Southern New Hampshire University

DAD 220 Module Two Activity Template
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Step One: 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.

   Answer: I used the SQL query "`CREATE SCHEMA QuantigrationRMA`" to create the `QuantigrationRMA` database schema. I then used the SQL query "`SHOW DATABASES;`" to list all the database schemas in my MySQL instance. Finally, I connected to the `QuantigrationRMA` schema with the query "`USE QuantigrationRMA`". Please refer to figure 1 for a screenshot demonstrating that I indeed did this.

2. Using the 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.

   Answer: Referencing the ER-Diagram in Figure 2, the exact SQL query that I will use to create the Customers table is:

   ```
   CREATE TABLE Customers (
       CustomerID    INT PRIMARY KEY NOT NULL,
       FirstName     VARCHAR(25),
       LastName      VARCHAR(25),
       Street        VARCHAR(50),
       City          VARCHAR(50),
       State         VARCHAR(25),
       ZipCode       INT,
   ```

1

```
mysql> CREATE SCHEMA QuantigrationRMA;
Query OK, 1 row affected (0.00 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| QuantigrationRMA   |
| ahmann             |
| mysql              |
| performance_schema |
+--------------------+
5 rows in set (0.00 sec)

mysql> USE QuantigrationRMA;
Database changed
```

Figure 1: **My answer to question 1**

```
    Telephone     VARCHAR(15)
);
```

I will then use the query "`DESCRIBE Customers`" to demonstrate that the table was indeed created. See figure 3 for the screenshot that demonstrates that the SQL queries that I ran were successful.

(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.

Answer: Referencing the ER-Diagram in Figure 2, the exact SQL query that I will use to create the Orders table is:

```
CREATE TABLE Orders (
    OrderID     INT PRIMARY KEY NOT NULL,
    CustomerID  INT,
    SKU         VARCHAR(20),
    Description VARCHAR(50),
    FOREIGN KEY (CustomerID)
        REFERENCES Customers(CustomerID)
);
```
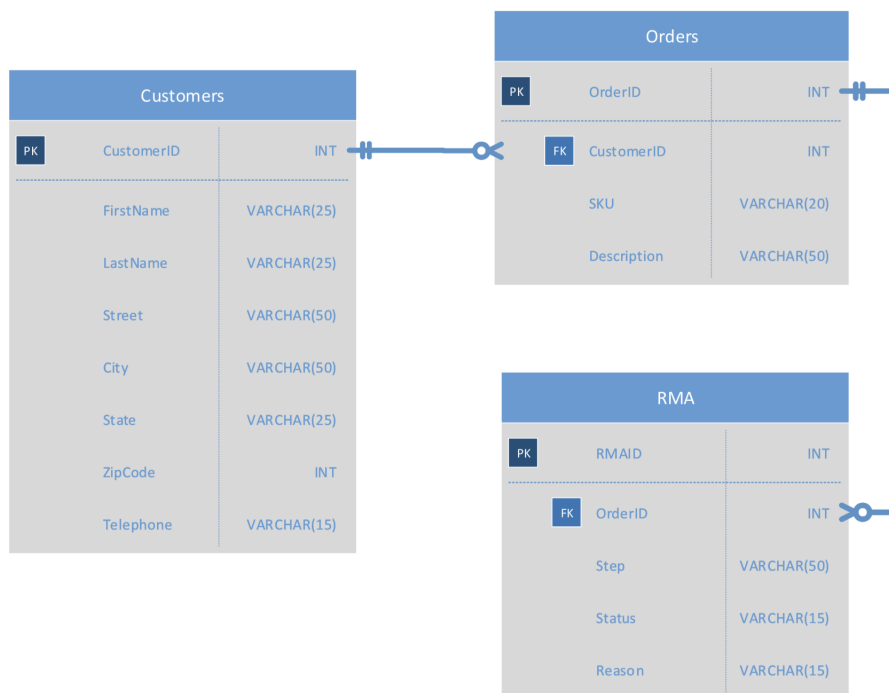
Figure 2: **ER-Diagram**

And as with question 2a, I will use the SQL query `DESCRIBE Orders` to confirm that the table was indeed created properly. See figure 4 for a screenshot demonstrating that I was able to complete this task.

(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.

Answer: Referencing the ER-Diagram in Figure 2, the exact SQL query that I will use to create the Orders table is:

```
CREATE TABLE RMA (
    RMAID       INT PRIMARY KEY NOT NULL,
    OrderID     INT,
    Step        VARCHAR(50),
    Status      VARCHAR(15),
    Reason      VARCHAR(15),
    FOREIGN KEY (OrderID)
        REFERENCES Orders(OrderID)
```

```
mysql> CREATE TABLE Customers (
    ->     CustomerID    INT PRIMARY KEY NOT NULL,
    ->     FirstName     VARCHAR(25),
    ->     LastName      VARCHAR(25),
    ->     Street        VARCHAR(50),
    ->     City          VARCHAR(50),
    ->     State         VARCHAR(25),
    ->     ZipCode       INT,
    ->     Telephone     VARCHAR(15)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> DESCRIBE Customers;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| CustomerID | int(11)     | 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(11)     | YES  |     | NULL    |       |
| Telephone  | varchar(15) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

Figure 3: **My answer to question 2a**

```
mysql> CREATE TABLE Orders (
    ->     OrderID     INT PRIMARY KEY NOT NULL,
    ->     CustomerID  INT,
    ->     SKU         VARCHAR(20),
    ->     Description VARCHAR(50),
    ->     FOREIGN KEY (CustomerID)
    ->         REFERENCES Customers(CustomerID)
    -> );
Query OK, 0 rows affected (0.05 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)
```

Figure 4: **My answer to question 2b**

```
);
```

And as with questions 2a and 2b, I will use the SQL query `DESCRIBE Orders` to confirm that the table was indeed created properly. See figure 4 for a screenshot demonstrating that I was able to complete this task.

```
mysql> CREATE TABLE RMA (
    ->      RMAID        INT PRIMARY KEY NOT NULL,
    ->      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)
```

Figure 5: **My answer to question 2c**

3. Edit the provided SQL query to **create a view from the existing table** from `Customers` to `Collaborators` using SQL based on this change in requirements. Provide the updated SQL commands you completed and ran against MySQL to complete this successfully in your answer:

Answer: Before I do this, I need to populate the database with ten (10) rows of made up customers. I did so with the following query:

```
INSERT INTO Customers (CustomerID, FirstName, LastName, Street,
    City, State, ZipCode, Telephone) VALUES
    (1, "May", "Hill", "4638 Goosetown Drive",
        "Sevier", "NC", 28752, "828-756-4457"),
    (2, "Harvey", "Gonzalez", "862 Bridge Avenue",
        "Lafayette", "LA", 70503, "337-735-1799"),
```

5

```
(3, "Jason", "Dahl", "302 Holly Street",
    "Gainesville", "GA", 30501, "706-200-8078"),
(4, "Elliott", "Martone", "2700 Crestview Terrace",
    "San Antonio", "TX", 78202, "201-828-4689"),
(5, "John", "Castaneda", "1477 Lakewood Drive",
    "Ramsey", "NJ", 07446, "312-939-5123"),
(6, "Harriet", "Lovett", "937 Point Street",
    "Chicago", "IL", 60605, "773-796-6398"),
(7, "Christian", "Lusk", "3115 Tetrick Road",
    "Fort Myers", "FL", 33901, "863-301-8731"),
(8, "Rosalind", "Jean", "2304 Rosebud Avenue",
    "Little Rock", "AR", 72201, "870-402-5510"),
(9, "Erwin", "Custer", "3871 Brown Street",
    "San Francisco", "CA", 94143, "925-990-2774"),
(10, "Joyce", "Abell", "4732 Huntz Lane",
    "West Peabody", "MA", 01960, "978-535-1522");
```

I generated the fake records with `fakenamegenerator.com`. See figure 6 in where I demonstrate that I did indeed complete this step with a screenshot.

Next, I am presenting with the following SQL query with brackets that need to be filled in by the student:

```
CREATE VIEW Collaborator AS
SELECT CustomerID AS CollaboratorID, [student work here]
FROM Customers;
```

The other columns in the table do not have a "Customer" prefix in their names, therefore I don't need to use the `AS` operator to change the column name. The resulting query is therefore:

```
CREATE VIEW Collaborator AS
SELECT CustomerID AS CollaboratorID,
    FirstName, LastName, Street, City,
    State, ZipCode, Telephone
FROM Customers;
```

To demonstrate that the view was properly created, I am to run the SQL query "`DESCRIBE Collaborators;`" and then run a SELECT query of the first five (5) rows from the table with the following: "`SELECT * FROM Collaborators LIMIT 5;`". See figure 7 for a screenshot demonstrating that I was able to create the view properly:

6

```
mysql> INSERT INTO Customers (CustomerID, FirstName, LastName, Street, City, State, ZipCode, Telephone) VALUES
    ->     (1, "May", "Hill", "4638 Goosetown Drive", "Sevier", "NC", 28752, "828-756-4457"),
    ->     (2, "Harvey", "Gonzalez", "862 Bridge Avenue", "Lafayette", "LA", 70503, "337-735-1799"),
    ->     (3, "Jason", "Dahl", "302 Holly Street", "Gainesville", "GA", 30501, "706-200-8078"),
    ->     (4, "Elliott", "Martone", "2700 Crestview Terrace", "San Antonio", "TX", 78202, "201-828-4689"),
    ->     (5, "John", "Castaneda", "1477 Lakewood Drive", "Ramsey", "NJ", 07446, "312-939-5123"),
    ->     (6, "Harriet", "Lovett", "937 Point Street", "Chicago", "IL", 60605, "773-796-6398"),
    ->     (7, "Christian", "Lusk", "3115 Tetrick Road", "Fort Myers", "FL", 33901, "863-301-8731"),
    ->     (8, "Rosalind", "Jean", "2304 Rosebud Avenue", "Little Rock", "AR", 72201, "870-402-5510"),
    ->     (9, "Erwin", "Custer", "3871 Brown Street", "San Francisco", "CA", 94143, "925-990-2774"),
    ->     (10, "Joyce", "Abell", "4732 Huntz Lane", "West Peabody", "MA", 01960, "978-535-1522");
Query OK, 10 rows affected (0.02 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM Customers;
+------------+-----------+-----------+------------------------+---------------+-------+---------+--------------+
| CustomerID | FirstName | LastName  | Street                 | City          | State | ZipCode | Telephone    |
+------------+-----------+-----------+------------------------+---------------+-------+---------+--------------+
|          1 | May       | Hill      | 4638 Goosetown Drive   | Sevier        | NC    |   28752 | 828-756-4457 |
|          2 | Harvey    | Gonzalez  | 862 Bridge Avenue      | Lafayette     | LA    |   70503 | 337-735-1799 |
|          3 | Jason     | Dahl      | 302 Holly Street       | Gainesville   | GA    |   30501 | 706-200-8078 |
|          4 | Elliott   | Martone   | 2700 Crestview Terrace | San Antonio   | TX    |   78202 | 201-828-4689 |
|          5 | John      | Castaneda | 1477 Lakewood Drive    | Ramsey        | NJ    |    7446 | 312-939-5123 |
|          6 | Harriet   | Lovett    | 937 Point Street       | Chicago       | IL    |   60605 | 773-796-6398 |
|          7 | Christian | Lusk      | 3115 Tetrick Road      | Fort Myers    | FL    |   33901 | 863-301-8731 |
|          8 | Rosalind  | Jean      | 2304 Rosebud Avenue    | Little Rock   | AR    |   72201 | 870-402-5510 |
|          9 | Erwin     | Custer    | 3871 Brown Street      | San Francisco | CA    |   94143 | 925-990-2774 |
|         10 | Joyce     | Abell     | 4732 Huntz Lane        | West Peabody  | MA    |    1960 | 978-535-1522 |
+------------+-----------+-----------+------------------------+---------------+-------+---------+--------------+
10 rows in set (0.00 sec)
```

Figure 6: **Inserting rows into the Customer table**

```
mysql> CREATE VIEW Collaborator AS
    -> SELECT CustomerID AS CollaboratorID,
    ->     FirstName, LastName, Street, City,
    ->     State, ZipCode, Telephone
    -> FROM Customers;
Query OK, 0 rows affected (0.06 sec)

mysql> DESCRIBE Collaborator;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| CollaboratorID | int(11)     | 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(11)     | YES  |     | NULL    |       |
| Telephone      | varchar(15) | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)

mysql> SELECT * FROM Collaborator LIMIT 5;
+----------------+-----------+-----------+----------------------+-------------+-------+---------+--------------+
| CollaboratorID | FirstName | LastName  | Street               | City        | State | ZipCode | Telephone    |
+----------------+-----------+-----------+----------------------+-------------+-------+---------+--------------+
|              1 | May       | Hill      | 4638 Goosetown Drive | Sevier      | NC    |   28752 | 828-756-4457 |
|              2 | Harvey    | Gonzalez  | 862 Bridge Avenue    | Lafayette   | LA    |   70503 | 337-735-1799 |
|              3 | Jason     | Dahl      | 302 Holly Street     | Gainesville | GA    |   30501 | 706-200-8078 |
|              4 | Elliott   | Martone   | 2700 Crestview Terrace | San Antonio | TX  |   78202 | 201-828-4689 |
|              5 | John      | Castaneda | 1477 Lakewood Drive  | Ramsey      | NJ    |    7446 | 312-939-5123 |
+----------------+-----------+-----------+----------------------+-------------+-------+---------+--------------+
5 rows in set (0.00 sec)
```

Figure 7: **Inserting rows into the Customer table**