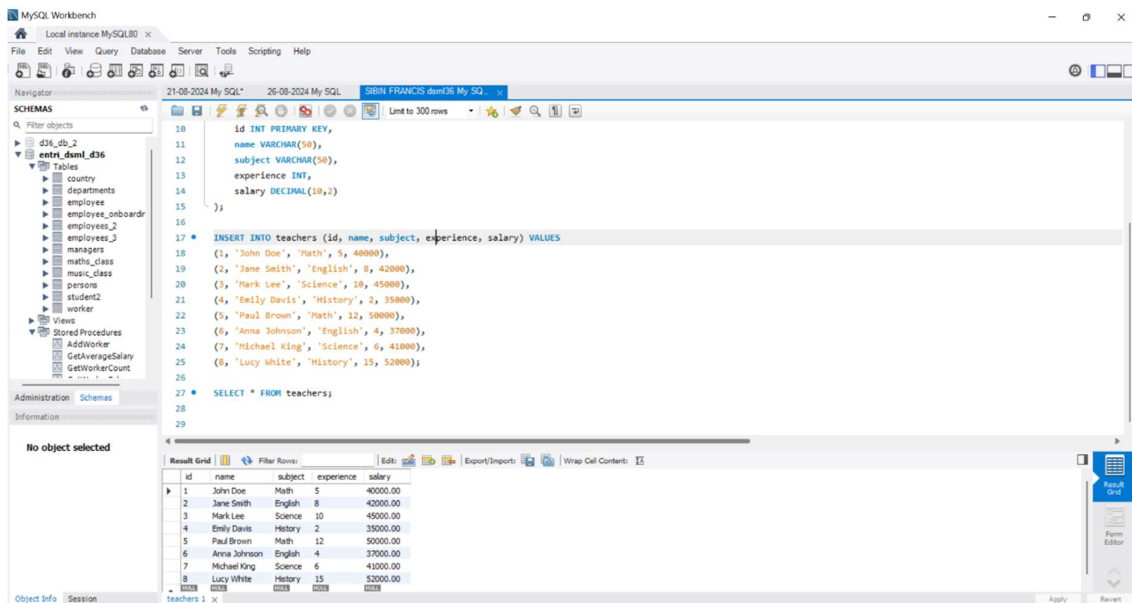
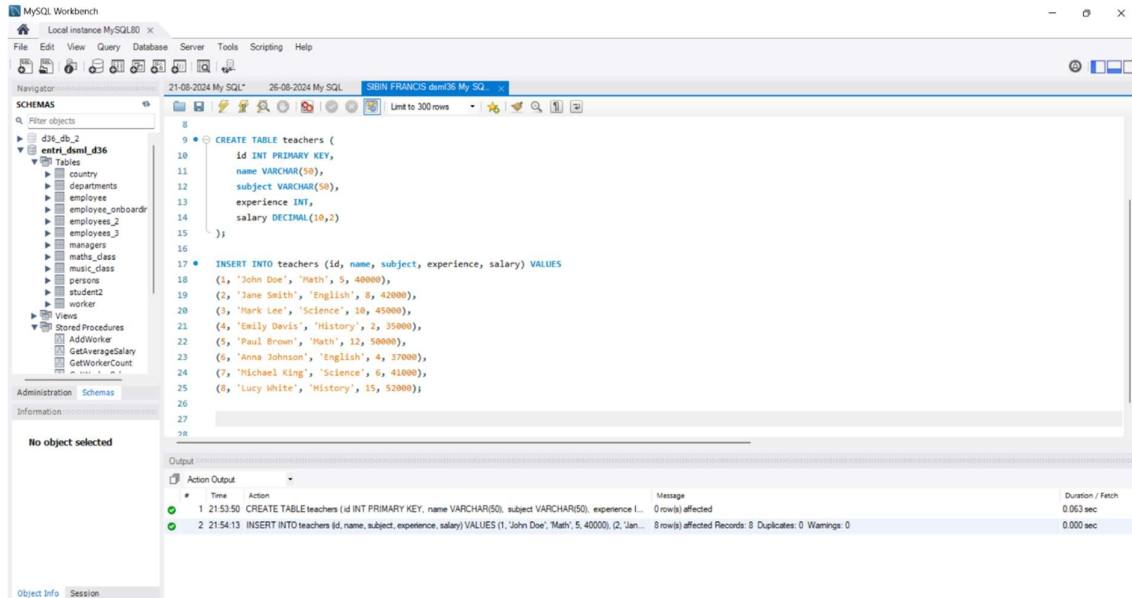
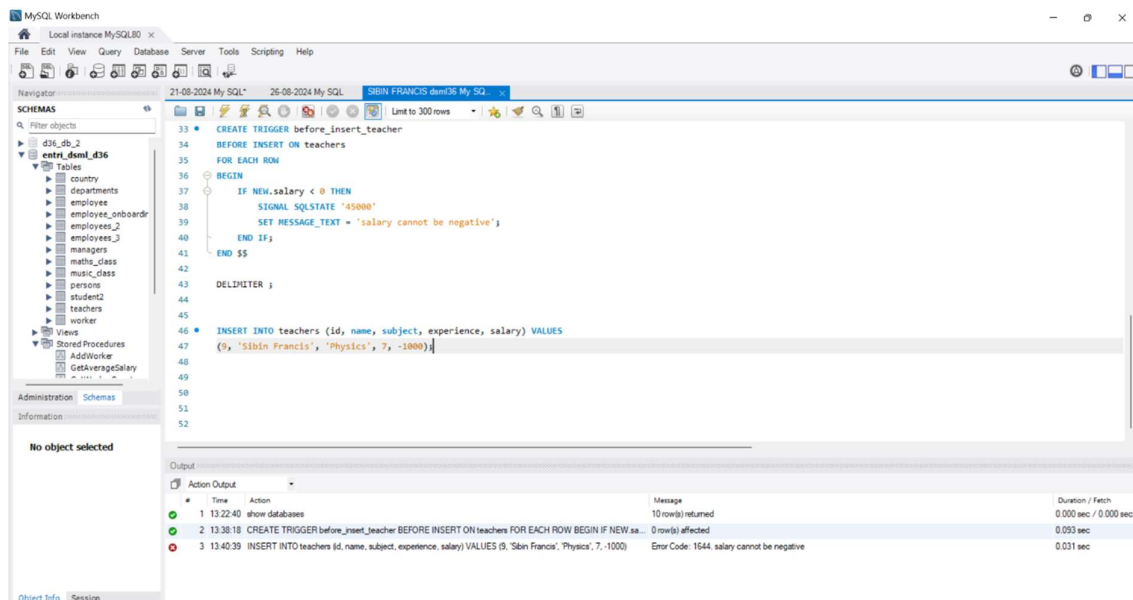
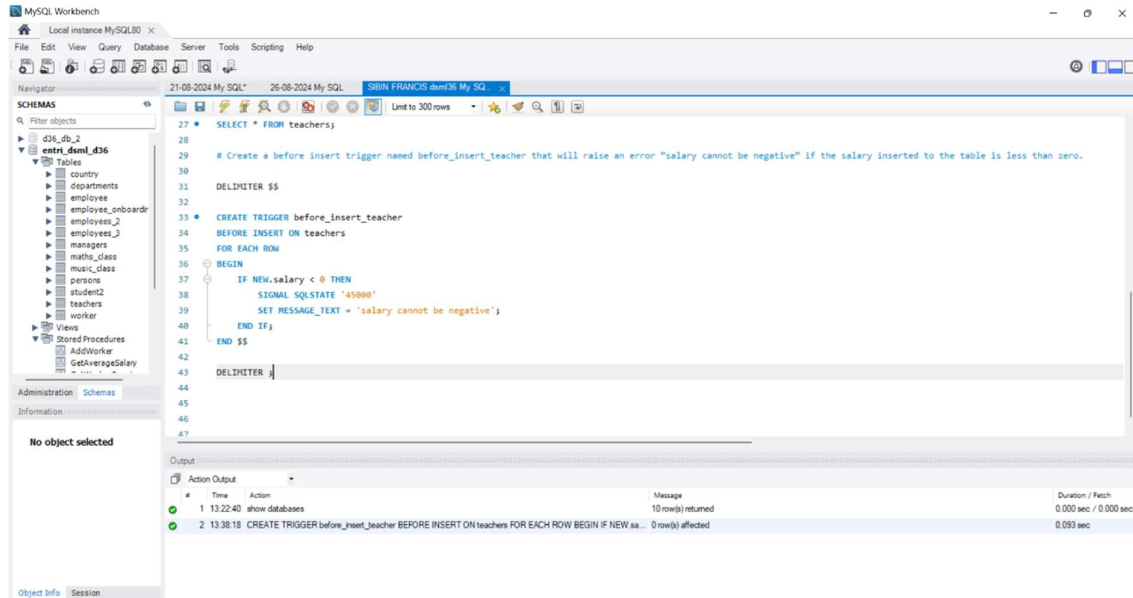


TRIGGERS

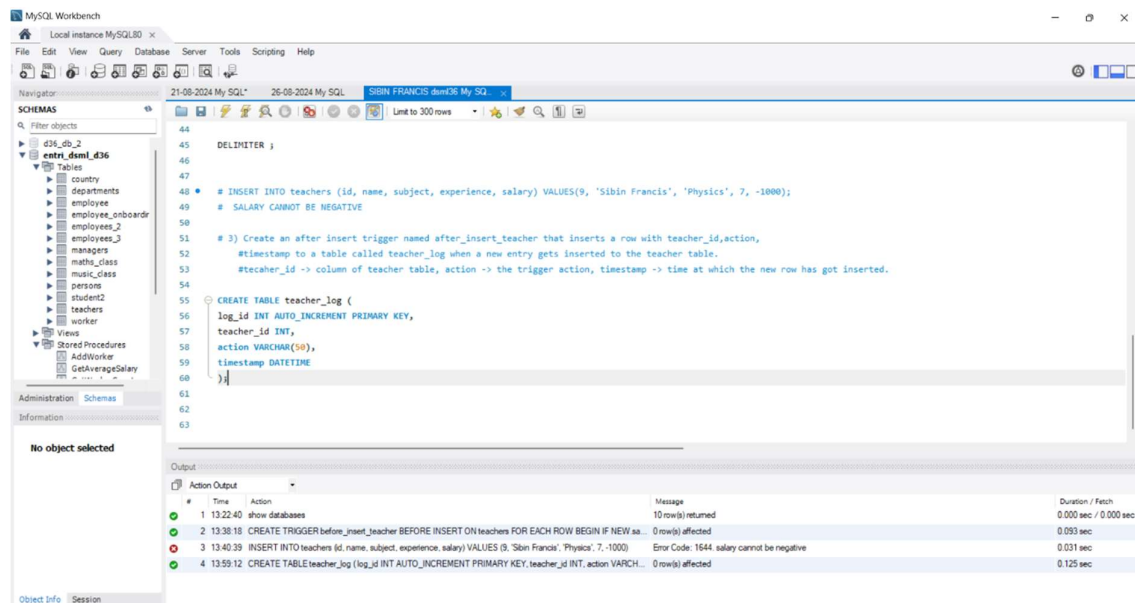
➤ **CREATED A TABLE NAMED **TEACHERS** AND
INSERTED 8 ROWS**



- **CREATED A BEFORE INSERT TRIGGER NAMED BEFORE_INSERT_TEACHER THAT WILL RAISE AN ERROR “SALARY CANNOT BE NEGATIVE” IF THE SALARY INSERTED TO THE TABLE < THAN ZERO.**



- **CREATED AN AFTER INSERT TRIGGER NAMED AFTER_INSERT_TEACHER THAT INSERTS A ROW WITH TEACHER_ID, ACTION, TIMESTAMP TO A TABLE CALLED TEACHER_LOG WHEN A NEW ENTRY GETS INSERTED TO THE TEACHER TABLE.**

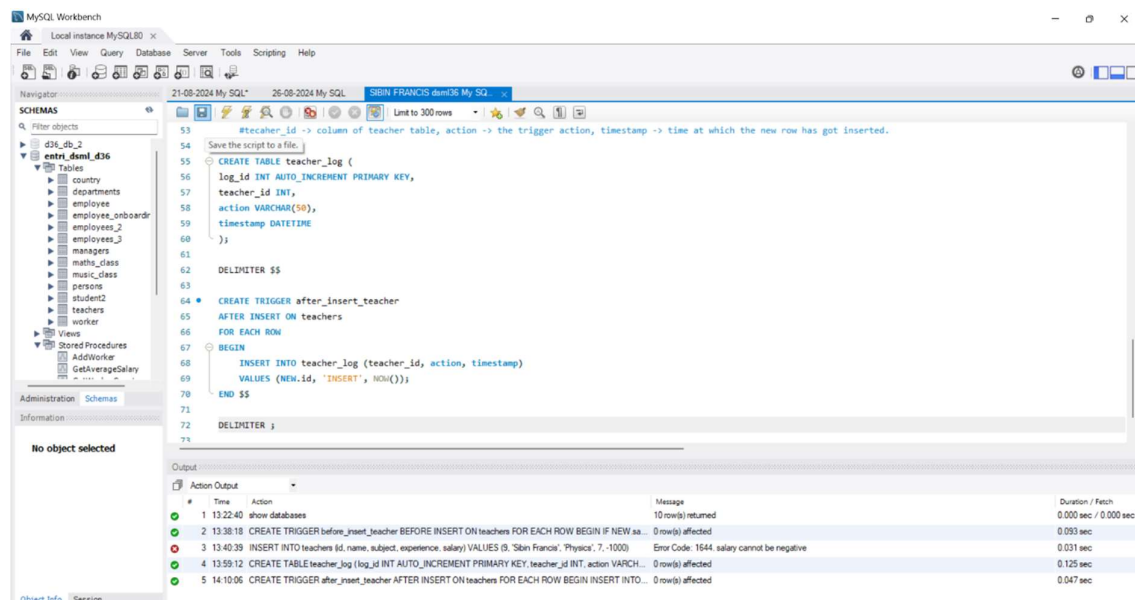


The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'Schemas' tree with 'd3s_db_2' selected. The main editor shows a SQL script with the following content:

```
44 DELIMITER ;
45
46
47
48 # INSERT INTO teachers (id, name, subject, experience, salary) VALUES(9, 'Sibin Francis', 'Physics', 7, -1000);
49 # SALARY CANNOT BE NEGATIVE
50
51 # 3) Create an after insert trigger named after_insert_teacher that inserts a row with teacher_id,action,
52 # timestamp to a table called teacher_log when a new entry gets inserted to the teacher table.
53 # teacher_id -> column of teacher table, action -> the trigger action, timestamp -> time at which the new row has got inserted.
54
55 CREATE TABLE teacher_log (
56   log_id INT AUTO_INCREMENT PRIMARY KEY,
57   teacher_id INT,
58   action VARCHAR(50),
59   timestamp DATETIME
60 );
61
62
63
```

The 'Output' pane at the bottom shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	13:22:40	show databases	10 row(s) returned	0.000 sec / 0.000 sec
2	13:38:18	CREATE TRIGGER before_insert_teacher BEFORE INSERT ON teachers FOR EACH ROW BEGIN IF NEW sa...	0 row(s) affected	0.093 sec
3	13:40:39	INSERT INTO teachers (id, name, subject, experience, salary) VALUES (9, 'Sibin Francis', 'Physics', 7, -1000)	Error Code: 1644, salary cannot be negative	0.031 sec
4	13:59:12	CREATE TABLE teacher_log (log_id INT AUTO_INCREMENT PRIMARY KEY, teacher_id INT, action VARCH...	0 row(s) affected	0.125 sec

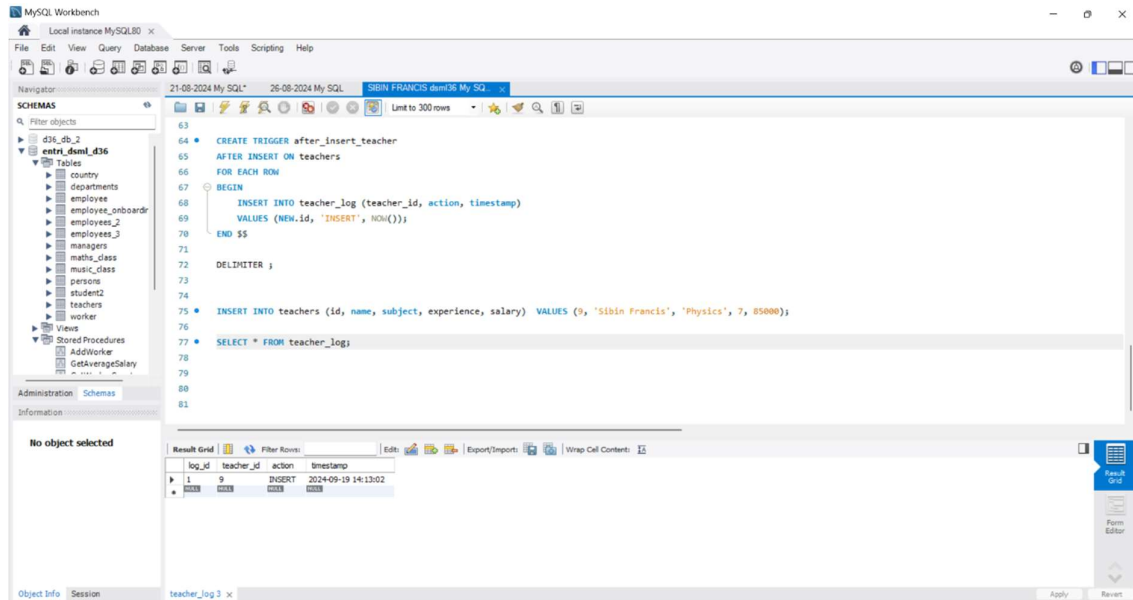


The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'Schemas' tree with 'd3s_db_2' selected. The main editor shows a SQL script with the following content:

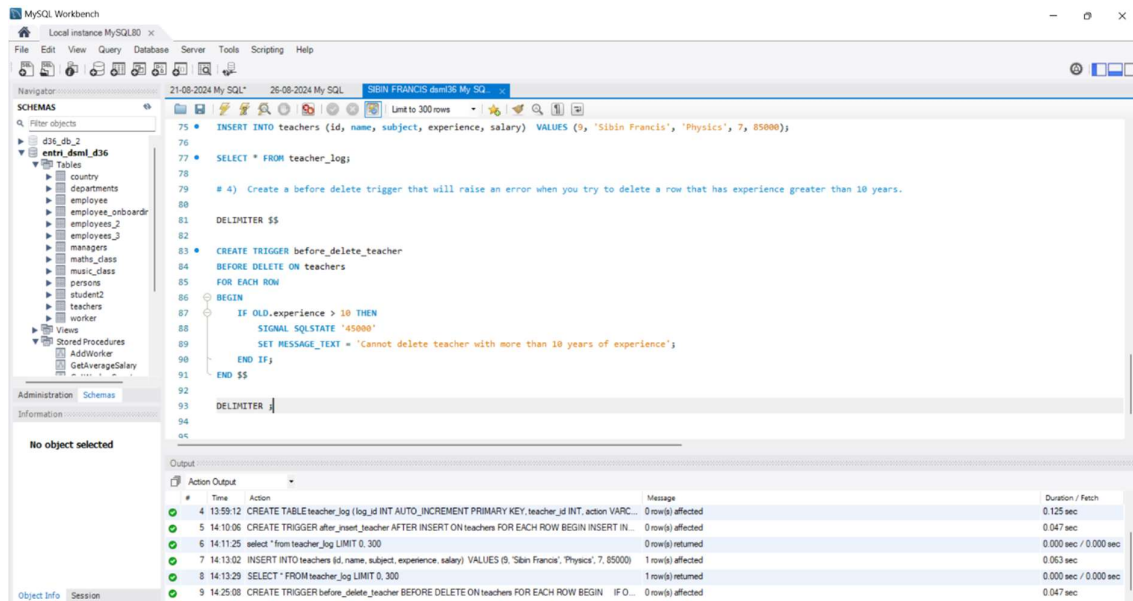
```
53 #teacher_id -> column of teacher table, action -> the trigger action, timestamp -> time at which the new row has got inserted.
54 Save the script to a file.
55
56 CREATE TABLE teacher_log (
57   log_id INT AUTO_INCREMENT PRIMARY KEY,
58   teacher_id INT,
59   action VARCHAR(50),
60   timestamp DATETIME
61 );
62 DELIMITER $$
63
64 CREATE TRIGGER after_insert_teacher
65 AFTER INSERT ON teachers
66 FOR EACH ROW
67 BEGIN
68   INSERT INTO teacher_log (teacher_id, action, timestamp)
69   VALUES (NEW.id, 'INSERT', NOW());
70 END $$
71
72 DELIMITER ;
73
```

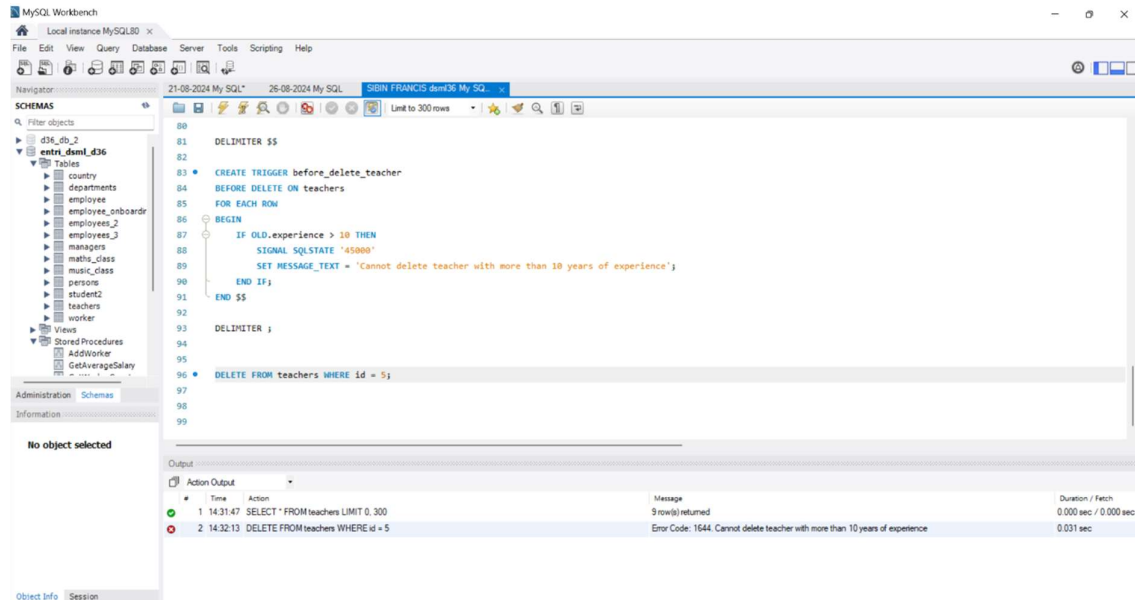
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3	13:40:39	INSERT INTO teachers (id, name, subject, experience, salary) VALUES (9, 'Sibin Francis', 'Physics', 7, -1000)	Error Code: 1644, salary cannot be negative	0.031 sec
4	13:59:12	CREATE TABLE teacher_log (log_id INT AUTO_INCREMENT PRIMARY KEY, teacher_id INT, action VARCH...	0 row(s) affected	0.125 sec
5	14:10:06	CREATE TRIGGER after_insert_teacher AFTER INSERT ON teachers FOR EACH ROW BEGIN INSERT INTO...	0 row(s) affected	0.047 sec

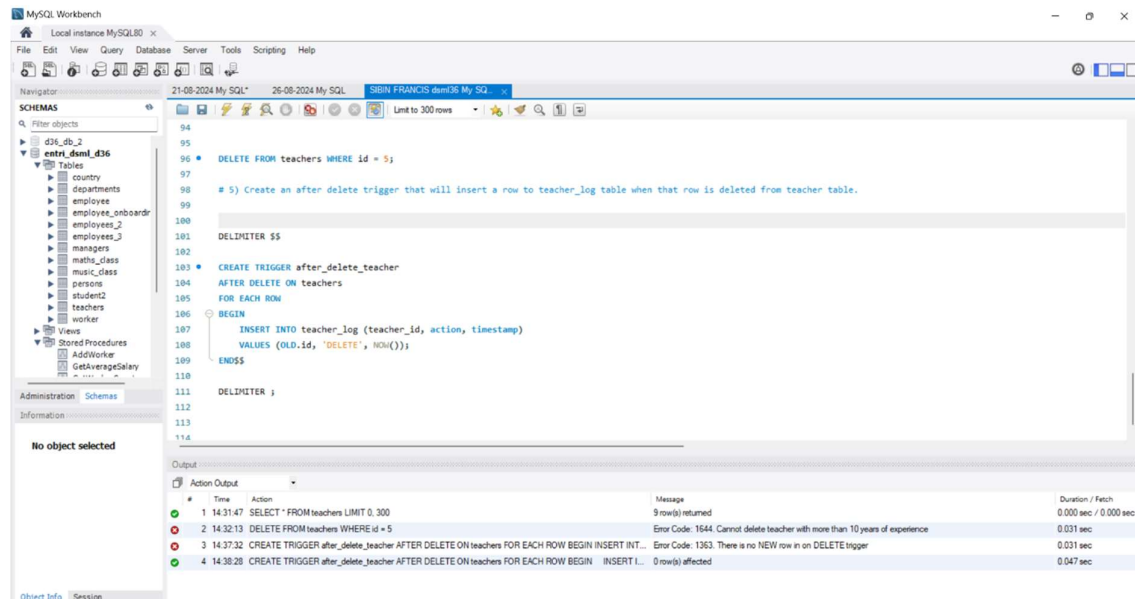


➤ **CREATED A BEFORE DELETE TRIGGER THAT WILL RAISE AN ERROR WHEN YOU TRY TO DELETE A ROW THAT HAS EXPERIENCE > 10 YEARS.**





➤ **CREATED AN AFTER DELETE TRIGGER THAT WILL INSERT A ROW TO TEACHER_LOG TABLE WHEN THAT ROW IS DELETED FROM TEACHER TABLE.**



MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Filter objects

SCHMAS

d36_db_2

entri_demo1_d36

Tables

country

departments

employee

employee_onboard

employees_2

employees_3

managers

maths_class

music_class

persons

student2

teachers

worker

Views

Stored Procedures

AddWorker

GetAverageSalary

Administration Schemas

Information

No object selected

21-08-2024 My SQL* 26-08-2024 My SQL SIBIN FRANCIS demo36 My SQL

Limit to 300 rows

```
103 AFTER DELETE ON teachers
104 FOR EACH ROW
105 BEGIN
106     INSERT INTO teacher_log (teacher_id, action, timestamp)
107     VALUES (OLD.id, 'DELETE', NOW());
108 END$$
109
110 DELIMITER ;
111
112
113 DELETE FROM teachers WHERE id = 7;
114
115 SELECT * FROM teacher_log;
```

Result Grid

	log_id	teacher_id	action	timestamp
1	9		INSERT	2024-09-19 14:13:02
2	4		INSERT	2024-09-19 14:31:31
3	7		DELETE	2024-09-19 14:41:43

teacher_log 6

Output

#	Time	Action	Message	Duration / Fetch
2	14:32:13	DELETE FROM teachers WHERE id = 5	Error Code: 1644. Cannot delete teacher with more than 10 years of experience	0.031 sec
3	14:37:32	CREATE TRIGGER after_delete_teacher AFTER DELETE ON teachers FOR EACH ROW BEGIN INSERT IN...	Error Code: 1363. There is no NEW row in on DELETE trigger	0.031 sec
4	14:38:28	CREATE TRIGGER after_delete_teacher AFTER DELETE ON teachers FOR EACH ROW BEGIN INSERT...	0 row(s) affected	0.047 sec
5	14:41:21	DELETE FROM teachers WHERE id = 8	Error Code: 1644. Cannot delete teacher with more than 10 years of experience	0.000 sec
6	14:41:43	DELETE FROM teachers WHERE id = 7	1 row(s) affected	0.047 sec
7	14:42:00	SELECT * FROM teacher_log LIMIT 0, 300	3 row(s) returned	0.000 sec / 0.000 sec