Southern New Hampshire University

DAD 220 Module Two Activity Template
Prepared on: 27 Mar., 2022
Prepared for: Prof. Aastha Agarwal
Prepared by: Alexander Ahmann

Contents

1 Problem set

1. **Import the data from each file into tables.**

   (a) 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.

   Answer: See Fig. 1 for a screenshot in where I connect to the `QuantigrationRMA` database.

   (b) Provide the SQL commands you ran against MySQL to complete this successfully in your answer.

   Answer: The exact query that I used to load the `customers.csv` file into the `Quantigration.Customers` table is:

```
LOAD DATA INFILE '/home/codio/workspace/customers.csv'
    INTO TABLE Customers
    FIELDS TERMINATED BY ','
    LINES TERMINATED BY '\n';
```

   The exact query that I used to load the `orders.csv` file into the `Quantigration.Orders` table is:

```
LOAD DATA INFILE '/home/codio/workspace/orders.csv'
    INTO TABLE Orders
    FIELDS TERMINATED BY ','
    LINES TERMINATED BY '\n';
```

The exact query that I used to load the `rma.csv` file into the `Quantigration.RMA` table is:

```
LOAD DATA INFILE '/home/codio/workspace/rma.csv'
    INTO TABLE RMA
    FIELDS TERMINATED BY ','
    LINES TERMINATED BY '\n';
```

See Fig. 2 for a screenshot in where I use the `LOAD DATA INFILE` SQL query to load the .csv tables into their respective tables.

2. **Write basic queries against imported tables to organise and analyse targeted data.** For each query, include a screenshot of the query and its output. You should also include a brief, 1-3 sentence description of the output.

   (a) Write an SQL query that returns the count of orders for `customers` located only in the city of Framingham, Massachusetts.

      i. How many records were returned?

      Answer: The SQL query that I wrote returned 505 results. See Fig. 3 for a screenshot of my solution to this question.

   (b) Write an SQL query to select all of the customers located in the state of Massachusetts.

      i. Use a `WHERE` clause to limit the number of records in the `customers` table to only those that are located in Massachusetts.

      ii. Record an answer to the following question: How many records were returned?

      Answer: The SQL query that I wrote returned a total of 982 results. See Fig. 4 for a screenshot of my solution to this question.

   (c) Write an SQL query to insert four new records into the `orders` and `customers` tables using the following data: Customers Table and the

Orders Table in accordance with the table data shown (Figs. 5 & 6).

Answer: Based on the Customers table shown in Fig. 5, the exact SQL query that I shall use to insert the new records is:

```
INSERT INTO Customers
    (CustomerID, FirstName, LastName, Street,
    City, State, ZipCode, Telephone)
VALUES
    (100004, "Luke", "Walker", "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");
```

... and based on the Orders table shown in Fig. 6, the exact SQL query that I shall use to insert the new records is:

```
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-24-10F",
        "Enterprise Switch 10GigE SFP+ 48 port");
```

See Fig. 7 for the screenshot of myself performing these queries.

(d) In the customers table, perform a query to count all records where the city is Woonsocket, Rhode Island.

i. How many records are in the customers table where the field `city` equals `Woonsocket`?

Answer: Using the following SQL database query:

```
SELECT COUNT(*) FROM Customers
WHERE City = "Woonsocket"
AND (State = "RI" OR State = "Rhode Island");
```

I was able to work out the total number of rows to 7. See Fig. 8 for a screenshot of myself executing the query.

(e) In the `rma` database, update a `customer`'s records.

i. 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`.

ii. What are the current status and step?

iii. Write an SQL statement to update the status and step for the `orderid`,`5175` to `status` = `Complete` and `step` = `Credit Customer Account`

iv. What are the updated status and step values for this record? - Provide a screenshot of your work.

Answer: The exact SQL query that I used for part i. is:

```
SELECT Step, Status FROM RMA
WHERE OrderID = 5175;
```

From the results of the SQL query, I can tell that the step is "Awaiting customer Documentation and the status is "Pending." I then updated the table rows where `OrderID = 5175` with the following SQL query:

```
UPDATE RMA
SET Step = "Credit Customer Account",
    Status = "Complete"
WHERE OrderID = 5175;
```

Executing this query caused the rows where `OrderID = 5175` to have their "Step" set to "Credit Customer Account" and their "Status" set to complete. See Fig. 9 for the screenshot of myself doing this.

(f) Delete `rma` records.

i. Write an SQL statement to delete all records with a reason of `Rejected`.

ii. How many records were deleted? Provide a screenshot of your work.

Answer: The exact SQL query to complete this task is:

```
TRUNCATE TABLE RMA;
```

Unfortunately, I could not figure out how to give the reason of "rejected," nor was I able to get the exact number of rows that have been deleted. Fig. 10 shows a screenshot demonstrating my query to partially work.

3. **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.

Answer: The exact SQL query that I used to work out this problem is:

```
SELECT * INTO OUTFILE
    "/home/codio/workspace/week4_4-3_Q3.csv"
FIELDS TERMINATED BY ","
OPTIONALLY ENCLOSED BY '"'
LINES TERMINATED BY "\n"
FROM Orders;
```

And Fig. 11 shows a screenshot demonstrating that I was able to complete this task.

2 Figures

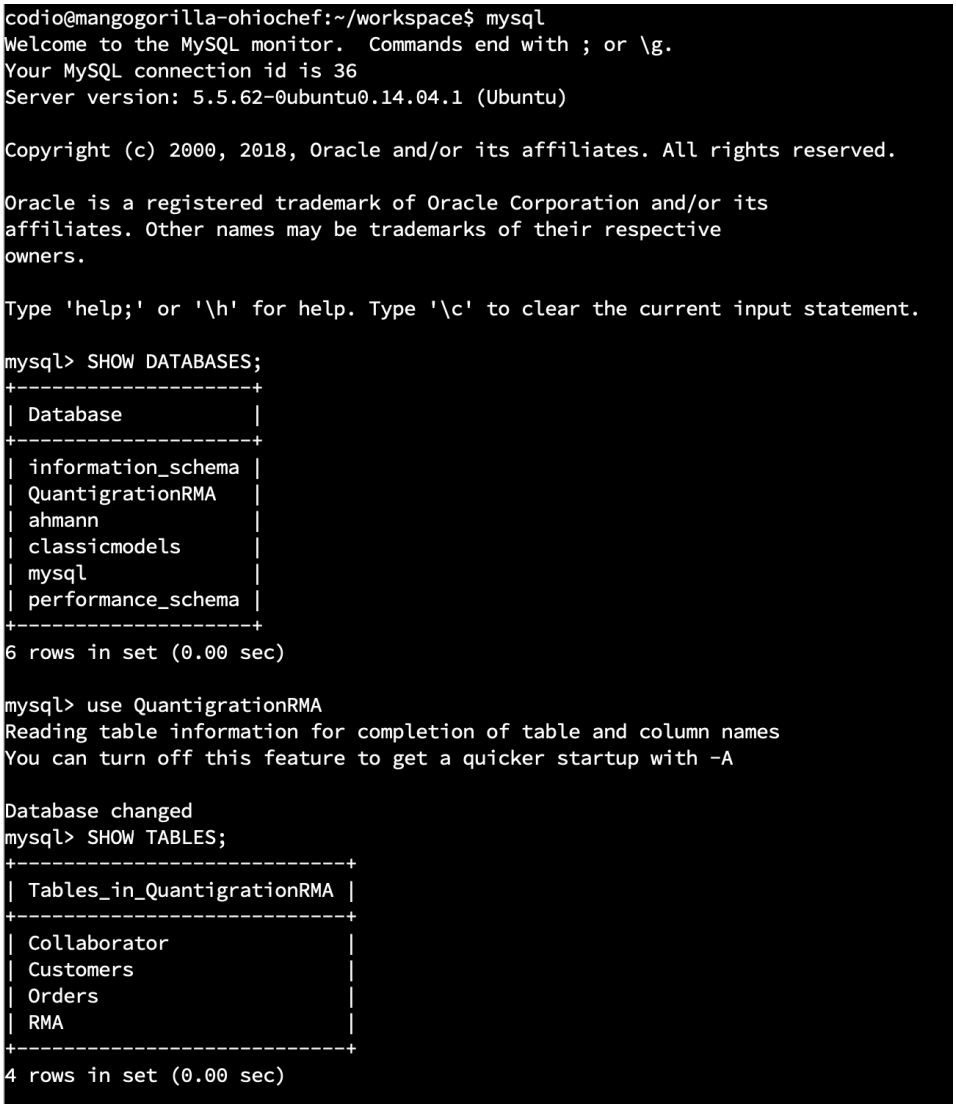

Figure 1: **My solution to question 1a**

```
mysql> LOAD DATA INFILE '/home/codio/workspace/customers.csv'
    -> INTO TABLE Customers
    -> FIELDS TERMINATED BY ','
    -> LINES TERMINATED BY '\n';
Query OK, 37994 rows affected (0.27 sec)
Records: 37994  Deleted: 0  Skipped: 0  Warnings: 0

mysql> LOAD DATA INFILE '/home/codio/workspace/orders.csv'
    -> INTO TABLE Orders
    -> FIELDS TERMINATED BY ','
    -> LINES TERMINATED BY '\n';
Query OK, 37994 rows affected, 4173 warnings (0.38 sec)
Records: 37994  Deleted: 0  Skipped: 0  Warnings: 4173

mysql> LOAD DATA INFILE '/home/codio/workspace/rma.csv'
    -> INTO TABLE RMA
    -> FIELDS TERMINATED BY ','
    -> LINES TERMINATED BY '\n';
Query OK, 38162 rows affected (0.46 sec)
Records: 38162  Deleted: 0  Skipped: 0  Warnings: 0
```

Figure 2: **My solution to question 1b**

```
mysql> SELECT OrderID, Orders.CustomerID, SKU, Description FROM Orders
    -> INNER JOIN Customers
    -> ON Orders.CustomerID = Customers.CustomerID
    -> WHERE Customers.City = "Framingham"
    -> AND (Customers.State = "MA" OR Customers.State = "Massachusetts");
+---------+------------+------------+-----------------------------------------------------+
| OrderID | CustomerID | SKU        | Description                                         |
+---------+------------+------------+-----------------------------------------------------+
|   74086 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port
|   74101 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port
|   74186 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port
|   74212 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port
|   74241 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port
|   74252 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port
|   74269 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port
|   74290 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port
|   74433 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port
|   74435 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port
|   74439 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port
|   74457 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port
|   74530 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port
|   74533 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port
|   74538 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port
|   74555 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port
```

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

```
mysql> SELECT OrderID, Orders.CustomerID, SKU, Description FROM Orders
    -> INNER JOIN Customers
    -> ON Orders.CustomerID = Customers.CustomerID
    -> WHERE Customers.State = "MA" OR Customers.State = "Massachusetts";
+---------+------------+------------+-----------------------------------------------------+
| OrderID | CustomerID | SKU        | Description                                         |
+---------+------------+------------+-----------------------------------------------------+
|         |      74086 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port               |
|         |      74091 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port              |
|         |      74101 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port              |
|         |      74107 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port               |
|         |      74186 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port               |
|         |      74188 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port              |
|         |      74212 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port               |
|         |      74241 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port              |
|         |      74252 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port              |
|         |      74269 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port              |
|         |      74290 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port               |
|         |      74305 | ENT-48-40F | Enterprise Switch 40GigE SFP+ 48 port               |
|         |      74308 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port               |
|         |      74374 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port              |
|         |      74431 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port               |
|         |      74433 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port               |
|         |      74435 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port              |
|         |      74439 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port               |
|         |      74457 | ENT-48-10F | Enterprise Switch 10GigE SFP+ 48 port               |
|         |      74472 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port               |
|         |      74500 | ENT-48-40F | Enterprise Switch 40GigE SFP+ 48 port               |
|   72285 |      74501 | ADV-48-10F | Advanced Switch 10 GigE Copper/Fiber 44 port coppe  |
|         |      74502 | ENT-48-40F | Enterprise Switch 40GigE SFP+ 48 port               |
|         |      74525 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port               |
|         |      74530 | ADV-24-10C | Advanced Switch 10GigE Copper 24 port               |
|         |      74533 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port              |
|         |      74534 | ENT-24-40F | Enterprise Switch 40GigE SFP+ 24 port               |
|         |      74538 | ENT-24-10F | Enterprise Switch 10GigE SFP+ 24 Port               |
|         |      74555 | BAS-08-1 C | Basic Switch  10/100/1000 BaseT 8 port              |
|         |      74592 | BAS-48-1 C | Basic Switch 10/100/1000 BaseT 48 port              |
|   72439 |      74611 | ADV-48-10F | Advanced Switch 10 GigE Copper/Fiber 44 port coppe  |
```

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

Customers Table

CustomerID	FirstName	LastName	StreetAddress	City	State	ZipCode	Telephone
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

Figure 5: **What new entries to insert into the Customers table.**

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

Figure 6: **What new entries to insert into the Orders table.**

```
mysql> INSERT INTO Customers (CustomerID, FirstName, LastName, Street, City, State, ZipCode, Telephone)
    -> VALUES (100004, "Luke", "Walker", "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");
Query OK, 4 rows affected (0.02 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> 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-24-10F", "Enterprise Switch 10GigE SFP+ 48 port");
Query OK, 4 rows affected, 1 warning (0.02 sec)
Records: 4  Duplicates: 0  Warnings: 1
```

Figure 7: **Inserting new customers and their respective orders.**

```
mysql> SELECT COUNT(*) FROM Customers
    -> WHERE City = "Woonsocket"
    -> AND (State = "RI" OR State = "Rhode Island");
+----------+
| COUNT(*) |
+----------+
|        7 |
+----------+
1 row in set (0.40 sec)
```

Figure 8: **Counting the number of Woonsocket, RI entries in Customers.**

```
mysql> SELECT Step, Status FROM RMA
    -> WHERE OrderID = 5175;
+--------------------------------+---------+
| Step                           | Status  |
+--------------------------------+---------+
| Awaiting customer Documentation | Pending |
+--------------------------------+---------+
1 row in set (0.03 sec)

mysql> UPDATE RMA
    -> SET Step = "Credit Customer Account",
    ->     Status = "Complete"
    -> WHERE OrderID = 5175;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT Step, Status FROM RMA
    -> WHERE OrderID = 5175;
+------------------------+----------+
| Step                   | Status   |
+------------------------+----------+
| Credit Customer Account | Complete |
+------------------------+----------+
1 row in set (0.00 sec)
```

Figure 9: **Updating the information for OrderID = 5175.**

```
mysql> TRUNCATE TABLE RMA;
Query OK, 0 rows affected (0.06 sec)

mysql> SELECT * FROM RMA;
Empty set (0.00 sec)
```

Figure 10: **Truncating the RMA table.**

```
mysql> SELECT * INTO OUTFILE "/home/codio/workspace/week4_4-3_Q3.csv"
    -> FIELDS TERMINATED BY ","
    -> OPTIONALLY ENCLOSED BY '"'
    -> LINES TERMINATED BY "\n"
    -> FROM Orders;
Query OK, 37998 rows affected (0.21 sec)

mysql> exit
Bye
codio@mangogorilla-ohiochef:~/workspace$ head week4_4-3_Q3.csv
",76368,"BAS-08-1 C","Basic Switch  10/100/1000 BaseT 8 port
",62494,"BAS-48-1 C","Basic Switch 10/100/1000 BaseT 48 port
",98077,"ENT-48-10F","Enterprise Switch 10GigE SFP+ 48 port
",85882,"ENT-48-40F","Enterprise Switch 40GigE SFP+ 48 port
"0,59384,"BAS-48-1 C","Basic Switch 10/100/1000 BaseT 48 port
"4,96361,"ENT-48-10F","Enterprise Switch 10GigE SFP+ 48 port
15,67424,"ADV-48-10F","Advanced Switch 10 GigE Copper/Fiber 44 port coppe"
"6,93634,"ENT-24-10F","Enterprise Switch 10GigE SFP+ 24 Port
"9,62756,"ENT-24-40F","Enterprise Switch 40GigE SFP+ 24 port
"0,99453,"BAS-48-1 C","Basic Switch 10/100/1000 BaseT 48 port
```

Figure 11: **Exporting Orders to CSV.**