**7 .Create Table student(Rollno,Name, Address,Marks)**

**1. Create different Triggers After Insertion, After Updation,After Deletion,Before Insertion.**

**2. Create different Views and Display it.**

### Step 1: Create the Student Table

sql

Copy code

CREATE TABLE Student (

Rollno INT PRIMARY KEY,

Name VARCHAR(50),

Address VARCHAR(100),

Marks INT

);

### 1. Create Triggers

* **After Insertion Trigger**: This trigger will execute after a new record is inserted into the Student table. For example, it can log the insertion.

sql

Copy code

CREATE TRIGGER after\_student\_insert

AFTER INSERT ON Student

FOR EACH ROW

BEGIN

INSERT INTO Student\_Log (Action, Rollno, Name, Address, Marks, ActionDate)

VALUES ('INSERT', NEW.Rollno, NEW.Name, NEW.Address, NEW.Marks, NOW());

END;

* **After Update Trigger**: This trigger will execute after a record is updated in the Student table.

sql

Copy code

CREATE TRIGGER after\_student\_update

AFTER UPDATE ON Student

FOR EACH ROW

BEGIN

INSERT INTO Student\_Log (Action, Rollno, Name, Address, Marks, ActionDate)

VALUES ('UPDATE', NEW.Rollno, NEW.Name, NEW.Address, NEW.Marks, NOW());

END;

* **After Deletion Trigger**: This trigger will execute after a record is deleted from the Student table.

sql

Copy code

CREATE TRIGGER after\_student\_delete

AFTER DELETE ON Student

FOR EACH ROW

BEGIN

INSERT INTO Student\_Log (Action, Rollno, Name, Address, Marks, ActionDate)

VALUES ('DELETE', OLD.Rollno, OLD.Name, OLD.Address, OLD.Marks, NOW());

END;

* **Before Insertion Trigger**: This trigger will execute before a new record is inserted into the Student table. It can be used, for example, to check data integrity.

sql

Copy code

CREATE TRIGGER before\_student\_insert

BEFORE INSERT ON Student

FOR EACH ROW

BEGIN

IF NEW.Marks < 0 OR NEW.Marks > 100 THEN

SIGNAL SQLSTATE '45000'

SET MESSAGE\_TEXT = 'Marks must be between 0 and 100';

END IF;

END;

Note: The Student\_Log table should be created beforehand to store the logs from these triggers.

### Step 2: Create Views and Display Them

* **View for Students with Passing Marks**: This view shows students who have scored 40 or more marks.

sql

Copy code

CREATE VIEW Passing\_Students AS

SELECT Rollno, Name, Address, Marks

FROM Student

WHERE Marks >= 40;

-- Display the view

SELECT \* FROM Passing\_Students;

* **View for Students with Marks above 80**: This view shows students with distinction.

sql

Copy code

CREATE VIEW Distinction\_Students AS

SELECT Rollno, Name, Address, Marks

FROM Student

WHERE Marks > 80;

-- Display the view

SELECT \* FROM Distinction\_Students;

* **View for Students with Marks below 40**: This view shows students who need improvement.

sql

Copy code

CREATE VIEW Improvement\_Students AS

SELECT Rollno, Name, Address, Marks

FROM Student

WHERE Marks < 40;

-- Display the view

SELECT \* FROM Improvement\_Students;