

```
oaddweb@LP-48:~$ /opt/lampp/bin/mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 330
Server version: 10.4.21-MariaDB Source distribution
```

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
MariaDB [(none)]> show databases;
```

```
+-----+
| Database |
+-----+
| 29Oct21  |
| Admin    |
| Fruitikha |
| Riya     |
| information_schema |
| mysql    |
| performance_schema |
| phpmyadmin |
| test     |
+-----+
```

9 rows in set (0.001 sec)

```
MariaDB [(none)]> create database practice;
Query OK, 1 row affected (0.001 sec)
```

```
MariaDB [(none)]> use practice;
Database changed
```

```
MariaDB [practice]> MariaDB [practice]> create table Customer(id int,cname
varchar(50),contact bigint(20),city varchar(50),pincode bigint(20),country
varchar(20),PRIMARY KEY(id));
Query OK, 0 rows affected (0.175 sec)
```

```
MariaDB [practice]> insert into Customer
values(1,'riya',9876543210,'chittor',312622,'India');
Query OK, 1 row affected (0.036 sec)
```

```
MariaDB [practice]> insert into Customer
values(2,'avni',9887897685,'berlin',12777,'germany');
Query OK, 1 row affected (0.032 sec)
```

```
MariaDB [practice]> insert into Customer
values(3,'shreyanshi',9887897685,'mexico',05021,'Mexico');
Query OK, 1 row affected (0.033 sec)
```

```
MariaDB [practice]> insert into Customer
values(4,'shriya',9988776655,'london',05021,'UK');
Query OK, 1 row affected (0.026 sec)
```

```
MariaDB [practice]> insert into Customer
values(5,'anjani',9898767654,'ahmedabad',380009,'india');
Query OK, 1 row affected (0.027 sec)
```

```
MariaDB [practice]> insert into Customer
values(6,'kajal',98765432,'london',00521,'UK');
Query OK, 1 row affected (0.048 sec)
```

```
MariaDB [practice]> select * from Customer;
```

```
+-----+-----+-----+-----+-----+-----+
| id | cname      | contact    | city      | pincode | country |
+-----+-----+-----+-----+-----+-----+
```

1	riya	9876543210	chittor	312622	India
2	avni	9887897685	berlin	12777	germany
3	shreyanshi	9887897685	mexico	5021	Mexico
4	shriya	9988776655	london	5021	UK
5	anjani	9898767654	ahmedabad	380009	india
6	kajal	98765432	london	521	UK

6 rows in set (0.001 sec)

MariaDB [practice]> select distinct country from Customer ;

country
India
germany
Mexico
UK

4 rows in set (0.001 sec)

MariaDB [practice]> select count(distinct country) from Customer ;

count(distinct country)
4

1 row in set (0.001 sec)

MariaDB [practice]> select * from Customer where country='India';

id	cname	contact	city	pincode	country
1	riya	9876543210	chittor	312622	India
5	anjani	9898767654	ahmedabad	380009	india

2 rows in set (0.001 sec)

MariaDB [practice]> select * from Customer where country = 'India' and city='ahmedabad';

id	cname	contact	city	pincode	country
5	anjani	9898767654	ahmedabad	380009	india

1 row in set (0.001 sec)

MariaDB [practice]> select * from Customer where country='india' or country='uk';

id	cname	contact	city	pincode	country
1	riya	9876543210	chittor	312622	India
4	shriya	9988776655	london	5021	UK
5	anjani	9898767654	ahmedabad	380009	india
6	kajal	98765432	london	521	UK

4 rows in set (0.001 sec)

MariaDB [practice]> select * from Customer where not country='india';

id	cname	contact	city	pincode	country
2	avni	9887897685	berlin	12777	germany
3	shreyanshi	9887897685	mexico	5021	Mexico

4	shriya	9988776655	london	5021	UK
6	kajal	98765432	london	521	UK

4 rows in set (0.001 sec)

```
MariaDB [practice]> select * from Customer order by country;
```

id	cname	contact	city	pincode	country
2	avni	9887897685	berlin	12777	germany
1	riya	9876543210	chittor	312622	India
5	anjani	9898767654	ahmedabad	380009	india
3	shreyanshi	9887897685	mexico	5021	Mexico
4	shriya	9988776655	london	5021	UK
6	kajal	98765432	london	521	UK

6 rows in set (0.001 sec)

```
MariaDB [practice]> select * from Customer order by country desc;
```

id	cname	contact	city	pincode	country
4	shriya	9988776655	london	5021	UK
6	kajal	98765432	london	521	UK
3	shreyanshi	9887897685	mexico	5021	Mexico
1	riya	9876543210	chittor	312622	India
5	anjani	9898767654	ahmedabad	380009	india
2	avni	9887897685	berlin	12777	germany

6 rows in set (0.001 sec)

```
MariaDB [practice]> select * from Customer order by country, cname;
```

id	cname	contact	city	pincode	country
2	avni	9887897685	berlin	12777	germany
5	anjani	9898767654	ahmedabad	380009	india
1	riya	9876543210	chittor	312622	India
3	shreyanshi	9887897685	mexico	5021	Mexico
6	kajal	98765432	london	521	UK
4	shriya	9988776655	london	5021	UK

6 rows in set (0.001 sec)

```
MariaDB [practice]> select * from Customer order by country asc, cname desc;
```

id	cname	contact	city	pincode	country
2	avni	9887897685	berlin	12777	germany
1	riya	9876543210	chittor	312622	India
5	anjani	9898767654	ahmedabad	380009	india
3	shreyanshi	9887897685	mexico	5021	Mexico
4	shriya	9988776655	london	5021	UK
6	kajal	98765432	london	521	UK

6 rows in set (0.001 sec)

```
MariaDB [practice]> update Customer set city='berlin', country='germany' where id=3;
```

Query OK, 1 row affected (0.030 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
MariaDB [practice]> delete from Customer where id=1;
```

Query OK, 1 row affected (0.030 sec)

MariaDB [practice]> select * from Customer limit 3;

id	cname	contact	city	pincode	country
2	avni	9887897685	berlin	12777	germany
3	shreyanshi	9887897685	berlin	5021	germany
4	shriya	9988776655	london	5021	UK

3 rows in set (0.001 sec)

MariaDB [practice]> ALTER TABLE Customer ADD bill_amount bigint(40) NOT NULL AFTER country;

Query OK, 0 rows affected (0.064 sec)

Records: 0 Duplicates: 0 Warnings: 0

MariaDB [practice]> select * from Customer;

id	cname	contact	city	pincode	country	bill_amount
2	avni	9887897685	berlin	12777	germany	0
3	shreyanshi	9887897685	berlin	5021	germany	0
4	shriya	9988776655	london	5021	UK	0
5	anjani	9898767654	ahmedabad	380009	india	0
6	kajal	98765432	london	521	UK	0

5 rows in set (0.001 sec)

MariaDB [practice]> update Customer set bill_amount=2500 where id=2;

Query OK, 1 row affected (0.037 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [practice]> update Customer set bill_amount=2000 where id=3;

Query OK, 1 row affected (0.037 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [practice]> update Customer set bill_amount=3000 where id=4;

Query OK, 1 row affected (0.039 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [practice]> update Customer set bill_amount=3300 where id=5;

Query OK, 1 row affected (0.041 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [practice]> update Customer set bill_amount=3500 where id=6;

Query OK, 1 row affected (0.033 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [practice]> select * from Customer;

id	cname	contact	city	pincode	country	bill_amount
2	avni	9887897685	berlin	12777	germany	2500
3	shreyanshi	9887897685	berlin	5021	germany	2000
4	shriya	9988776655	london	5021	UK	3000
5	anjani	9898767654	ahmedabad	380009	india	3300
6	kajal	98765432	london	521	UK	3500

5 rows in set (0.001 sec)

MariaDB [practice]> select max(bill_amount) from Customer;

max(bill_amount)
3500

```
+-----+
|          3500 |
+-----+
1 row in set (0.001 sec)
```

```
MariaDB [practice]> select min(bill_amount) from Customer;
+-----+
| min(bill_amount) |
+-----+
|          2000 |
+-----+
1 row in set (0.001 sec)
```

```
MariaDB [practice]> select avg(bill_amount) from Customer;
+-----+
| avg(bill_amount) |
+-----+
|        2860.0000 |
+-----+
1 row in set (0.001 sec)
```

```
MariaDB [practice]> select sum(bill_amount) from Customer;
+-----+
| sum(bill_amount) |
+-----+
|          14300 |
+-----+
1 row in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where cname like '%i%';
+---+-----+-----+-----+-----+-----+-----+
| id | cname      | contact    | city      | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 2  | avni       | 9887897685 | berlin    | 12777   | germany | 2500        |
| 3  | shreyanshi | 9887897685 | berlin    | 5021    | germany | 2000        |
| 4  | shriya     | 9988776655 | london    | 5021    | UK      | 3000        |
| 5  | anjani     | 9898767654 | ahmedabad | 380009  | india   | 3300        |
+---+-----+-----+-----+-----+-----+-----+
4 rows in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where country like '%er%';
+---+-----+-----+-----+-----+-----+-----+
| id | cname      | contact    | city      | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 2  | avni       | 9887897685 | berlin    | 12777   | germany | 2500        |
| 3  | shreyanshi | 9887897685 | berlin    | 5021    | germany | 2000        |
+---+-----+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where country like '_nd_a';
+---+-----+-----+-----+-----+-----+-----+
| id | cname      | contact    | city      | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 5  | anjani     | 9898767654 | ahmedabad | 380009  | india   | 3300        |
+---+-----+-----+-----+-----+-----+-----+
1 row in set (0.000 sec)
```

```
MariaDB [practice]> select * from Customer where country in ('germany','UK');
+---+-----+-----+-----+-----+-----+-----+
| id | cname      | contact    | city      | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 2  | avni       | 9887897685 | berlin    | 12777   | germany | 2500        |
| 3  | shreyanshi | 9887897685 | berlin    | 5021    | germany | 2000        |
| 4  | shriya     | 9988776655 | london    | 5021    | UK      | 3000        |
+---+-----+-----+-----+-----+-----+-----+
```

```
| 6 | kajal | 98765432 | london | 521 | UK | 3500 |
+---+-----+-----+-----+-----+-----+-----+
4 rows in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where country not in
('germany','UK');
```

```
+---+-----+-----+-----+-----+-----+-----+
| id | cname | contact | city | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 5 | anjani | 9898767654 | ahmedabad | 380009 | india | 3300 |
+---+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where bill_amount between 2000 and
3000;
```

```
+---+-----+-----+-----+-----+-----+-----+
| id | cname | contact | city | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 2 | avni | 9887897685 | berlin | 12777 | germany | 2500 |
| 3 | shreyanshi | 9887897685 | berlin | 5021 | germany | 2000 |
| 4 | shriya | 9988776655 | london | 5021 | UK | 3000 |
+---+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where bill_amount not between 2000
and 3000;
```

```
+---+-----+-----+-----+-----+-----+-----+
| id | cname | contact | city | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 5 | anjani | 9898767654 | ahmedabad | 380009 | india | 3300 |
| 6 | kajal | 98765432 | london | 521 | UK | 3500 |
+---+-----+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where bill_amount between 2000 and
3000 and id not in(1,3,5);
```

```
+---+-----+-----+-----+-----+-----+-----+
| id | cname | contact | city | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 2 | avni | 9887897685 | berlin | 12777 | germany | 2500 |
| 4 | shriya | 9988776655 | london | 5021 | UK | 3000 |
+---+-----+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

```
MariaDB [practice]> select * from Customer where bill_amount not between 2000
and 3000 order by cname;
```

```
+---+-----+-----+-----+-----+-----+-----+
| id | cname | contact | city | pincode | country | bill_amount |
+---+-----+-----+-----+-----+-----+-----+
| 5 | anjani | 9898767654 | ahmedabad | 380009 | india | 3300 |
| 6 | kajal | 98765432 | london | 521 | UK | 3500 |
+---+-----+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

```
MariaDB [practice]> select cname, concat_ws(' ',city,country,pincode) as address
from Customer;
```

```
+---+-----+-----+
| cname | address |
+---+-----+-----+
| avni | berlin, germany, 12777 |
| shreyanshi | berlin, germany, 5021 |
| shriya | london, UK, 5021 |
| anjani | ahmedabad, india, 380009 |
+---+-----+-----+
```

```
| kajal      | london, UK, 521      |
+-----+
5 rows in set (0.001 sec)
```

```
MariaDB [practice]> SELECT order_detail.o_id, Customer.cname,
order_detail.o_date FROM order_detail INNER JOIN Customer ON
order_detail.id=Customer.id;
```

```
+-----+-----+-----+
| o_id | cname      | o_date      |
+-----+-----+-----+
| 1    | avni       | 2021-09-22  |
| 2    | shreyanshi | 2021-10-12  |
| 3    | shriya     | 2020-11-02  |
| 4    | anjani     | 2020-12-25  |
| 5    | kajal      | 2021-01-01  |
+-----+-----+-----+
5 rows in set (0.041 sec)
```

```
MariaDB [practice]> SELECT order_detail.o_id, Customer.cname,
order_detail.o_date FROM order_detail LEFT JOIN Customer ON
order_detail.id=Customer.id;
```

```
+-----+-----+-----+
| o_id | cname      | o_date      |
+-----+-----+-----+
| 1    | avni       | 2021-09-22  |
| 2    | shreyanshi | 2021-10-12  |
| 3    | shriya     | 2020-11-02  |
| 4    | anjani     | 2020-12-25  |
| 5    | kajal      | 2021-01-01  |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

```
MariaDB [practice]> SELECT order_detail.o_id, Customer.cname,
order_detail.o_date FROM order_detail RIGHT JOIN Customer ON
order_detail.id=Customer.id;
```

```
+-----+-----+-----+
| o_id | cname      | o_date      |
+-----+-----+-----+
| 1    | avni       | 2021-09-22  |
| 2    | shreyanshi | 2021-10-12  |
| 3    | shriya     | 2020-11-02  |
| 4    | anjani     | 2020-12-25  |
| 5    | kajal      | 2021-01-01  |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

```
MariaDB [practice]> SELECT order_detail.o_id, Customer.cname FROM Customer CROSS
JOIN order_detail WHERE Customer.id=order_detail.id;
```

```
+-----+-----+
| o_id | cname      |
+-----+-----+
| 1    | avni       |
| 2    | shreyanshi |
| 3    | shriya     |
| 4    | anjani     |
| 5    | kajal      |
+-----+-----+
5 rows in set (0.001 sec)
```

```
MariaDB [practice]> select A.cname as cname1, B.cname as cname2, A.city from
Customer A, Customer B where A.id <> B.id and A.city = B.city order by A.city;
```

```
+-----+-----+-----+-----+
| A.cname1 | A.cname2 | A.city | B.cname2 |
+-----+-----+-----+-----+
| avni     | avni     | london | avni     |
| shreyanshi | shreyanshi | london | shreyanshi |
| shriya    | shriya    | london | shriya    |
| anjani    | anjani    | london | anjani    |
| kajal     | kajal     | london | kajal     |
+-----+-----+-----+-----+
5 rows in set (0.001 sec)
```

cname1	cname2	city
shreyanshi	avni	berlin
avni	shreyanshi	berlin
shriya	kajal	london
kajal	shriya	london

4 rows in set (0.002 sec)

MariaDB [practice]> select id from Customer union all select id from order_detail order by id;

id
2
2
3
3
4
4
5
5
6
6

10 rows in set (0.001 sec)

MariaDB [practice]> select count(id), country from Customer group by country;

count(id)	country
2	germany
1	india
2	UK

3 rows in set (0.001 sec)

MariaDB [practice]> select count(id), country from Customer group by country having count(id)<2;

count(id)	country
1	india

1 row in set (0.001 sec)

MariaDB [practice]> select cname from Customer where exists(select o_date from order_detail where Customer.id=order_detail.id and bill_amount=3000);

cname
shriya

1 row in set (0.007 sec)

MariaDB [practice]> select cname from Customer where id=any(select id from order_detail where bill_amount > 4000);
Empty set (0.000 sec)

MariaDB [practice]> select cname from Customer where id=all(select id from order_detail where bill_amount > 4000);

cname

```
| avni |
| shreyanshi |
| shriya |
| anjani |
| kajal |
+-----+
```

5 rows in set (0.001 sec)

```
MariaDB [practice]> select cname from Customer where id=any(select id from
order_detail where bill_amount > 4000 );
Empty set (0.000 sec)
```

```
MariaDB [practice]> select cname from Customer where id=all(select id from
order_detail where bill_amount > 4000 );
```

```
+-----+
| cname |
+-----+
| avni |
| shreyanshi |
| shriya |
| anjani |
| kajal |
```

```
MariaDB [practice]> delimiter //
```

```
MariaDB [practice]> create procedure sp_get1() begin select * from Customer; end
//
```

Query OK, 0 rows affected (0.021 sec)

```
MariaDB [practice]> delimiter ;
```

```
MariaDB [practice]> call sp_get1();
```

```
+-----+-----+-----+-----+-----+-----+-----+
| id | cname | contact | city | pincode | country | bill_amount |
+-----+-----+-----+-----+-----+-----+-----+
| 2 | avni | 9887897685 | berlin | 12777 | germany | 2500 |
| 3 | shreyanshi | 9887897685 | berlin | 5021 | germany | 2000 |
| 4 | shriya | 9988776655 | london | 5021 | UK | 3000 |
| 5 | anjani | 9898767654 | ahmedabad | 380009 | india | 3300 |
| 6 | kajal | 98765432 | london | 521 | UK | 3500 |
+-----+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.001 sec)

Query OK, 0 rows affected (0.002 sec)

```
MariaDB [practice]> delimiter &&
```

```
MariaDB [practice]> create function bill1(bill_amount decimal(10,2)) returns
decimal(10,2) deterministic begin declare b decimal(10,2); set b=bill_amount+59;
return(b); end&&
```

Query OK, 0 rows affected (0.085 sec)

```

MariaDB [practice]> delimiter ;
MariaDB [practice]> select bill1(100);
+-----+
| bill1(100) |
+-----+
|      159.00 |
+-----+
1 row in set (0.001 sec)

```

Triggers

Before Insert

```

MariaDB [practise]> create table people(age int,name varchar(150));
Query OK, 0 rows affected (0.015 sec)

```

```

MariaDB [practise i]> delimiter //
MariaDB [practise]> create trigger agecheck before insert on people for each row if new.age < 0
-> then set new.age=0;end if;//
Query OK, 0 rows affected (0.006 sec)

```

```

MariaDB [practise]> delimiter ;
MariaDB [practise]> insert into people values(-20,'sid'),(30,'josh');
Query OK, 2 rows affected (0.005 sec)
Records: 2  Duplicates: 0  Warnings: 0

```

```

MariaDB [anjani]> select * from people;
+-----+-----+
| age | name |
+-----+-----+
|  0 | sid |
| 30 | josh |
+-----+-----+
2 rows in set (0.001 sec)

```

After Insert

```

MariaDB [practise]> CREATE TABLE members (id INT AUTO_INCREMENT primary key,name
VARCHAR(100) NOT NULL, email VARCHAR(255),birthDate DATE);
Query OK, 0 rows affected (0.014 sec)

```

```

MariaDB [practise]> CREATE TABLE reminders(id INT AUTO_INCREMENT,memberId
INT,message VARCHAR(255) NOT NULL,PRIMARY KEY (id , memberId) );
Query OK, 0 rows affected (0.013 sec)

```

```

MariaDB [practise]> DELIMITER $$
MariaDB [practise]> CREATE TRIGGER after_members_insert
-> AFTER INSERT
-> ON members FOR EACH ROW
-> BEGIN
-> IF NEW.birthDate IS NULL THEN
-> INSERT INTO reminders(memberId, message)
-> VALUES(new.id,CONCAT('Hi ', NEW.name, ', please update your date of birth.'));
-> END IF;
-> END$$

```

Query OK, 0 rows affected (0.007 sec)

```

MariaDB [practise]> DELIMITER ;
MariaDB [practise]> INSERT INTO members(name, email, birthDate) VALUES('John Doe',
'john.doe@example.com', NULL)
-> SELECT * FROM reminders;

```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'SELECT * FROM reminders' at line 2

```

MariaDB [practise]> INSERT INTO members(name, email, birthDate) VALUES('John Doe',
'john.doe@example.com', NULL); SELECT * FROM reminders;
Query OK, 1 row affected (0.003 sec)

```

```

+----+-----+-----+
| id | memberId | message |
+----+-----+-----+
| 1 | 1 | Hi John Doe, please update your date of birth. |
+----+-----+-----+
1 row in set (0.000 sec)

```

Before Update

```

MariaDB [practise]> CREATE TABLE person (name varchar(45), age int);
Query OK, 0 rows affected (0.014 sec)

```

```

MariaDB [practise]> INSERT INTO person VALUES ('Matthew', 25), ('Mark', 20);
Query OK, 2 rows affected (0.003 sec)
Records: 2 Duplicates: 0 Warnings: 0

```

```

MariaDB [practise]> delimiter //
MariaDB [practise]> CREATE TRIGGER person_bu BEFORE UPDATE
-> ON person
-> FOR EACH ROW
-> IF NEW.age < 18 THEN
-> SIGNAL SQLSTATE '50002' SET MESSAGE_TEXT = 'Person must be older than 18.';
-> END IF; //

```

Query OK, 0 rows affected (0.007 sec)

```

MariaDB [practise]> delimiter ;
MariaDB [practise]> UPDATE person SET age = 17 WHERE name = 'John';
Query OK, 0 rows affected (0.001 sec)

```

Rows matched: 0 Changed: 0 Warnings: 0

MariaDB [practise]> select * from person;

```
+-----+-----+
| name  | age |
+-----+-----+
| Matthew | 25 |
| Mark   | 20 |
+-----+-----+
2 rows in set (0.000 sec)
```

MariaDB [practise]> UPDATE person SET age = 17 WHERE name = 'mark';
ERROR 1644 (50002): Person must be older than 18.

MariaDB [practise]> UPDATE person SET age = 20 WHERE name = 'mark';
Query OK, 0 rows affected (0.001 sec)
Rows matched: 1 Changed: 0 Warnings: 0

MariaDB [practise]> select * from person;

```
+-----+-----+
| name  | age |
+-----+-----+
| Matthew | 25 |
| Mark   | 20 |
+-----+-----+
2 rows in set (0.000 sec)
```

MariaDB [practise]> UPDATE person SET age = 27 WHERE name = 'mark';
Query OK, 1 row affected (0.004 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [practise]> select * from person;

```
+-----+-----+
| name  | age |
+-----+-----+
| Matthew | 25 |
| Mark   | 27 |
+-----+-----+
2 rows in set (0.001 sec)
```

After Update

MariaDB [practise]> CREATE TABLE average_age (age int);

Query OK, 0 rows affected (0.010 sec)

MariaDB [practise]> delimiter //

MariaDB [practise]> CREATE TRIGGER person_au AFTER UPDATE
-> ON person

-> FOR EACH ROW

-> UPDATE average_age SET average = (SELECT AVG(age) FROM person); //

Query OK, 0 rows affected (0.005 sec)

MariaDB [practise]> delimiter ;

MariaDB [practise]> UPDATE person SET age = 21 WHERE name = 'John';

Query OK, 0 rows affected (0.001 sec)

Rows matched: 0 Changed: 0 Warnings: 0

MariaDB [practise]> Select * from average_age

-> ;

Empty set (0.000 sec)

Before Delete

MariaDB [practise]> CREATE TABLE person_archive (name varchar(45), age int);

Query OK, 0 rows affected (0.011 sec)

MariaDB [practise]> delimiter //

MariaDB [practise]> CREATE TRIGGER person_bd BEFORE DELETE

-> ON person

-> FOR EACH ROW

-> INSERT INTO person_archive (name, age)

-> VALUES (OLD.name, OLD.age); //

Query OK, 0 rows affected (0.006 sec)

MariaDB [practise]> delimiter ;

MariaDB [practise]> delete from person where name="Mark";

Query OK, 1 row affected (0.006 sec)

MariaDB [practise]> select * from person_archive;

+-----+-----+

| name | age |

+-----+-----+

| Mark | 27 |

+-----+-----+

1 row in set (0.000 sec)

After Delete

```
MariaDB [practise]> delimiter //
```

```
MariaDB [practise]> CREATE TRIGGER person_ad AFTER DELETE
```

```
-> ON person
```

```
-> FOR EACH ROW
```

```
-> UPDATE average_age SET average = (SELECT AVG(person.age) FROM person); //
```

Query OK, 0 rows affected (0.005 sec)

```
MariaDB [practise]> delimiter ;
```

```
MariaDB [practise]> delete from person where name="Mark";
```

Query OK, 0 rows affected (0.002 sec)

```
MariaDB [practise]> select * from average_age;
```

Empty set (0.000 sec)