Assignment 10

Triggers

1. Create a table named teachers with fields id, name, subject, experience and salary and insert 8 rows.

Query and Result

```
 3 •  ⊖  create table teachers(id int,
 4                              name varchar(25),
 5                              subject varchar(25),
 6                              experience int,
 7                              salary decimal(10,2));
 8 •     desc teachers;
 9 •     insert into teachers(id, name, subject, experience, salary)
10        values(1, 'Nithya Jayaram', 'English', 12, 50000),
11        (2, 'Femi Azad', 'Maths', 2, 9000),
12        (3, 'Divya John', 'Science', 5, 15000),
13        (4, 'Ajay Raj', 'Phyisical Training', 6, 25000),
14        (5, 'Aradhya Vijay', 'Music', 2, 9000),
15        (6, 'Anish Rahman', 'Computer', 5, 15000),
16        (7, 'Sithara Sidharth', 'Social Studies', 5, 15000),
17        (8, 'Sindhu Suresh', 'Art', 4, 12000);
18 •     select* from teachers;
```

id	name	subject	experience	salary
1	Nithya Jayaram	English	12	50000.00
2	Femi Azad	Maths	2	9000.00
3	Divya John	Science	5	15000.00
4	Ajay Raj	Phyisical Training	6	25000.00
5	Aradhya Vijay	Music	2	9000.00
6	Anish Rahman	Computer	5	15000.00
7	Sithara Sidharth	Social Studies	5	15000.00
8	Sindhu Suresh	Art	4	12000.00

2. Create a before insert trigger named before_insert_teacher that will raise an error "salary cannot be negative" if the salary inserted to the table is less than zero.

Query and Result

```
22      Delimiter $$
23 •    create trigger before_insert_teacher
24      before insert on teachers
25      for each row
26   ⊖  begin
27      if new.salary<0
28   ⊖  then
29      signal sqlstate '45000' set message_text="salary cannot be negative";
30    ⌐ end if;
31    ⌐ end $$
32      Delimiter ;
33 •    insert into teachers(id, name, subject, experience, salary)
34      values(9, 'Haritha Shankar', 'Malayalam', 4, -12000);
```

❌ 65 22:51:13 insert into teachers(id, name, subject, experience, salary) values(9, 'Haritha Sha... Error Code: 1644. salary cannot be negative

3. Create 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. tecaher_id -> column of teacher table, action -> the trigger action, timestamp -> time at which the new row has got inserted.

Query and Result

```
40 • ⊖ create table teacher_log(teacher_id int,
41                                 action varchar(25),
42                                 timestamp timestamp default current_timestamp);
43 •    desc teacher_log;
44
45      Delimiter $$
46 •    create trigger after_insert_teacher
47      after insert on teachers
48      for each row
49   ⊖  begin
50      insert into teacher_log(teacher_id, action, timestamp)
51      values(new.id, 'insert', current_timestamp);
52    ⌐ end $$
53      Delimiter ;
54 •    insert into teacher_log(teacher_id, action, timestamp)
55      values(1, 'insert', current_timestamp);
56 •    select* from teacher_log;
```

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

teacher_id	action	timestamp
1	insert	2024-11-15 22:56:49

4. Create a before delete trigger that will raise an error when you try to delete a row that has experience greater than 10 years.

Query and Result

```
60      Delimiter $$
61 •    create trigger before_delete_teacher
62      before delete on teachers
63      for each row
64 ⊖   begin
65      if old.experience>10
66 ⊖   then
67      signal sqlstate '45000' set message_text="cannot delete teacher with experience greater than 10 years";
68      end if;
69      end $$
70      Delimiter ;
71 •    delete from teachers where id=1;
```

✗	88 23:02:36 delete from teachers where id=1	Error Code: 1644. cannot delete teacher with experience greater than 10 years

5. Create an after delete trigger that will insert a row to teacher_log table when that row is deleted from teacher table.

Query and Result

```
75      Delimiter $$
76 •    create trigger after_delete_teacher
77      after delete on teachers
78      for each row
79 ⊖   begin
80      insert into teacher_log(teacher_id, action, timestamp)
81      values(old.id, 'delete', current_timestamp);
82      end $$
83      Delimiter ;
84 •    delete from teachers where id=2;
85 •    select* from teacher_log;
```

Result Grid	🔲	↨ Filter Rows:	Export: 🖫	Wrap Cell Content: 🔲A

	teacher_id	action	timestamp
▶	2	delete	2024-11-15 23:29:23