# Before insert trigger

```
DELIMITER $$

CREATE TRIGGER before_insert_teacher
BEFORE INSERT ON teachers
FOR EACH ROW
BEGIN
    IF NEW.salary < 0 THEN
        SIGNAL SQLSTATE '45000'
        SET MESSAGE_TEXT = 'Salary cannot be negative';
    END IF;
END $$

DELIMITER ;
-- This will raise an error: "Salary cannot be negative"
INSERT INTO teachers (name, subject, experience, salary)
VALUES ('Paul Green', 'Art', 4, -30000);
```

tion Output

| | Time | Action | Message |
|---|---|---|---|
| 1 | 21:01:28 | create database Teachers | 1 row(s) affected |
| 2 | 21:01:34 | use Teachers | 0 row(s) affected |
| 3 | 21:01:44 | CREATE TABLE teachers ( id INT PRIMARY KEY AUTO_INCREMENT, name VARCHAR(100), subject V... | 0 row(s) affected |
| 4 | 21:01:48 | INSERT INTO teachers (name, subject, experience, salary) VALUES (John Doe', 'Mathematics', 12, 50000), (Jan... | 8 row(s) affected Records: 8 Duplicates: 0 Warnings: 0 |
| 5 | 21:02:27 | CREATE TRIGGER before_insert_teacher BEFORE INSERT ON teachers FOR EACH ROW BEGIN IF NEW s... | 0 row(s) affected |
| 6 | 21:08:42 | INSERT INTO teachers (name, subject, experience, salary) VALUES ('Paul Green', 'Art', 4, -30000) | Error Code: 1644. Salary cannot be negative |

# After insert trigger

```
64  BEGIN
65      INSERT INTO teacher_log (teacher_id, action, timestamp)
66      VALUES (NEW.id, 'INSERT', NOW());
67  END $$
68
69  DELIMITER ;
70  -- Valid insertion
71  INSERT INTO teachers (name, subject, experience, salary)
72  VALUES ('Paul Green', 'Art', 4, 30000);
73  select * from teacher_log;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| teacher_id | action | timestamp |
|---|---|---|
| 3 | INSERT | 2024-11-11 16:45:00 |
| 5 | DELETE | 2024-11-12 18:20:00 |
| 6 | INSERT | 2024-11-15 08:00:00 |
| 7 | DELETE | 2024-11-18 19:50:00 |
| 9 | INSERT | 2024-11-27 21:34:45 |

teacher_log 1  ×

## Before Delete Trigger

```
74
75    DELIMITER $$
76
77 ●  CREATE TRIGGER before_delete_teacher
78    BEFORE DELETE ON teachers
79    FOR EACH ROW
80    BEGIN
81        IF OLD.experience > 10 THEN
82            SIGNAL SQLSTATE '45000'
83            SET MESSAGE_TEXT = 'Cannot delete a teacher with experience greater than 10 years';
84        END IF;
85    END $$
86
87    DELIMITER ;
88 ●  -- This will raise an error if the teacher has more than 10 years of experience
89    DELETE FROM teachers WHERE id = 1;
90
```

**Output**

Action Output

| # | Time | Action | Message | Duration / Fetch |
|---|------|--------|---------|------------------|
| ✓ | 29 21:33:14 | CREATE TRIGGER before_insert_teacher BEFORE INSERT ON teachers FOR EACH ROW BEGIN    IF NE... | 0 row(s) affected | 0.000 sec |
| ✓ | 30 21:33:32 | CREATE TABLE teacher_log (    teacher_id INT,      -- References ID of the teacher inserted    action VAR... | 0 row(s) affected | 0.015 sec |
| ✓ | 31 21:34:20 | INSERT INTO teacher_log (teacher_id, action, timestamp) VALUES (1, 'INSERT', '2024-11-01 09:00:00'), (2, '... | 8 row(s) affected Records: 8  Duplicates: 0  Warnings: 0 | 0.016 sec |
| ✓ | 32 21:34:33 | CREATE TRIGGER after_insert_teacher AFTER INSERT ON teachers FOR EACH ROW BEGIN    INSERT I... | 0 row(s) affected | 0.000 sec |
| ✓ | 33 21:34:45 | INSERT INTO teachers (name, subject, experience, salary) VALUES ('Paul Green', 'Art', 4, 30000) | 1 row(s) affected | 0.000 sec |
| ✓ | 34 21:35:26 | select * from teacher_log LIMIT 0, 1000 | 9 row(s) returned | 0.000 sec / 0.000 sec |
| ✓ | 35 21:40:53 | CREATE TRIGGER before_delete_teacher BEFORE DELETE ON teachers FOR EACH ROW BEGIN    IF OL... | 0 row(s) affected | 0.016 sec |
| ✗ | 36 21:41:50 | DELETE FROM teachers WHERE id = 1 | Error Code: 1644. Cannot delete a teacher with experience greater than 10 years | 0.016 sec |

## After Delete Trigger

```
96    BEGIN
97        INSERT INTO teacher_log (teacher_id, action, timestamp)
98        VALUES (OLD.id, 'DELETE', NOW());
99    END $$
100
101   DELIMITER ;
102
103 ● -- Valid deletion
104   DELETE FROM teachers WHERE id = 4;
105 ● select * from teacher_log;
```

Result Grid | Filter Rows:          Export:   | Wrap Cell Content: 

| teacher_id | action | timestamp |
|-----------|--------|-----------|
| 5 | DELETE | 2024-11-12 18:20:00 |
| 6 | INSERT | 2024-11-15 08:00:00 |
| 7 | DELETE | 2024-11-18 19:50:00 |
| 9 | INSERT | 2024-11-27 21:34:45 |
| 4 | DELETE | 2024-11-27 21:50:28 |