Triggers-

Triggers are **stored procedures** which have been **triggered** or enforced on **action of a particular event.**

Events can be

INSERT: Trigger fires when a new record is inserted into the table.
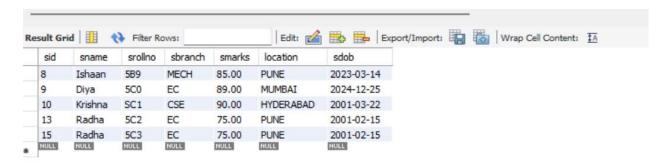
UPDATE: Trigger fires when an existing record is updated.

DELETE: Trigger fires when a record is deleted from the table.

Trigger-1 -Before Insert

```
create trigger t1
before insert on students
for each row
set new.smarks=new.smarks+5;
insert into students (sname,srollno,sbranch,smarks,location,sdob) values ('Radha','5C3','EC',70,'PUNE','2001-02-15');
```

Output-

sid	sname	srollno	sbranch	smarks	location	sdob
8	Ishaan	5B9	MECH	85.00	PUNE	2023-03-14
9	Diya	5C0	EC	89.00	MUMBAI	2024-12-25
10	Krishna	SC1	CSE	90.00	HYDERABAD	2001-03-22
13	Radha	5C2	EC	75.00	PUNE	2001-02-15
15	Radha	5C3	EC	75.00	PUNE	2001-02-15
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Trigger-2-After Insert

```
create table finalMarks(marks decimal(5,2));
create trigger store_marks
after insert on students
for each row
insert into finalMarks(marks) values(new.smarks);

insert into students (sname,srollno,sbranch,smarks,location,sdob) values ('Gopal','5C4','EC',80,'PUNE','2001-02-15');
```

marks
▶ 75.00
75.00
85.00

Trigger-3-Before update

```
DELIMITER //
create trigger t4
before update on students
for each row
begin
if new.sname='krishna' then
signal sqlstate '45000' set message_text='no update possible';
end if;
end;
//
DELIMITER ;
```

```
DELIMITER //
create trigger t9
after update on students
for each row
begin
if new.sname='krishna' then
signal sqlstate '45000' set message_text='no update possible';
END IF;
END;
//
DELIMITER ;
```

```
SET SQL_SAFE_UPDATES = 0;
update students set smarks=98 where sname='krishna';
```

#	Time	Action	Message	Duration / Fetch
✓	7	23:10:17	insert into students (sname,srollno,sbranch,smarks,location,sdob) values ('Gopal','5C...	1 row(s) affected	0.016 sec
✓	8	23:10:21	select * from finalMarks LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
✓	9	23:11:52	SET SQL_SAFE_UPDATES = 0	0 row(s) affected	0.000 sec
✗	10	23:11:52	update students set smarks=98 where sname='krishna'	Error Code: 1644. Cannot update	0.000 sec