

## Lesson 02 Demo 01

### Implementing Insert, Update, and Delete Operations

**Objective:** To implement insert, update, and delete records in the database using SQL commands

**Tools Required:** MySQL

**Prerequisites:** None

#### Steps to be followed:

1. Insert, update, and delete records from the table

#### Step 1: Insert, update, and delete records from the table

- 1.1 Open the terminal and execute the following command to display the available databases:

**show databases;**

```
mysql> show databases;
+-----+
| Database |
+-----+
| estore   |
| information_schema |
| mydb     |
| mysql    |
| performance_schema |
| sys      |
+-----+
6 rows in set (0.01 sec)

mysql>
```

- 1.2 Describe the structure of **User** table with the command:  
**describe User;**

```
gmail@ip-172-31-17-157: ~
File Edit View Search Terminal Help
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_estore |
+-----+
| Product          |
| User              |
+-----+
2 rows in set (0.00 sec)

mysql> describe User;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| uid   | int           | NO   | PRI | NULL    | auto_increment |
| name  | varchar(256)  | YES  |     | NULL    |                |
| phone | varchar(16)   | YES  |     | NULL    |                |
| email | varchar(256)  | NO   |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

- 1.3 Check existing records in a table with the command:  
**select \* from User;**

```
mysql> select * from User;
Empty set (0.00 sec)

mysql>
```

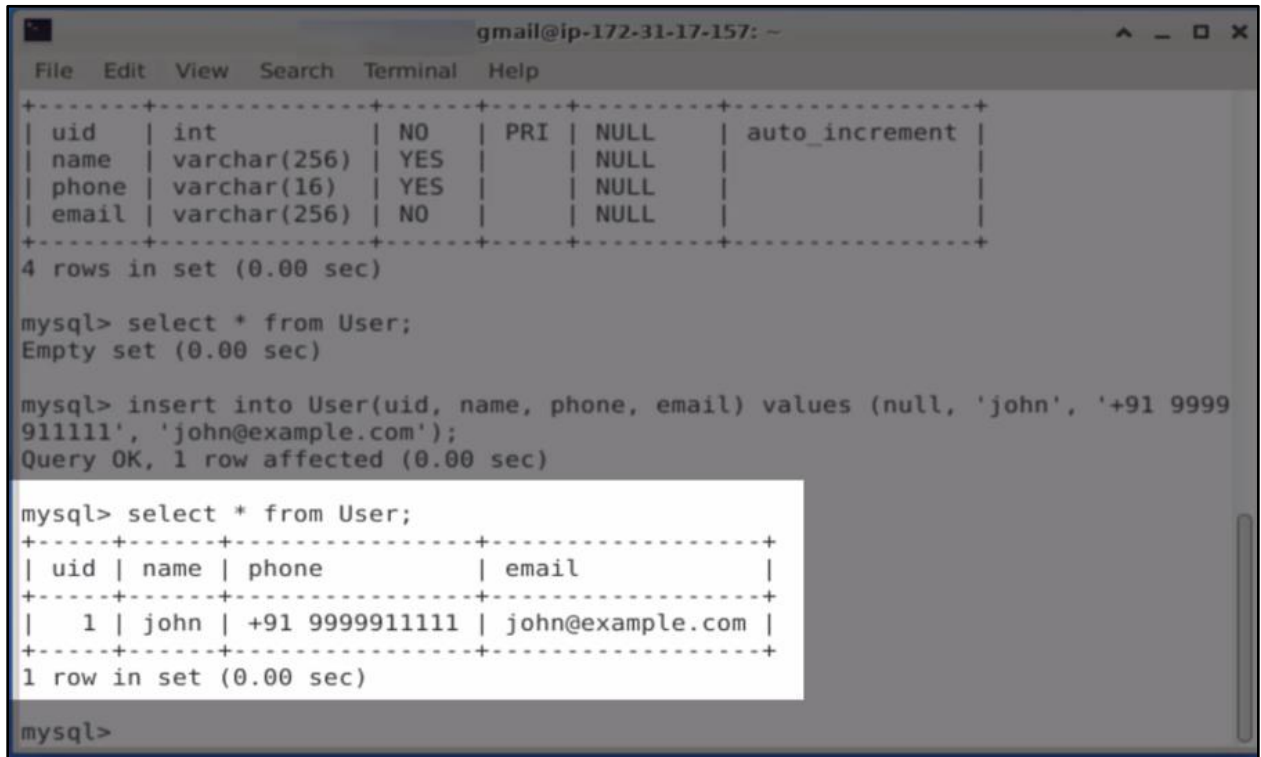
- 1.4 Insert data into the **User** table using the following command:  
**INSERT INTO User(name, phone, email) VALUES ('john', '+91 999991111', 'john@example.com');**

```
mysql> INSERT INTO User(name, phone, email) VALUES ('john', '+91 999991111', 'john@example.com');
Query OK, 1 row affected (0.00 sec)

mysql>
mysql>
```

1.5 To verify the insertion, execute the following command to display all records in the **User** table:

```
select * from User;
```



```
gmail@ip-172-31-17-157: ~
File Edit View Search Terminal Help
+-----+-----+-----+-----+-----+
| uid | int | NO | PRI | NULL | auto_increment |
| name | varchar(256) | YES | | NULL | |
| phone | varchar(16) | YES | | NULL | |
| email | varchar(256) | NO | | NULL | |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from User;
Empty set (0.00 sec)

mysql> insert into User(uid, name, phone, email) values (null, 'john', '+91 9999
911111', 'john@example.com');
Query OK, 1 row affected (0.00 sec)

mysql> select * from User;
+-----+-----+-----+-----+
| uid | name | phone | email |
+-----+-----+-----+-----+
| 1 | john | +91 9999911111 | john@example.com |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

You should be able to see the first record you inserted.

- 1.6 Execute the following command to perform alternative insert queries without specifying column names:

```
insert into User values (null, 'fionna', '+91 999922222', 'fionna@example.com');
```

```
insert into User (uid, name, email) values (null, 'john', 'john@example.com');
```

```
gmail@ip-172-31-17-157: ~
File Edit View Search Terminal Help
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from User;
Empty set (0.00 sec)

mysql> insert into User(uid, name, phone, email) values (null, 'john', '+91 9999
911111', 'john@example.com');
Query OK, 1 row affected (0.00 sec)

mysql> select * from User;
+-----+-----+-----+-----+
| uid | name | phone          | email          |
+-----+-----+-----+-----+
| 1   | john | +91 9999911111 | john@example.com |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> insert into User values (null, 'fionna', '+91 9999922222', 'fionna@exampl
e.com');
Query OK, 1 row affected (0.00 sec)
```

- 1.7 Check existing records in a table with the command:

```
select * from User;
```

```
mysql> insert into User(uid, name, email) values (null, 'john', 'john@example.co
m');
Query OK, 1 row affected (0.01 sec)

mysql> select * from User;
+-----+-----+-----+-----+
| uid | name | phone          | email          |
+-----+-----+-----+-----+
| 1   | john | +91 9999911111 | john@example.com |
| 2   | fionna | +91 9999922222 | fionna@example.com |
| 3   | john | NULL           | john@example.com |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> █
```

- 1.8 Write an **update** statement to modify the data in the **User** table  
**update User set name = 'mike', phone = '+91 9090910101', email = 'mike@example.com' where uid = 3;**

```
mysql> update User set name = 'mike', phone='+91 9090910101', email = 'mike@example.com' where uid = 3;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from User;
+----+-----+-----+-----+
| uid | name  | phone          | email          |
+----+-----+-----+-----+
| 1   | john  | +91 9999911111 | john@example.com |
| 2   | fionna | +91 9999922222 | fionna@example.com |
| 3   | mike  | +91 9090910101 | mike@example.com |
+----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

- 1.9 Check existing records in a table with the command:  
**select \* from User;**

```
mysql> select * from User;
+----+-----+-----+-----+
| uid | name  | phone          | email          |
+----+-----+-----+-----+
| 1   | john  | +91 9999911111 | john@example.com |
| 2   | fionna | +91 9999922222 | fionna@example.com |
| 3   | mike  | +91 9888812345 | mike@example.com |
+----+-----+-----+-----+
3 rows in set (0.00 sec)
```

1.10 Delete a record from the table using the command:

**delete from User where uid = 3;**



```
gmail@ip-172-31-17-157: ~  
File Edit View Search Terminal Help  
  
mysql> select * from User;  
+-----+-----+-----+-----+  
| uid | name  | phone      | email                |  
+-----+-----+-----+-----+  
| 1   | john  | +91 9999911111 | john@example.com     |  
| 2   | fionna | +91 9999922222 | fionna@example.com   |  
| 3   | mike  | +91 9888812345 | mike@example.com     |  
+-----+-----+-----+-----+  
3 rows in set (0.00 sec)  
  
mysql> delete from User where uid = 3;  
Query OK, 1 row affected (0.00 sec)
```

1.11 Execute the following command to verify that all records have been deleted from the **User** table:

**select \* from User;**



```
mysql> delete from User where uid = 3;  
Query OK, 1 row affected (0.00 sec)  
  
mysql> select * from User;  
+-----+-----+-----+-----+  
| uid | name  | phone      | email                |  
+-----+-----+-----+-----+  
| 1   | john  | +91 9999911111 | john@example.com     |  
| 2   | fionna | +91 9999922222 | fionna@example.com   |  
+-----+-----+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql>
```

By following these steps, you have successfully implemented the insert, update, and delete operations in the database.