

## Lesson 03 Demo 02

### Joins on Tables

**Objective:** To perform inner, left, and right joins on two tables in MySQL

**Tools required:** MySQL

**Prerequisites:** SQL

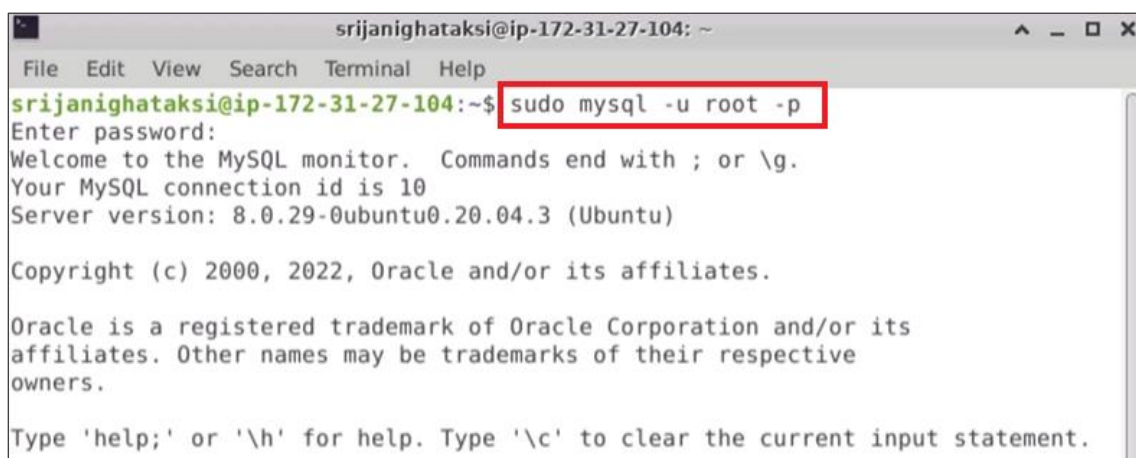
Steps to be followed:

1. Insert more records in the Customer and the Address table
2. Perform inner join
3. Perform left join
4. Perform right join

#### Step 1: Insert more records in the Customer and the Address table

1.1 Login to the terminal of lab and type the following command to open MySQL shell:

**sudo mysql -u root -p (password is empty for this root user)**

A terminal window titled 'srijanighataksi@ip-172-31-27-104: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is 'srijanighataksi@ip-172-31-27-104:~\$' and the command 'sudo mysql -u root -p' is entered and highlighted with a red box. The output shows the MySQL login process: 'Enter password:', 'Welcome to the MySQL monitor. Commands end with ; or \g.', 'Your MySQL connection id is 10', 'Server version: 8.0.29-0ubuntu0.20.04.3 (Ubuntu)', 'Copyright (c) 2000, 2022, Oracle and/or its affiliates.', 'Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.', and 'Type \'help;\' or \'h\' for help. Type \'c\' to clear the current input statement.'

1.2 Switch to the estore database using the below commands:

**use estore;**

```
srijanighataksi@ip-172-31-27-104: ~
File Edit View Search Terminal Help

mysql> use estore;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

1.3 Show the records of the **Customer** and the **Address** table using the following commands:

**select \* from Customer;**

**select \* from Address;**

```
mysql> select * from Customer;
+----+-----+-----+-----+
| cid | name  | phone      | email           |
+----+-----+-----+-----+
| 1   | John  | +91 99999 11111 | john@example.com |
| 2   | Fiona | +91 99999 22222 | fionna@example.com |
+----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from Address;
+----+-----+-----+-----+-----+
| aid | adrsLine      | city      | pincode | cid |
+----+-----+-----+-----+-----+
| 1   | 2144 Redwood Shores | Bangalore | 520001 | 1   |
| 2   | 52 B Pristine Magnum | Bangalore | 520001 | 2   |
| 3   | 77 E Country Homes  | Ludhiana  | 141001 | 1   |
+----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

1.4 Add new records in the **Customer** table using the following commands:

```
insert into Customer values(null, 'fionn
1 insert into Customer values(null, 'fionna', '+91 99999 22222', 'fionna@example.com');
2 insert into Customer values(null, 'harry', '+91 99999 34567', 'harry@example.com');
3 insert into Customer values(null, 'george', '+91 99999 12345', 'george@example.com');
4 insert into Customer values(null, 'sia', '+91 99999 77777', 'sia@example.com');
5 insert into Customer values(null, 'kim', '+91 99999 65656', 'kim@example.com');
6 insert into Customer values(null, 'leo', '+91 99999 32323', 'leo@example.com');
7 insert into Customer values(null, 'mike', '+91 99999 12312', 'mike@example.com');
```

1.5 Show all the records of the **Customer** table using the following command:

**select \* from Customer;**

```
mysql> insert into Customer values(null, 'mike', '+91 99999 12312', 'mike@example.com');
Query OK, 1 row affected (0.00 sec)

mysql> select * from Customer;
+----+-----+-----+-----+
| cid | name  | phone | email |
+----+-----+-----+-----+
| 1   | John  | +91 99999 11111 | john@example.com |
| 2   | Fiona | +91 99999 22222 | fionna@example.com |
| 3   | fionna | +91 99999 22222 | fionna@example.com |
| 4   | harry  | +91 99999 34567 | harry@example.com |
| 5   | george | +91 99999 12345 | george@example.com |
| 6   | sia    | +91 99999 77777 | sia@example.com |
| 7   | kim    | +91 99999 65656 | kim@example.com |
| 8   | leo    | +91 99999 32323 | leo@example.com |
| 9   | mike   | +91 99999 12312 | mike@example.com |
+----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```

1.6 Add new records in the **Address** table using the following commands:

```
10 insert into Address values(null, '2121 Eastern Heights', 'Chennai', 60001, 2);
11 insert into Address values(null, '33 Pristine Magnum', 'Bangalore', 52001, 2);
12 insert into Address values(null, '77 Aashiana', 'Delhi', 110001, 3);
13 insert into Address values(null, '33 Model Town', 'Bangalore', 60001, 4);
14 insert into Address values(null, '761 Pinnacle Square', 'Chennai', 60001, 7);
15 insert into Address values(null, '565 Haven', 'Chennai', 60003, 7);
16 insert into Address values(null, 'Omaxe Apartments', 'Ludhiana', 141001, 4);
17 insert into Address values(null, '66 JapyPee Estates', 'Chennai', 60001, 3);
```

1.7 Show all the records of the **Address** table using the following command:

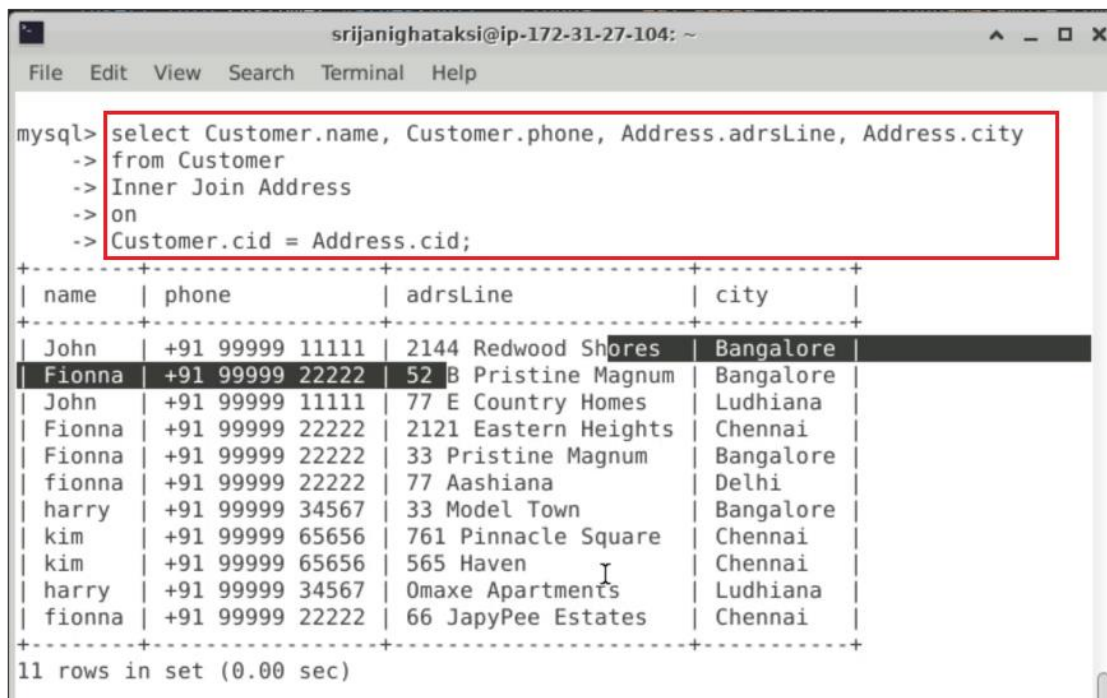
**select \* from Address;**

```
mysql> select * from Address;
+----+-----+-----+-----+-----+
| aid | adrsLine | city | pincode | cid |
+----+-----+-----+-----+-----+
| 1   | 2144 Redwood Shores | Bangalore | 520001 | 1 |
| 2   | 52 B Pristine Magnum | Bangalore | 520001 | 2 |
| 3   | 77 E Country Homes | Ludhiana | 141001 | 1 |
| 4   | 2121 Eastern Heights | Chennai | 60001 | 2 |
| 5   | 33 Pristine Magnum | Bangalore | 52001 | 2 |
| 6   | 77 Aashiana | Delhi | 110001 | 3 |
| 7   | 33 Model Town | Bangalore | 60001 | 4 |
| 8   | 761 Pinnacle Square | Chennai | 60001 | 7 |
| 9   | 565 Haven | Chennai | 60003 | 7 |
| 10  | Omaxe Apartments | Ludhiana | 141001 | 4 |
| 11  | 66 JapyPee Estates | Chennai | 60001 | 3 |
+----+-----+-----+-----+-----+
11 rows in set (0.00 sec)
```

## Step 2: Perform inner join

2.1 Run the given query to perform an inner join on the **Customer** and the **Address** table:

```
select Customer.name, Customer.phone, Address.adrsLine, Address.city
from Customer
Inner Join Address
on
Customer.id = Address.id
```



The screenshot shows a MySQL terminal window with the following query and results:

```
mysql> select Customer.name, Customer.phone, Address.adrsLine, Address.city
-> from Customer
-> Inner Join Address
-> on
-> Customer.cid = Address.cid;
```

| name   | phone           | adrsLine             | city      |
|--------|-----------------|----------------------|-----------|
| John   | +91 99999 11111 | 2144 Redwood Shores  | Bangalore |
| Fionna | +91 99999 22222 | 52 B Pristine Magnum | Bangalore |
| John   | +91 99999 11111 | 77 E Country Homes   | Ludhiana  |
| Fionna | +91 99999 22222 | 2121 Eastern Heights | Chennai   |
| Fionna | +91 99999 22222 | 33 Pristine Magnum   | Bangalore |
| fionna | +91 99999 22222 | 77 Aashiana          | Delhi     |
| harry  | +91 99999 34567 | 33 Model Town        | Bangalore |
| kim    | +91 99999 65656 | 761 Pinnacle Square  | Chennai   |
| kim    | +91 99999 65656 | 565 Haven            | Chennai   |
| harry  | +91 99999 34567 | Omaxe Apartments     | Ludhiana  |
| fionna | +91 99999 22222 | 66 JapyPee Estates   | Chennai   |

11 rows in set (0.00 sec)

## Step 3: Perform left join

3.1 Run the following query to perform a left join on the **Customer** and the **Address** table:

```
select Customer.name, Customer.phone, Address.adrsLine, Address.city
from Customer
Left Join Address
on
Customer.id = Address.id Order By Customer.name;
```

```
mysql> select Customer.name, Customer.phone, Address.adrsLine, Address.city from
Customer Left Join Address on Customer.cid = Address.cid Order By Customer.name
;
```

| name   | phone           | adrsLine             | city      |
|--------|-----------------|----------------------|-----------|
| Fionna | +91 99999 22222 | 52 B Pristine Magnum | Bangalore |
| Fionna | +91 99999 22222 | 2121 Eastern Heights | Chennai   |
| Fionna | +91 99999 22222 | 33 Pristine Magnum   | Bangalore |
| fionna | +91 99999 22222 | 77 Aashiana          | Delhi     |
| fionna | +91 99999 22222 | 66 JapyPee Estates   | Chennai   |
| george | +91 99999 12345 | NULL                 | NULL      |
| harry  | +91 99999 34567 | 33 Model Town        | Bangalore |
| harry  | +91 99999 34567 | Omaxe Apartments     | Ludhiana  |
| John   | +91 99999 11111 | 2144 Redwood Shores  | Bangalore |
| John   | +91 99999 11111 | 77 E Country Homes   | Ludhiana  |
| kim    | +91 99999 65656 | 761 Pinnacle Square  | Chennai   |
| kim    | +91 99999 65656 | 565 Haven            | Chennai   |
| leo    | +91 99999 32323 | NULL                 | NULL      |
| mike   | +91 99999 12312 | NULL                 | NULL      |
| sia    | +91 99999 77777 | NULL                 | NULL      |

15 rows in set (0.00 sec)

## Step 4: Perform right join

4.1 Run the following query to perform a right join on the **Customer** and the **Address** table:

```
select Customer.name, Customer.phone, Address.adrsLine, Address.city
from Customer
Right Join Address
on
Customer.id = Address.id Order By Customer.name;
```

```
mysql> select Customer.name, Customer.phone, Address.adrsLine, Address.city from
Customer Right Join Address on Customer.cid = Address.cid Order By Customer.name;
```

| name   | phone           | adrsLine             | city      |
|--------|-----------------|----------------------|-----------|
| Fionna | +91 99999 22222 | 52 B Pristine Magnum | Bangalore |
| Fionna | +91 99999 22222 | 2121 Eastern Heights | Chennai   |
| Fionna | +91 99999 22222 | 33 Pristine Magnum   | Bangalore |
| fionna | +91 99999 22222 | 77 Aashiana          | Delhi     |
| fionna | +91 99999 22222 | 66 JapyPee Estates   | Chennai   |
| harry  | +91 99999 34567 | 33 Model Town        | Bangalore |
| harry  | +91 99999 34567 | Omaxe Apartments     | Ludhiana  |
| John   | +91 99999 11111 | 2144 Redwood Shores  | Bangalore |
| John   | +91 99999 11111 | 77 E Country Homes   | Ludhiana  |
| kim    | +91 99999 65656 | 761 Pinnacle Square  | Chennai   |
| kim    | +91 99999 65656 | 565 Haven            | Chennai   |

11 rows in set (0.00 sec)

```
mysql>
```