Ex. No: 9 Date: 10 - 11 - 2022

**Experiment 9**

Triggers

**Consider the following schema of a database:**

**emp** (EID, NAME, SALARY)

**Table:**

**emp**

|  |  |  |
| --- | --- | --- |
| EID | NAME | SALARY |
| 100 | Steven | 24000 |
| 101 | Neena | 17000 |
| 102 | Lex | 17000 |
| 103 | Alexander | 9000 |
| 104 | Bruce | 6000 |
| 105 | David | 4800 |
| 106 | Valli | 4800 |
| 107 | Diana | 4200 |

**Write a SQL query to**

1. Create a statement-type DML trigger for UPDATE command.
2. Create a row-type DML trigger for UPDATE command.
3. Create a statement-type DDL trigger for DROP command.

Query

1. create or replace trigger emptrg1 before update on emp

begin

dbms\_output.put\_line('Updated records!');

end;

/

1. create or replace trigger emptrg2 before update on emp for each row

begin

dbms\_output.put\_line('Updated records!');

end;

/

1. create or replace trigger systrg1 before drop on system.schema

begin

dbms\_output.put\_line('Deleted table!');

end;

/

**Code:**

SQL> create table emp (EID number(3), NAME varchar2(20), SALARY number, primary key(EID));

Table created.

SQL> desc emp

Name Null? Type

----------------------------------------- -------- ----------------------------

EID NOT NULL NUMBER(3)

NAME VARCHAR2(20)

SALARY NUMBER

SQL> insert into emp values(&EID, '&NAME', &SALARY);

Enter value for eid: 100

Enter value for name: Steven

Enter value for salary: 24000

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(100, 'Steven', 24000)

1 row created.

SQL> /

Enter value for eid: 101

Enter value for name: Neena

Enter value for salary: 17000

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(101, 'Neena', 17000)

1 row created.

SQL> /

Enter value for eid: 102

Enter value for name: Lex

Enter value for salary: 17000

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(102, 'Lex', 17000)

1 row created.

SQL> /

Enter value for eid: 103

Enter value for name: Alexander

Enter value for salary: 9000

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(103, 'Alexander', 9000)

1 row created.

SQL> /

Enter value for eid: 104

Enter value for name: Bruce

Enter value for salary: 6000

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(104, 'Bruce', 6000)

1 row created.

SQL> /

Enter value for eid: 105

Enter value for name: David

Enter value for salary: 4800

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(105, 'David', 4800)

1 row created.

SQL> /

Enter value for eid: 106

Enter value for name: Valli

Enter value for salary: 4800

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(106, 'Valli', 4800)

1 row created.

SQL> /

Enter value for eid: 107

Enter value for name: Diana

Enter value for salary: 4200

old 1: insert into emp values(&EID, '&NAME', &SALARY)

new 1: insert into emp values(107, 'Diana', 4200)

1 row created.

SQL> select \* from emp;

EID NAME SALARY

---------- -------------------- ----------

100 Steven 24000

101 Neena 17000

102 Lex 17000

103 Alexander 9000

104 Bruce 6000

105 David 4800

106 Valli 4800

107 Diana 4200

8 rows selected.

SQL> set serveroutput on;

SQL> create or replace trigger emptrg1 before update on emp

2 begin

3 dbms\_output.put\_line('Updated records!');

4 end;

5 /

Trigger created.

SQL> update emp set salary = salary \* 1.2 where salary < 10000;

Updated records!

5 rows updated.

SQL> update emp set salary = salary \* 1.2 where eid = 107;

Updated records!

1 row updated.

SQL> create or replace trigger emptrg2 before update on emp for each row

2 begin

3 dbms\_output.put\_line('Updated records!');

4 end;

5 /

Trigger created.

SQL> update emp set salary = salary \* 1.2 where salary < 10000;

Updated records!

Updated records!

Updated records!

Updated records!

Updated records!

4 rows updated.

SQL> create or replace trigger systrg1 before drop on system.schema

2 begin

3 dbms\_output.put\_line('Deleted table!');

4 end;

5 /

Trigger created.

SQL> drop table emp;

Deleted table!

Table dropped.