       |
| FirstName  | varchar(25)   | YES  |     | NULL    |       |
| LastName   | varchar(25)   | YES  |     | NULL    |       |
| Street     | varchar(50)   | YES  |     | NULL    |       |
| City       | varchar(50)   | YES  |     | NULL    |       |
| State      | varchar(25)   | YES  |     | NULL    |       |
| ZipCode    | int           | YES  |     | NULL    |       |
| Telephone  | varchar(15)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.01 sec)

mysql> 
```

Code used: create table Customers(

- > CustomerID INT,
- > FirstName VARCHAR(25),
- > LastName VARCHAR(25),
- > Street VARCHAR(50),
- > City VARCHAR(50),
- > State VARCHAR(25),
- > ZipCode INT,
- > Telephone VARCHAR(15),
- > PRIMARY KEY (CustomerID)

->);

This code was used to create a table named Customers to store customer's information with a primary key of CustomerID.

- 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,
  -> CustomerID INT,
  -> SKU VARCHAR(20),
  -> Description VARCHAR(50),
  -> PRIMARY KEY (OrderID),
  -> FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
  -> );
Query OK, 0 rows affected (0.53 sec)

mysql> describe orders;
ERROR 1146 (42S02): Table 'QuantigrationRMA.orders' doesn't exist
mysql> describe Orders;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| OrderID    | int       | NO   | PRI | NULL    |       |
| CustomerID | int       | YES  | MUL | NULL    |       |
| SKU        | varchar(20) | YES  |     | NULL    |       |
| Description | varchar(50) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> 
```

Code used: create table Orders(

-> OrderID int,

-> CustomerID INT,

-> SKU VARCHAR(20),

-> Description VARCHAR(50),

-> PRIMARY KEY (OrderID),



```
-> FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)

-> );
```

This code was used to create the table named Orders. This table will store order information with a primary key of OrderID and a Foreign Key of CustomerID

- 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,
  -> OrderID int,
  -> Step VARCHAR(50),
  -> Status VARCHAR(15),
  -> Reason VARCHAR(15),
  -> PRIMARY KEY (RMAID),
  -> FOREIGN KEY (OrderID) REFERENCES Orders(OrderID));
Query OK, 0 rows affected (0.99 sec)

mysql> describe RMA;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| RMAID | int           | NO   | PRI | NULL    |       |
| OrderID | int          | YES  | MUL | NULL    |       |
| Step   | varchar(50)   | YES  |     | NULL    |       |
| Status | varchar(15)   | YES  |     | NULL    |       |
| Reason | varchar(15)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql> █
```

Code used: CREATE table RMA (

```
-> RMAID int,

-> OrderID int,

-> Step VARCHAR(50),
```



- > Status VARCHAR(15),
- > Reason VARCHAR(15),
- > PRIMARY KEY (RMAID),
- > FOREIGN KEY (OrderID) REFERENCES Orders(OrderID));

This command was used to create the table RMA. This table with store information with a primary key of RMAID and a foreign key of OrderID.

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.

```
mysql> INSERT INTO Customers (CustomerID, FirstName, LastName, Street, City, State, ZipCode, Telephone)
-> VALUES
-> (1, 'Bobby', 'Singer', '2194 Kripke Lane', 'Sioux Falls', 'SD', 70098, '212-679-2543'),
-> (2, 'Dean', 'Martin', 'Costline.', 'San Antonio', 'TX', 77097, '217-693-3291'),
-> (3, 'Jerry', 'Campbell', 'A St.', 'Pittsburgh', 'PA', 77059, '963-326-0588'),
-> (4, 'Tom', 'Riddle', 'Wool's', 'london', 'MI', 41234, '596-321-4544'),
-> (5, 'Dobby', 'Hobbs', 'Freshwater West.', 'Pembrokeshire', 'MI', 77777, '857-325-8521'),
-> (6, 'Mike', 'Mixer', 'State St.', 'copper', 'MI', 48858, '853-298-4551'),
-> (7, 'Ron', 'Weasley', 'Ottery St.', 'Catchpole', 'MI', 74230, '852-964-1678'),
-> (8, 'Harry', 'Potter', 'Whining', 'Surrey', 'MI', 96325, '123-983-4523'),
-> (9, 'Allen', 'Enfield', 'Commons DR', 'Mount Pleasant', 'MI', 96325, '123-456-7896'),
-> (10, 'Jerrett', 'Merren', 'Commons DR', 'Mount Pleasant', 'MI', 48858, '989-802-2518');
Query OK, 10 rows affected (0.06 sec)
Records: 10 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM Customers;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CustomerID | FirstName | LastName | Street | City | State | ZipCode | Telephone |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Bobby | Singer | 2194 Kripke Lane | Sioux Falls | SD | 70098 | 212-679-2543 |
| 2 | Dean | Martin | Costline. | San Antonio | TX | 77097 | 217-693-3291 |
| 3 | Jerry | Campbell | A St. | Pittsburgh | PA | 77059 | 963-326-0588 |
| 4 | Tom | Riddle | Wool's | london | MI | 41234 | 596-321-4544 |
| 5 | Dobby | Hobbs | Freshwater West. | Pembrokeshire | MI | 77777 | 857-325-8521 |
| 6 | Mike | Mixer | State St. | copper | MI | 48858 | 853-298-4551 |
| 7 | Ron | Weasley | Ottery St. | Catchpole | MI | 74230 | 852-964-1678 |
| 8 | Harry | Potter | Whining | Surrey | MI | 96325 | 123-983-4523 |
| 9 | Allen | Enfield | Commons DR | Mount Pleasant | MI | 96325 | 123-456-7896 |
| 10 | Jerrett | Merren | Commons DR | Mount Pleasant | MI | 48858 | 989-802-2518 |
+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> 
```

Code used: INSERT INTO Customers (CustomerID, FirstName, LastName, Street, City, State, ZipCode, Telephone) VALUES



(1, 'Bobby', 'Singer', '2194 Kripke Lane', 'Sioux Falls', 'SD', 70098, '212-679-2543'),
(2, 'Dean', 'Martin', 'Costline.', 'San Antonio', 'TX', 77097, '217-693-3291'),
(3, 'Jerry', 'Campbell', 'A St.', 'Pittsburgh', 'PA', 77059, '963-326-0588'),
(4, 'Tom', 'Riddle', 'Wool's', 'london', 'MI', 41234, '596-321-4544'),
(5, 'Dobby', 'Hobbs', 'Freshwater West.', 'Pembrokeshire', 'MI', 77777, '857-325-8521'),
(6, 'Mike', 'Mixer', 'State St.', 'copper', 'MI', 48858, '853-298-4551'),
(7, 'Ron', 'Weasley', 'Ottery St.', 'Catchpole', 'MI', 74230, '852-964-1678'),
(8, 'Harry', 'Potter', 'Whining', 'Surrey', 'MI', 96325, '123-983-4523'),
(9, 'Allen', 'Enfield', 'Commons DR', 'Mount Pleasant', 'MI', 96325, '123-456-7896'),
(10, 'Jerrett', 'Merren', 'Commons DR', 'Mount Pleasant', 'MI', 48858, '989-802-2518');

This screenshot shows the command used for entering 10 records into the Customers table.

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."

```
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> CREATE VIEW Collaborators AS
-> SELECT
-> CustomerID AS CollaboratorID,
-> FirstName,
-> LastName,
-> Street,
-> City,
-> State,
-> ZipCode,
-> Telephone
-> FROM Customers;
Query OK, 0 rows affected (0.11 sec)
```

Code used: CREATE VIEW Collaborators AS

```
-> SELECT
-> CustomerID AS CollaboratorID,
-> FirstName,
-> LastName,
-> Street,
-> City,
-> State,
-> ZipCode,
-> Telephone
-> FROM Customers;
```

This code was used to create a view which is virtual that you can run queries on.



```
mysql> DESCRIBE Collaborators;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| CollaboratorID | int           | NO   |     | NULL    |       |
| FirstName      | varchar(25)   | YES  |     | NULL    |       |
| LastName       | varchar(25)   | YES  |     | NULL    |       |
| Street         | varchar(50)   | YES  |     | NULL    |       |
| City           | varchar(50)   | YES  |     | NULL    |       |
| State          | varchar(25)   | YES  |     | NULL    |       |
| ZipCode        | int           | YES  |     | NULL    |       |
| Telephone      | varchar(15)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.01 sec)

mysql> █
```

Code used: DESCRIBE Collaborators;

This Command shows the structure of my view.

```
mysql> SELECT * FROM Collaborators LIMIT 5;
+-----+-----+-----+-----+-----+-----+-----+-----+
| CollaboratorID | FirstName | LastName | Street          | City          | State | ZipCode | Telephone |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Bobby | Singer | 2194 Kripke Lane | Sioux Falls | SD   | 70098 | 212-679-2543 |
| 2 | Dean | Martin | Costline.       | San Antonio | TX   | 77097 | 217-693-3291 |
| 3 | Jerry | Campbell | A St.          | Pittsburgh | PA   | 77059 | 963-326-0588 |
| 4 | Tom | Riddle | Wool's         | london      | MI   | 41234 | 596-321-4544 |
| 5 | Dobby | Hobbs | Freshwater West. | Pembrokeshire | MI   | 77777 | 857-325-8521 |
+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> █
```

Code used: SELECT * FROM Collaborators LIMIT 5;

This command retrieved the first five records from the Collaborator's view. This view reflect the data from the Customers table with the CustomerID column rename to CollaboratorID.