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DAD-220 Intro to Struct Database Env

16 January 2024

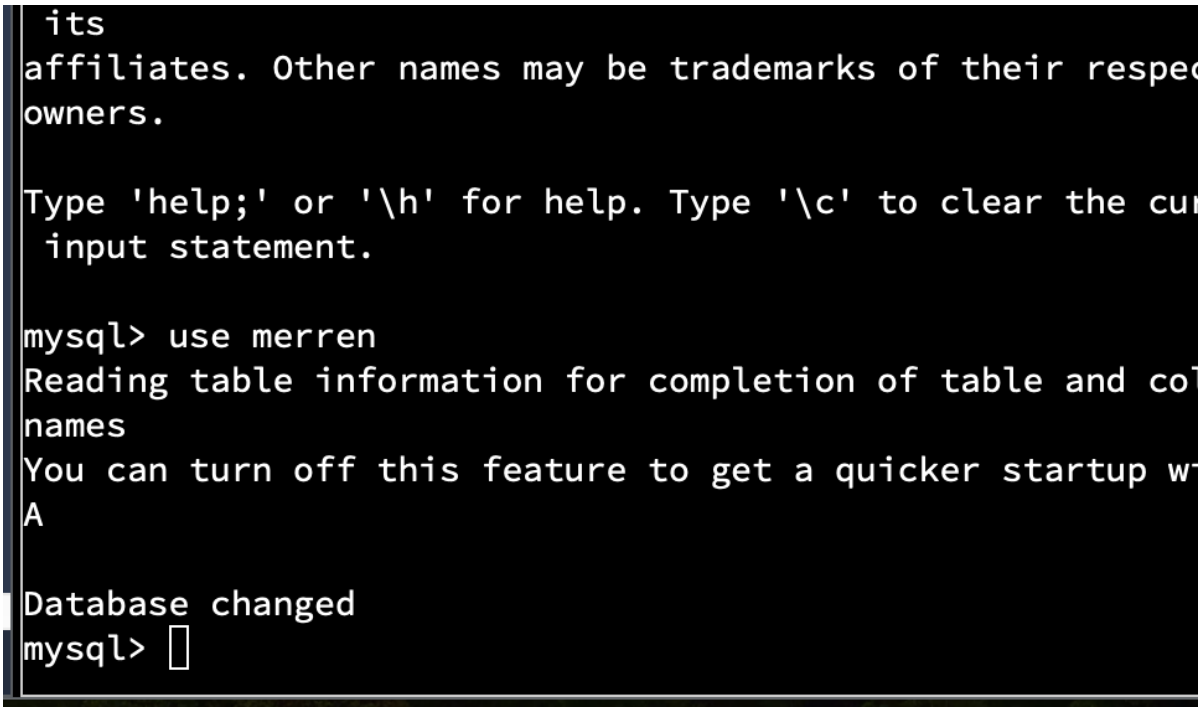
2-4 Lab: Updating Tables

1. **Connect to the database** you created and named in Module One (for example, Jetson).

   Type after the prompt mysql>

   A. use (table you named);

      i. Example: mysql> use Jetson;



This screenshot is me using the command “use merren” to retrieve the table I created in module 1.

2. **Create the Employee table** using the SQL statement shown here. Press **Return** after each line.

```
CREATE TABLE Employee (
Employee_ID SMALLINT,
First_Name VARCHAR(40),
Last_Name VARCHAR(60),
Department_ID SMALLINT,
Classification VARCHAR(10),
STATUS VARCHAR(10),
Salary DECIMAL(7,2));
```

```
ERROR 1064 (42000): You have an error in your SQL syntax; che
ck the manual that corresponds to your MySQL server version f
or the right syntax to use near 'Last_Name VARCHAR(60),
Department_ID SMALLINT,
Classification VARCHAR(10),
STATU' at line 4
mysql> CREATE TABLE Employee ( Employee_ID SMALLINT, First_Na
me VARCHAR(40), Last_Name VARCHAR(60), Department_ID SMALLINT
, Classification VARCHAR(10), STATUS VARCHAR(10), Salary DECI
MAL(7,2));
Query OK, 0 rows affected (0.32 sec)

mysql> show tables
    -> show tables;
ERROR 1064 (42000): You have an error in your SQL syntax; che
ck the manual that corresponds to your MySQL server version f
or the right syntax to use near 'show tables' at line 2
mysql> show tables;
+------------------+
| Tables_in_merren |
+------------------+
| Employee         |
| tb2              |
+------------------+
2 rows in set (0.02 sec)
```

-This screenshot shows the commands “CREATE TABLE Employee” and the columns and datatypes for the table.

3. **Create the Branches table.** Fill in the missing characters or punctuation in the incomplete statement shown below to complete this action.

    1. CREATE Branches (

       Department_ID SMALLINT,

       Department_Name)

```
+------------------+
| Tables_in_merren |
+------------------+
| Employee         |
| tb2              |
+------------------+
2 rows in set (0.02 sec)

mysql> CREATE TABLE Branches (
    -> Department_ID SMALLINT,
    -> Department_Name VARCHAR(50));
Query OK, 0 rows affected (0.30 sec)

mysql>
```

-This screenshot is the command “ CREATE TABLE Branches,” This command and the statements below it create a table with two columns for Department_ID with SMALLINT for small-range integers, and Department_Name that allows up to 50 characters.

4. After creating the tables, use the correct commands to **describe them** . You'll only be given commands to describe one of the tables and must complete the same action for the second one on your own. Validate your work with a screenshot.

   A. describe Employee;

   B. Write the correct command to describe the Branches table

```
mysql> CREATE TABLE Branches (
    -> Department_ID SMALLINT,
    -> Department_Name VARCHAR(50));
Query OK, 0 rows affected (0.30 sec)

mysql> describe Employee;
+----------------+--------------+------+-----+---------+-------+
| Field          | Type         | Null | Key | Default | Extra |
+----------------+--------------+------+-----+---------+-------+
| Employee_ID    | smallint     | YES  |     | NULL    |       |
| First_Name     | varchar(40)  | YES  |     | NULL    |       |
| Last_Name      | varchar(60)  | YES  |     | NULL    |       |
| Department_ID  | smallint     | YES  |     | NULL    |       |
| Classification | varchar(10)  | YES  |     | NULL    |       |
| STATUS         | varchar(10)  | YES  |     | NULL    |       |
| Salary         | decimal(7,2) | YES  |     | NULL    |       |
+----------------+--------------+------+-----+---------+-------+
7 rows in set (0.18 sec)

mysql> describe Branches;
+-----------------+-------------+------+-----+---------+-------+
| Field           | Type        | Null | Key | Default | Extra |
+-----------------+-------------+------+-----+---------+-------+
| Department_ID   | smallint    | YES  |     | NULL    |       |
| Department_Name | varchar(50) | YES  |     | NULL    |       |
+-----------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql>
```

-This screenshot is the command "describe Employee," and "describe Branches." These commands provide the structure of the specified tables.

5. **Insert** the following **records into the Employee table (with support)** . Each line going from left to right is a record. Each line going from top to bottom is a column. Validate your work with a screenshot.

   A. INSERT INTO Employee VALUES (100, 'John', 'Smith', 1, 'Exempt', 'Full-Time', 90000),

      (101,'Mary','Jones',2,'Non-Exempt','Part-Time',35000),

      (102,'Mary','Williams',3,'Exempt','Full-Time',80000);

   B. Type the command select* from Employee; and take a screenshot of it to validate this step.

```
mysql> INSERT INTO Employee VALUES (100, 'John', 'Smith', 1, 'Exempt', 'Full-Time', 90000),
    -> (101,'Mary','Jones',2,'Non-Exempt','Part-Time',35000),
    -> (102,'Mary','Williams',3,'Exempt','Full-Time',80000);
Query OK, 3 rows affected (0.30 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select* from Employee;
+-------------+------------+-----------+---------------+----------------+-----------+----------+
| 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 |
+-------------+------------+-----------+---------------+----------------+-----------+----------+
3 rows in set (0.00 sec)

mysql>
```

-This screenshot shows the use of the “INSERT INTO” statement to add three records to the Employee table. I then executed the “SELECT” query to retrieve all the data from the Employee table.

6. **Insert** the following **records into the Employee table** for Gwen Johnson and Michael Jones by writing the correct SQL commands on your own **(without support).**

   A. Gwen Johnson: Employee ID = 103, DEPARTMENT_ID = 4, Classification = NULL, Status = Full-Time, SALARY = 40000

   B. Michael Jones: Employee ID = 104, DEPARTMENT_ID = 4, Classification = Non-Exempt, Status = Full-Time, SALARY = 90000

   C. Insert your name into the table to verify and prove your work.

      1. (Your First and Last Name, or a nickname): Employee ID = 105, DEPARTMENT_ID = 1, Classification = Non-Exempt, Statues = Full-time, SALARY = (Choose a value between 50000 and 99000)

   D. Type the command select* from Employee; and take a screenshot of it to validate this step.

```
mysql> INSERT INTO Employee VALUES (103, 'Gwen', 'Johnson', 4, NULL, 'Full-Time', 40000);
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO Employee VALUES (104, 'Michael', 'Jones', 4, 'Non-Exempt', 'Full-Tiime', 90000);
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO Employee VALUES (105, 'Josh', 'Merren', 1, 'Non-exempt', 'Full-Time', 95000);
Query OK, 1 row affected (0.06 sec)

mysql> select* from Employee;
+-------------+------------+-----------+---------------+----------------+------------+----------+
| 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-Tiime | 90000.00 |
|         105 | Josh       | Merren    |             1 | Non-exempt     | Full-Time  | 95000.00 |
+-------------+------------+-----------+---------------+----------------+------------+----------+
6 rows in set (0.00 sec)

mysql>
```

-This is a screenshot of the commands to insert new data into the Employee table. I then used the Select* query to display all the data in the Employee table.

E. Insert records for a musician, athlete, or other famous character of your choice. Make sure to enter information for all of the fields listed in this table. The Department_ID must be a number between 1 and 4.

F. Write the correct command to prove that you've successfully completed this step, and validate it with a screenshot.

```
mysql> INSERT INTO Employee VALUES (106, 'Harry', 'Potter', 2, 'Exempt', 'Full-Time', 92000);
Query OK, 1 row affected (0.09 sec)

mysql> select* from Employee;
+-------------+------------+-----------+---------------+----------------+------------+----------+
| 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-Tiime | 90000.00 |
|         105 | Josh       | Merren    |             1 | Non-exempt     | Full-Time  | 95000.00 |
|         106 | Harry      | Potter    |             2 | Exempt         | Full-Time  | 92000.00 |
+-------------+------------+-----------+---------------+----------------+------------+----------+
7 rows in set (0.00 sec)

mysql>
```

-This is a screenshot following my statement to insert "Harry Potter" into the Employee table. I then used the Select* query to display all the data in the Employee table.

7. **Select the fields of last name, first name, and department id from the table.** Validate your work with a screenshot.

A. Select First_Name, Last_Name, Employee_ID, Department_ID from Employee;

```
mysql> Select First_Name, Last_Name, Employee_ID, Department_ID from Employee;
+------------+-----------+-------------+---------------+
| First_Name | Last_Name | Employee_ID | Department_ID |
+------------+-----------+-------------+---------------+
| John       | Smith     |         100 |             1 |
| Mary       | Jones     |         101 |             2 |
| Mary       | Williams  |         102 |             3 |
| Gwen       | Johnson   |         103 |             4 |
| Michael    | Jones     |         104 |             4 |
| Josh       | Merren    |         105 |             1 |
| Harry      | Potter    |         106 |             2 |
+------------+-----------+-------------+---------------+
7 rows in set (0.10 sec)

mysql>
```

-This is a screenshot of the “Select” query to display the selected data of First_Name, Last_Name, Employee_ID, and Department_ID from the Employee table.