# DAD 220 Project One Template

Complete these steps as you work through the directions for Project One. Replace the bracketed text with your screenshots and brief explanations of the work they capture. 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 in the Supporting Materials section of the Project One Guidelines and Rubric for assistance.

## Step One: Create a Database

1. In your online IDE (Codio), **create a database schema** called QuantigrationUpdates that will hold tables by using SQL commands.
   1. List out the database name on the screen.
   2. Provide the SQL commands you ran against MySQL to complete this step.

A screenshot of a computer program

Description automatically generated

For this part I made the database schema named QuantigrationUpdates. This part is about making a structure to keep all the tables organized.

1. Connect to the QuantigrationUpdates schema. Using the ERD as a reference, **write SQL commands to create** the following **tables** with the appropriate attributes and keys to demonstrate relationships based on the ERD.
   1. 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 step.

A screenshot of a computer

Description automatically generated

For this part I created three tables: Customers, Orders, and RMA. Each table holds specific types of information for customer data, orders, and return merchandise authorizations (RMA). I used Primary keys to define unique records, and foreign keys to show relationships between tables based on the ERD.

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

A screenshot of a computer program

Description automatically generated

For the Orders table I had to redo it because the VARCHAR of (50) did not allow one record to be entered because it was too long. So I used the ALTER TABLE Orders MODIFY Description VARCHAR(100); Later on, but I do not believe I captured a screenshot.

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

A screenshot of a computer program

Description automatically generated

For RMA table there is a Primary Key and a Foreign Key, the Foreign Key refers to the Primary Key of OrderID in the Orders table.

## Step Two: Load and Query the Data

1. **Import** the **data** from each file **into tables.** 
   1. Use the QuantigrationUpdates database, the three tables you created, and the three CSV files preloaded into Codio.
   2. Use the import utility of your database program to load the data from each file into the table of the same name. Perform this step three times, once for each table.
   3. Provide the SQL commands you ran against MySQL to complete this step.

A screenshot of a computer program

Description automatically generated

The CSV files for customers.csv, orders.csv, and rma.csv were in the file tree. I imported into the tables they belonged to using SQL command LOAD DATA INFILE. FIELDS TERMINATED BY tells the database how each piece of information in our data file is separated from the next one. LINES TERMINATED BY tells the database where one line of data ends and the next one begins in our file.

1. **Write basic queries** against the imported tables to organize and analyze the targeted data**.** For each query, replace the bracketed text with a screenshot of the query and its output. Also, include a one- to three-sentence description of the output.
   1. Write a SQL query that returns the count of orders for customers located only in Framingham, Massachusetts.
      1. This query will use a table join between the Customers and Orders tables. The query will also use a WHERE clause.
      2. How many records were returned?

A screen shot of a computer

Description automatically generated

505 were returned. This query helps us count the number of orders made by customers who live in Framingham, Massachusetts. It looks at both the Customers and Orders tables and checks where the customers are from and how many orders they've made.

* 1. Write a SQL query to select all of the customers located in 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. How many records were returned?

A screenshot of a computer program

Description automatically generated

A screenshot of a computer screen

Description automatically generated

982 records were returned. This query helps us find all customers who are located in Massachusetts. It looks at the Customers table and selects only those customers who have their location set to Massachusetts using a WHERE clause.

* 1. Write a SQL query to insert four new records into the Orders and Customers tables using the data below:

**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 |

A screenshot of a computer program

Description automatically generated

This SQL query is used to add new records to both the Orders and Customers tables. It inserts information about four new orders and their corresponding customers into the database.

**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 |

A screenshot of a computer screen

Description automatically generated

* 1. In the Customers table, perform a query to count all records where the city is Woonsocket and the state is Rhode Island.
     1. How many records are in the Customers table where the field "city" equals "Woonsocket"?

A screenshot of a computer

Description automatically generated

This query is used to count the number of records in the Customers table where the city is set to "Woonsocket" and the state is set to "Rhode Island". It looks specifically for customers located in Woonsocket, Rhode Island.

* 1. In the RMA database, update a customer's records.
     1. Write a 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 current status and step?

A screenshot of a computer

Description automatically generated

The current status is pending and step is awaiting customer documentation. This query selects the current values of the "status" and "step" fields for the record in the RMA (Return Merchandise Authorization) table with an OrderID value of "5175". It helps retrieve the current status and step of a specific RMA record identified by its OrderID.

* + 1. Write a 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?

A computer screen shot of a computer program

Description automatically generated

The updated status is Complete and the updated step is Credit Customer Account. This query updates the status and step fields for the RMA record with the OrderID "5175" in the RMA table. It changes the status to "Complete" and the step to "Credit Customer Account", showing that the RMA process for this order is complete and the customer's account has been credited accordingly.

* 1. Delete RMA records.
     1. Write a SQL statement to delete all records with a reason of "Rejected".
        1. How many records were deleted?

A screenshot of a computer

Description automatically generated

There were 596 records deleted. This query deletes all records from the RMA table where the reason field is set to "Rejected". It removes any RMA records that have been marked as rejected.

1. **Update your existing tables** from "Customer" to "Collaborator" using SQL based on this change in requirements. Copy and paste the SQL you write to do the following action:
   1. Rename all instances of "Customer" to "Collaborator".

A screenshot of a computer screen

Description automatically generated

This query updates the existing tables in the database where the term "Customer" is used and renames it to "Collaborator". This makes sure we are changing the fields to what the owners want them to be.

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

A screenshot of a computer program

Description automatically generated

This statement selects all the contents of the Orders table. Then, it exports the result set to a CSV file. This let us share and analyze the data that we changed for the Orders data.