

Created the teachers table and insert 8 rows

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'worker_db' selected. The main editor shows an SQL script with the following content:

```
12 • INSERT INTO teachers (name, subject, experience, salary) VALUES
13 ('Alice Johnson', 'Math', 5, 50000.00),
14 ('Bob Smith', 'Physics', 8, 60000.00),
15 ('Charlie Brown', 'Chemistry', 12, 70000.00),
16 ('David White', 'Biology', 4, 45000.00),
17 ('Eva Green', 'English', 6, 48000.00),
18 ('Frank Black', 'History', 15, 65000.00),
19 ('Grace Blue', 'Art', 3, 42000.00),
20 ('Helen Red', 'Geography', 10, 55000.00);
21 • select * from teachers;
22
```

The 'Result Grid' at the bottom displays the data inserted into the 'teachers' table:

id	name	subject	experience	salary
1	Alice Johnson	Math	5	50000.00
2	Bob Smith	Physics	8	60000.00
3	Charlie Brown	Chemistry	12	70000.00
4	David White	Biology	4	45000.00
5	Eva Green	English	6	48000.00
6	Frank Black	History	15	65000.00
7	Grace Blue	Art	3	42000.00
8	Helen Red	Geography	10	55000.00

The 'Output' pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	10:09:26	CREATE TABLE teachers (id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), ...	0 row(s) affected	0.031 sec
2	10:10:03	INSERT INTO teachers (name, subject, experience, salary) VALUES ('Alice Johnson', 'Math', 5, 50000...	8 row(s) affected Records: 8 Duplicates: 0 Warnings: 0	0.031 sec
3	10:10:16	select * from teachers LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

Created a before_insert_teacher trigger to raise an error if salary is negative

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'worker_db' selected. The main editor shows an SQL script with the following content:

```
14 ('Bob Smith', 'Physics', 8, 60000.00),
15 ('Charlie Brown', 'Chemistry', 12, 70000.00),
16 ('David White', 'Biology', 4, 45000.00),
17 ('Eva Green', 'English', 6, 48000.00),
18 ('Frank Black', 'History', 15, 65000.00),
19 ('Grace Blue', 'Art', 3, 42000.00),
20 ('Helen Red', 'Geography', 10, 55000.00);
21 • select * from teachers;
22
23 -- Created a before_insert_teacher trigger to raise an error if salary is negative
24
25 DELIMITER $$
26
27 • CREATE TRIGGER before_insert_teacher
28 BEFORE INSERT ON teachers FOR EACH ROW
29 BEGIN
30 IF NEW.salary < 0 THEN
31 SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'salary cannot be negative';
32 END IF;
33 END $$
34
35 DELIMITER ;
36
37 • INSERT INTO teachers (name, subject, experience, salary) VALUES ('John Johnson', 'Math', 5, -50000.00);
38
```

The 'Output' pane shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	10:09:26	CREATE TABLE teachers (id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), ...	0 row(s) affected	0.031 sec
2	10:10:03	INSERT INTO teachers (name, subject, experience, salary) VALUES ('Alice Johnson', 'Math', 5, 50000...	8 row(s) affected Records: 8 Duplicates: 0 Warnings: 0	0.031 sec
3	10:10:16	select * from teachers LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
4	10:16:44	CREATE TRIGGER before_insert_teacher BEFORE INSERT ON teachers FOR EACH ROW BEGIN ...	0 row(s) affected	0.016 sec
5	10:17:57	INSERT INTO teachers (name, subject, experience, salary) VALUES ('John Johnson', 'Math', 5, -50000...	Error Code: 1644, salary cannot be negative	0.016 sec

Created a before_delete_teacher trigger to raise an error if experience > 10 years

The screenshot shows the MySQL Workbench interface with the following SQL code in the editor:

```
65 CREATE TRIGGER before_delete_teacher
66 BEFORE DELETE ON teachers
67 FOR EACH ROW
68 BEGIN
69 IF OLD.experience > 10 THEN
70 SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Cannot delete teacher with experience greater than 10 years';
71 END IF;
72 END $$
73
74 DELIMITER ;
75
76 -- Created an after_delete_teacher trigger to log the deletion action
77
78 DELIMITER $$
79
80 CREATE TRIGGER after_delete_teacher
81 AFTER DELETE ON teachers
82 FOR EACH ROW
83 BEGIN
84 INSERT INTO teacher_log (teacher_id, action, timestamp)
85 VALUES (OLD.id, 'DELETE', NOW());
86 END $$
87
88 DELIMITER ;
89
```

The Output window shows the following results:

#	Time	Action	Message	Duration / Fetch
5	10:17:57	INSERT INTO teachers (name, subject, experience, salary) VALUES (John Johnson, 'Math', 5, -50000.00)	Error Code: 1644, salary cannot be negative	0.016 sec
6	10:19:26	CREATE TABLE teacher_log (teacher_id INT, action VARCHAR(50), timestamp DATETIME)	0 row(s) affected	0.031 sec
7	10:19:34	CREATE TRIGGER after_insert_teacher AFTER INSERT ON teachers FOR EACH ROW BEGIN	0 row(s) affected	0.015 sec
8	10:20:33	CREATE TRIGGER before_delete_teacher BEFORE DELETE ON teachers FOR EACH ROW BEGIN	0 row(s) affected	0.000 sec
9	10:22:06	DELETE FROM teachers WHERE id = 1	1 row(s) affected	0.016 sec
10	10:22:47	CREATE TRIGGER after_delete_teacher AFTER DELETE ON teachers FOR EACH ROW BEGIN	0 row(s) affected	0.015 sec

Created an after_delete_teacher trigger to log the deletion action

The screenshot shows the MySQL Workbench interface with the following SQL code in the editor:

```
80 CREATE TRIGGER after_delete_teacher
81 AFTER DELETE ON teachers
82 FOR EACH ROW
83 BEGIN
84 INSERT INTO teacher_log (teacher_id, action, timestamp)
85 VALUES (OLD.id, 'DELETE', NOW());
86 END $$
87
88 DELIMITER ;
89
90 select * from teachers;
```

The Output window shows the following results:

#	Time	Action	Message	Duration / Fetch
6	10:19:26	CREATE TABLE teacher_log (teacher_id INT, action VARCHAR(50), timestamp DATETIME)	0 row(s) affected	0.031 sec
7	10:19:34	CREATE TRIGGER after_insert_teacher AFTER INSERT ON teachers FOR EACH ROW BEGIN	0 row(s) affected	0.015 sec
8	10:20:33	CREATE TRIGGER before_delete_teacher BEFORE DELETE ON teachers FOR EACH ROW BEGIN	0 row(s) affected	0.000 sec
9	10:22:06	DELETE FROM teachers WHERE id = 1	1 row(s) affected	0.016 sec
10	10:22:47	CREATE TRIGGER after_delete_teacher AFTER DELETE ON teachers FOR EACH ROW BEGIN	0 row(s) affected	0.015 sec
11	10:24:41	select * from teachers LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec

The Result Grid shows the following data for the 'teachers' table:

id	name	subject	experience	salary
2	Bob Smith	Physics	8	60000.00
3	Charlie Brown	Chemistry	12	70000.00
4	David White	Biology	4	45000.00
5	Eva Green	English	6	48000.00
6	Frank Black	History	15	65000.00
7	Grace Blue	Art	3	42000.00
8	Helen Red	Geography	10	55000.00

