Before Insert

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

MariaDB [anjani]> delimiter //
MariaDB [anjani]> 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 [anjani]> delimiter ;
MariaDB [anjani]> 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 [anjani]> 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 [anjani]> 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 [anjani]> DELIMITER $$
MariaDB [anjani]> CREATE TRIGGER after_members_insert
    -> AFTER INSERT
    -> ON members FOR EACH ROW
    -> BEGIN
    -> IF NEW.birthDate IS NULL THEN
    -> INSERT INTO reminders(memberId, message)
    -> VALUES(new.id,CONCAT('Hi ', NEW.name, ', please update your date of birth.'));
    -> END IF;
    -> END$$
Query OK, 0 rows affected (0.007 sec)

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

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

MariaDB [anjani]> delimiter //
MariaDB [anjani]> 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 [anjani]> delimiter ;
MariaDB [anjani]> UPDATE person SET age = 17 WHERE name = 'John';
Query OK, 0 rows affected (0.001 sec)
Rows matched: 0 Changed: 0 Warnings: 0

MariaDB [anjani]> select * from person;
```
+---------+------+
| name    | age  |
+---------+------+
| Matthew |   25 |
| Mark    |   20 |
+---------+------+
```
2 rows in set (0.000 sec)

MariaDB [anjani]> UPDATE person SET age = 17 WHERE name = 'mark';
ERROR 1644 (50002): Person must be older than 18.
MariaDB [anjani]> UPDATE person SET age = 20 WHERE name = 'mark';
Query OK, 0 rows affected (0.001 sec)
Rows matched: 1 Changed: 0 Warnings: 0

MariaDB [anjani]> select * from person;
+---------+------+
| name | age |
+---------+------+
| Matthew | 25 |
| Mark | 20 |
+---------+------+
2 rows in set (0.000 sec)

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

MariaDB [anjani]> select * from person;
+---------+------+
| name | age |
+---------+------+
| Matthew | 25 |
| Mark | 27 |
+---------+------+
2 rows in set (0.001 sec)

After Update

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

Query OK, 0 rows affected (0.010 sec)

MariaDB [anjani]> delimiter //

MariaDB [anjani]> 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 [anjani]> delimiter ;

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

Query OK, 0 rows affected (0.001 sec)

Rows matched: 0 Changed: 0 Warnings: 0

MariaDB [anjani]> Select * from average_age

   -> ;

Empty set (0.000 sec)

Before Delete

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

Query OK, 0 rows affected (0.011 sec)

MariaDB [anjani]> delimiter //

MariaDB [anjani]> 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 [anjani]> delimiter ;

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

Query OK, 1 row affected (0.006 sec)

MariaDB [anjani]> select * from person_archive;

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

| name | age |

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

| Mark | 27 |

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

1 row in set (0.000 sec)

After Delete

MariaDB [anjani]> delimiter //

MariaDB [anjani]> 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 [anjani]> delimiter ;

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

Query OK, 0 rows affected (0.002 sec)

MariaDB [anjani]> select * from average_age;

Empty set (0.000 sec)