Haley Candia Perez

9/16/23

DAD-220

Module 3-2 Lab

Before you begin, type the following commands prior to typing MySQL to set file permissions.

This will allow you to perform the file output creation:

- chmod +x change\_perm.sh
- Press Enter.
- ./change perm.sh

Then, enter MySQL and reconnect to the employee information you entered in the previous lab. Write a SELECT statement for the Employee table to check that you've reconnected to the right information.

- 1. Update the name of the Branches table that you created in the previous lab to say "Department".
  - Use an ALTER statement to successfully RENAME the "Branches" table to "Department".
  - Capture these outputs in a screenshot to validate that you've successfully completed this step.

```
mysql> use candiaperez;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Oatabase changed
nysql> select * from Employee;
  Employee_ID | First_Name | Last_Name | Department_ID | Classification | STATUS
                        | John
| Mary
| Mary
| Gwen
| Michael
                                                                                                         Exempt
Non-Exempt
Exempt
NULL
Non-Exempt
                                                                                                                                         Full-Time | 90000.00
Part-Time | 35000.00
Full-Time | 80000.00
Full-Time | 40000.00
Full-Time | 90000.00
                                                    Smith
Jones
Williams
                                                                                                                                                                 90000.00
35000.00
                103
104
                           Haley
Beyonce
                                                    Candia
Knowles
                                                                                                         Non-Exempt
Non-Exempt
                                                                                                                                                              75000.00
99000.00
   rows in set (0.00 sec)
nysql> ALTER TABLE Branches RENAME Department;
ERROR 1146 (42S02): Table 'candiaperez.Branches' doesn't exist
nysql> SHOW TABLES;
  Tables_in_candiaperez |
   rows in set (0.00 sec)
```

2. Insert fields to the Department table so that you'll be able to perform joins on them.

## **INSERT INTO Department VALUES**

- (1, 'Accounting'),
- (2, 'Human Resources'),
- (3, 'Information Systems'),
- (4, 'Marketing');

Write a SELECT statement for this table to prove this step, and validate that it ran correctly with a screenshot.

- 3. Now, perform joins between the Department and Employee tables and show results for how many employees work in each one of the four departments. This will only provide information on the records that are already there.
  - Department 1 = Accounting
    - Command: SELECT First\_Name, Last\_Name, Department.Department\_Name FROM
       Employee INNER JOIN Department ON
       Employee.Department\_ID = Department.Department\_ID WHERE
       Employee.Department\_ID = 1;
  - Using SELECT statements similar to the one above, perform joins to produce results for the following tables:
    - Department 2 = Human Resources
    - Department 3 = Information Systems
    - Department 4 = Marketing

Capture the results of these joins and validate your work by providing a screenshot. You should have the same number of records as you do employees.

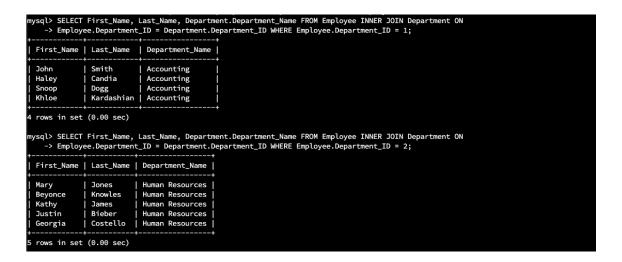
```
ql> SELECT First_Name, Last_Name, Department.Department_Name FROM Employee INNER JOIN Department ON
-> Employee.Department_ID = Department.Department_ID WHERE Employee.Department_ID = 1;
 First_Name | Last_Name | Department_Name |
John
Haley
                 Smith
                               Accounting
                 Candia
                               Accounting
First_Name | Last_Name | Department_Name |
Mary
Beyonce
                 Jones
                               Human Resources
               Knowles
                             Human Resources
rows in set (0.00 sec)
nysql> SELECT First_Name, Last_Name, Department.Department_Name FROM Employee INNER JOIN Department ON
-> Employee.Department_ID = Department.Department_ID wHERE Employee.Department_ID = 3;
First_Name | Last_Name | Department_Name
              | Williams | Information Systems |
row in set (0.00 sec)
nysql> SELECT First_Name, Last_Name, Department.Department_Name FROM Employee INNER JOIN Department ON
-> Employee.Department_ID = Department.Department_ID wHERE Employee.Department_ID = 4;
First_Name | Last_Name | Department_Name |
 Michael
                 Jones
                               Marketing
```

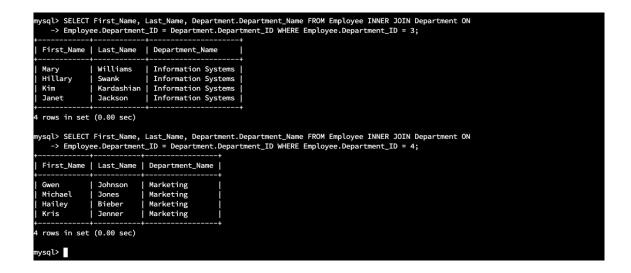
- 4. Populate the Employee table with information for ten new employees.
  - Give them unique names and include attributes for all necessary fields. (Note: Please reference attributes from the lab in Module Two. Department ID values must be between 1 and 4.)

Employee_ID	First_Name	Last_Name	Department_ID	Classification	STATUS	Salary
100	John	Smith	1	Exempt	Full-Time	90000.00
101	Mary	Jones	2	Non-Exempt	Part-Time	35000.00
102	Mary	Williams	3	Exempt	Full-Time	80000.00
103	Gwen	Johnson	4	NULL	Full-Time	40000.00
104	Michael	Jones	4	Non-Exempt	Full-Time	90000.00
105	Haley	Candia	1	Non-Exempt	Full-time	75000.00
106	Beyonce	Knowles	2	Non-Exempt	Full-Time	99000.00
107	Hailey	Bieber	4	Non-Exempt	Part-Time	45000.00
108	Kathy	James	2	Non-Exempt	Part-Time	55000.00
109	Hillary	Swank	3	Exempt	Full-Time	82000.00
110	Snoop	Dogg	1	Exempt	Full-Time	93000.00
111	Justin	Bieber	2	Non-Exempt	Part-Time	38000.00
112	Kim	Kardashian	3	Exempt	Full-Time	84000.00
113	Khloe	Kardashian	1	Exempt	Full-Time	76000.00
114	Kris	Jenner	4	Non-Exempt	Part-Time	52000.00
115	Georgia	Costello	2	Non-Exempt	Part-Time	39000.00
116	Janet	Jackson	3	Exempt	Full-Time	68000.00

- 5. Perform a join across the Employee and Department Tables for each of the four departments.

  New and existing records should be displayed in the results.
  - Take a screenshot to capture the updated results that the Employee and Department joins show to validate that they have run correctly. You should have the same number of records as you do employees.





- 6. Identify the resultant outputs of the commands that you've written:
  - How many records are returned for employees in each department?
    - In department 1: 4 Records.
    - In department 2: 5 Records.
    - In department 3: 4 Records.
    - In department 4: 4 Records.
- 7. Create a CSV file that contains only the records of employees in Human Resources and Information Systems. If you run this query multiple times, be sure to use a different file name each time. MySQL will not overwrite an existing file.
  - Enter the command listed below.
    - Command: select First\_Name, Last\_Name, Department.Department\_Name from Employee inner join Department on Employee.Department\_ID =
       Department\_ID where Employee.Department\_ID = 3 OR
       Employee.Department\_ID = 2 into outfile'/home/codio/workspace/HRandIS-Employees.csv' FIELDS TERMINATED BY',' LINES TERMINATED BY '\r\n';
  - Print the file output to the screen.
    - You'll need to type the word quit after your MySQL prompt and then press Enter to exit to the Linux shell. Do not exit the virtual lab environment itself.
    - Next, print the output of your file to the screen by following these steps:
      - 1. Type pwd and press Enter, then type Is and press Enter again. This will list your files.
      - 2. Now, type cat HRandIS-Employees.csv and press Enter.

3. Capture these outputs in a screenshot to validate that you've successfully completed this step.

```
ysql> select First_Name, Last_Name, Department.Department_Name from Employee inner join Department on Employee.Department_ID = Department.Departme_ID where Employee.Department_ID = 3 OR Employee.Department_ID = 2 into outfile'/home/codio/workspace/HRandIS-Employees.csv' FIELDS TERMINATED BY '\r\n';

LINES TERMINATED BY '\r\n';
   ery OK, 9 rows affected (0.00 sec)
  ysql> quit
 3ye
codio@zoomprotect-chinaholiday:~/workspace$ pwd
 codio@zoomprotect-chinaholiday:~/workspace$ ls
  hange_perm.sh    FleetMaintenanceRecords.csv    mysqlsampledatabase.sql
                                                                                                        __pycache__ rma.csv staruml
 ustomers.csv HRandIS-Employees.csv
                                                                 orders.csv
                                                                                                      README.md
  odio@zoomprotect-chinaholiday:~/workspace$ cat HRandIS-Employees.csv
 Mary, Jones, Human Resources
 lary, Williams, Information Systems
Leyonce, Knowles, Human Resources
Geyonic-Ninowes, Human Resources
Hillary, Swank, Information Systems
Justin, Bieber, Human Resources
Kim, Kardashian, Information Systems
  eorgia,Costello,Human Resources
  anet, Jackson, Information Systems
  odio@zoomprotect-chinaholiday:~/workspace$
```

- 8. Reflection: Provide detailed insight on the prompts below by explaining your process along with how and why it ultimately worked.
  - Process
    - Explain how the joins you used in this assignment worked.
      - A. The joins worked because it looked at the information from employee table and joined Department and Department ID together with an inner join.
    - Describe why the commands you used were able to retrieve the Department table when you selected the Department name.
      - B. The commands were able to retrieve the Department table because the commands specifically stated where I wanted to take the information from. The commands gave a direct path towards the information.
  - File creation and extraction

- Identify how many records are in the file when you write the records of your query to a
   CSV file.
  - C. It shows 9 records in the CSV file.
- Explain, in detail, the process of extracting data to a flat file.
  - D. Extracting data to a flat file selects the information of each of the employees from the employee table. It then uses an inner join to select the Department by selecting the Department ID. This file can now be output to the Codio workspace, which allows you to see the information in a simpler format.