



Course Name: DBMS Lab

Course Code: CSEG2146

Faculty Name: Mr. Syed Sajid Hussain

Submitted By:

Anoushka Pandey

Batch: B1

Sap Id: 500120245

Roll no.: R2142230030

Experiment 16:

Title: To understand the concepts of Trigger.

Objective: Students will be able to implement the concept of trigger.

CUSTOMER Table:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	Kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00

1. Create a row level trigger for the customers table that would fire for INSERT or UPDATE or DELETE operations performed on the CUSTOMERS table. This trigger will display the salary difference between the old values and new values.

1 DESCRIBE CUSTOMERS;

ResultsExplainDescribeSaved SQLHistory

Object TypeTABLEObjectCUSTOMERS

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
CUSTOMERS	ID	NUMBER	22	-	0	1	-	-	-
	NAME	VARCHAR2	30	-	-	-	-	-	-
	AGE	NUMBER	22	-	0	-	✓	-	-
	ADDRESS	VARCHAR2	30	-	-	-	✓	-	-
	SALARY	NUMBER	-	5	2	-	-	-	-

```

1 CREATE OR REPLACE TRIGGER Salary_Diff_Trigger
2 AFTER INSERT OR UPDATE OR DELETE ON CUSTOMERS
3 FOR EACH ROW
4 DECLARE
5     v_diff NUMBER;
6 BEGIN
7     IF INSERTING OR UPDATING THEN
8         IF INSERTING THEN
9             v_diff := :NEW.SALARY;
10        ELSE
11            v_diff := :NEW.SALARY - :OLD.SALARY;
12        END IF;
13
14        DBMS_OUTPUT.PUT_LINE('UPDATE: Salary changed from ' || :OLD.SALARY || ' to ' || :NEW.SALARY || ' (difference: ' || v_diff || ')');
15    ELSIF DELETING THEN
16        DBMS_OUTPUT.PUT_LINE('DELETE: Salary was ' || :OLD.SALARY);
17    END IF;
18 END;
19 /

```

Results Explain Describe Saved SQL History

Trigger created.

0.07 seconds

anoushka13pandey@gmail.com anoushka_20 en

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INSERT OPERATION:

```

1 INSERT INTO CUSTOMERS (ID, NAME, AGE, ADDRESS, SALARY)
2 VALUES (3, 'Ramesh', 32, 'Ahmedabad', 2000.00);

```

UPDATE OPERATION:

```

1 UPDATE CUSTOMERS SET SALARY=3000.00 WHERE ID=1;
2

```

Results

Explain

Describe

Saved SQL

History

0 row(s) updated.

DELETE OPERATION:

```

1 DELETE FROM CUSTOMERS WHERE ID=2;
2

```

Results

Explain

Describe

Saved SQL

History

0 row(s) deleted.