# DAD 220 Database Documentation

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DAD 220

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## Step One: Create a Database

1. Navigate to your online integrated development environment (IDE). List and record the SQL commands that you used to complete this step here:

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Open codio from brightspace

1. Create a database schema called QuantigrationUpdates. List out the database name. Provide the SQL commands you ran against MySQL to successfully complete this in your answer:

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Code used:

CREATE database QuantigrationUpdates;

SHOW databases;

1. Using the entity relationship diagram (ERD) as a reference, create the following tables with the appropriate attributes and keys:
   1. A table named **Customers** in the QuantigrationUpdates database, as defined on the project ERD. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

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Code used:

Use QuantigrationUpdates;

CREATE TABLE Customers (CustomerID INT PRIMARY KEY, FirstName VARCHAR(25), LastName VARCHAR(25), Street VARCHAR(50),City VARCHAR(50), State VARCHAR(25), ZipCode VARCHAR(10), Telephone VARCHAR(15));

describe Customers;

* 1. A table named **Orders** in the QuantigrationUpdates database, as defined on the project ERD. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

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Code used:

CREATE TABLE Orders (OrderID INT PRIMARY KEY, CustomerID INT, SKU VARCHAR(20), Description VARCHAR(50) , FOREIGN KEY (CustomerID) REFERENCES Customers (CustomerID));

describe Orders;

* 1. A table named **RMA** in the QuantigrationUpdates database, as defined on the project ERD. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:

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Code used:

CREATE TABLE RMA (RMAID INT PRIMARY KEY, OrderID INT, Step VARCHAR(50), Status VARCHAR(15),Reason VARCHAR(15), FOREIGN KEY (OrderID) REFERENCES Orders (OrderID));

describe RMA;

## Step Two: Load and Query the Data

1. **Import the data from each file into tables.** 
   * Use the QuantigrationUpdates database, the three tables you created, and the three CSV files preloaded into Codio.
   * Use the import utility of your database program to load the data from each file into the table of the same name. You will perform this step three times, once for each table.

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Code used:

LOAD DATA INFILE '/home/codio/workspace/customers.csv'

INTO TABLE Customers

FIELDS TERMINATED BY ','

LINES TERMINATED BY '\r\n';

LOAD DATA INFILE '/home/codio/workspace/orders.csv'

INTO TABLE Orders

FIELDS TERMINATED BY ','

LINES TERMINATED BY '\r\n';

LOAD DATA INFILE '/home/codio/workspace/rma.csv'

INTO TABLE RMA

FIELDS TERMINATED BY ','

LINES TERMINATED BY '\r\n';

1. **Write basic queries against imported tables to organize and analyze targeted data.** For each query, replace the bracketed text with a screenshot of the query and its output. You should also include a 1- to 3-sentence description of the output.
   * Write an SQL query that returns the **count** of orders for customers located only in the city of Framingham, Massachusetts.
     1. How many records were returned? A total of 505 records appeared in the results for customers located in Framingham, MA.

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Code used:

SELECT COUNT(\*)

FROM Customers INNER JOIN Orders ON Customers.CustomerID = Orders.CustomerID

WHERE UPPER(Customers.city) = 'FARMINGHAM' AND UPPER(Customers.state) = 'MASSACHUSETTS';

* + Write an SQL query to **select all** of the Customers located in the state of Massachusetts.
    1. Use a WHERE clause to limit the number of records in the Customers table to only those who are located in Massachusetts.
    2. Record an answer to the following question: How many records were returned? A total of 982 records were returned for the customers who are located in MA.

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Code used:

SELECT COUNT(\*)

FROM Customers

WHERE UPPER(Customers.state) = 'MASSACHUSETTS';

* + Write a SQL query to insert four new records into the Orders and Customers tables using the following data:

**Customers Table**

| **CustomerID** | **FirstName** | **LastName** | **StreetAddress** | **City** | **State** | **ZipCode** | **Telephone** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 100004 | Luke | Skywalker | 15 Maiden Lane | New York | NY | 10222 | 212-555-1234 |
| 100005 | Winston | Smith | 123 Sycamore Street | Greensboro | NC | 27401 | 919-555-6623 |
| 100006 | MaryAnne | Jenkins | 1 Coconut Way | Jupiter | FL | 33458 | 321-555-8907 |
| 100007 | Janet | Williams | 55 Redondo Beach Blvd | Torrence | CA | 90501 | 310-555-5678 |

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Code used:

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

(100004, 'Luke', 'Skywalker', '17 Maiden Lane', 'New York', 'NY', '10222', '212-555-1234'),

(100005, 'Winston', 'Smith', '128 Sycamore Street', 'Greensboro', 'NC', '27401', '919-555-6623'),

(100006, 'MaryAnne', 'Jenkins', '2 Coconut Way', 'Jupiter', 'FL', '33458', '321-555-8907'),

(100007, 'Janet', 'Williams', '58 Redondo Beach Blvd', 'Torrence', 'CA', '90501', '310-555-5678');

**Orders Table**

| **OrderID** | **CustomerID** | **SKU** | **Description** |
| --- | --- | --- | --- |
| 1204305 | 100004 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port |
| 1204306 | 100005 | ADV-48-10F | Advanced Switch 10 GigE Copper/Fiber 44 port copper 4 port fiber |
| 1204307 | 100006 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port |
| 1204308 | 100007 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port |

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Code used:

INSERT INTO Orders (OrderID,CustomerID,SKU,Description) VALUES

(1204305, 100004, 'ADV-24-10C', 'Advanced Switch 10GigE Copper 24 port'),

(1204306, 100005, 'ADV-48-10F', 'Advanced Switch 10 GigE Copper/Fiber 44 port copper 4 port fiber'),

(1204307, 100006, 'ENT-24-10F', 'Enterprise Switch 10GigE SFP+ 24 Port'),

(1204308, 100007, 'ENT-48-10F', 'Enterprise Switch 10GigE SFP+ 48 port');

* + In the Customers table, perform a query to count all records where the city is Woonsocket, Rhode Island.
    1. How many records are in the Customers table where the field “city” equals “Woonsocket”? Only a total of 7 records returned for customers located in the city of Woonsocket.

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Code used:

SELECT COUNT(\*)

FROM Customers

WHERE UPPER(Customers.city) = "WOONSOCKET";

* + In the RMA database, update a customer’s records.
    1. Write an SQL statement to select the current fields of **status** and **step** for the record in the **RMA** table with an **orderid** value of “5175.”
       1. What are the status and step? The current status is “Pending” and the step is “Awaiting customer documentation.”

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Code used:

SELECT status, step

FROM RMA

WHERE OrderID = '5175';

* + 1. Write an SQL statement to update the **status** and **step** for the **OrderID**, 5175 to **status** = “Complete” and **step** = “Credit Customer Account.”
       1. What are the updated **status** and **step** values for this record? The updated step has been changed to “completed” and the step is “credit customer account.”

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Code used:

UPDATE RMA

SET status = 'Complete', step = 'Credit Customer Account'

WHERE OrderID = '5175';

\*Code used to show step was updated\*

SELECT status, step

FROM RMA

WHERE OrderID = '5175';

* + Delete RMA records.
    1. Write an SQL statement to delete all records with a reason of “Rejected.”
       1. How many records were deleted? RMA table started with 38162 records returned. The DELETE command affected 596 rows, leading to the updated RMA table returning 37566 records.

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Code used:

DELETE FROM RMA

WHERE reason = 'Rejected';

1. **Update your existing tables** from “Customer” to “Collaborator” using SQL based on this change in requirements. Provide the SQL commands you ran against MySQL to complete this successfully in your answer:
   1. Rename all instances of “Customer” to “Collaborator.”

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Code used:

CREATE VIEW Collaborator AS SELECT CustomerID AS CollaboratorID, FirstName, LastName, Street, City, State, ZipCode, Telephone

FROM Customers;

1. **Create an output file of the required query results.** Write an SQL statement to list the contents of the **Orders** table and send the output to a file that has a .csv extension.

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Code used:

SELECT \* FROM Orders INTO OUTFILE '/home/codio/workspace/orders99.csv' FIELDS TERMINATED BY ',';

* + On the left side the new csvfile can be located titled orders99.csv