

LAB ASSIGNMENT NO -9

PART B

(PART B: TO BE COMPLETED BY STUDENTS)

(Students must submit the soft copy as per following segments within two hours of the practical. The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge faculties at the end of the practical in case there is no Blackboard access available)

Roll No.: 50	Name: Amey Thakur
Class: TE-Comps B	Batch: B3
Date of Experiment: 24/11/20	Date of Submission: 29/11/20
Grade:	

Create a table

EMP (eno, ename, hrs, pno) and
PROJECT (pname, pno, thrs)

where thrs is the total hours and is the derived attribute. Its value is the sum of hrs of all employees

working on that project. eno and pno are primary keys,. Insert 4 tuples into project table and write triggers to do the following:

Ans:

```
CREATE TABLE EMP(  
    ENO NUMBER,  
    ENAME VARCHAR2(20),  
    HOURS_SPENT NUMBER,  
    PNO NUMBER  
)
```

Table created.

```
CREATE TABLE PROJECTS(  
    PNO NUMBER,  
    PROJ_NAME VARCHAR2(20),  
    TOTAL_HOURS NUMBER  
)
```

Table created.

```
INSERT INTO PROJECTS VALUES (1, 'IMAGE PROCESSING', 0);  
INSERT INTO PROJECTS VALUES (2, 'CLOUD COMPUTING', 0);  
INSERT INTO PROJECTS VALUES (3, 'NETWORKING', 0);  
INSERT INTO PROJECTS VALUES (4, 'MACHINE LEARNING', 0);
```

1 row(s) inserted.
1 row(s) inserted.
1 row(s) inserted.
1 row(s) inserted.

SELECT * FROM PROJECTS

PNO	PROJ_NAME	TOTAL_HOURS
1	IMAGE PROCESSING	0
2	CLOUD COMPUTING	0
3	NETWORKING	0
4	MACHINE LEARNING	0

- A. Creating a trigger to insert a new employee tuple and display the new total_hours (thrs) from project table.
- After trigger creation insert records into employees.
 - Confirm total hrs from project as per employee records.

Ans:

```
CREATE TRIGGER TRIG1
AFTER INSERT ON EMP
FOR EACH ROW
BEGIN
UPDATE PROJECTS
SET TOTAL_HOURS = TOTAL_HOURS + :NEW.HOURS_SPENT WHERE
PNO=:NEW.PNO;
END;
```

Trigger created.

```
INSERT INTO EMP VALUES(101, 'ARCHIT', 8, 4);
INSERT INTO EMP VALUES(102, 'SAAKSHI', 8, 3);
INSERT INTO EMP VALUES(103, 'AMEY', 8, 2);
INSERT INTO EMP VALUES(104, 'MEGA', 8, 1);
```

1 row(s) inserted.
1 row(s) inserted.
1 row(s) inserted.
1 row(s) inserted.

SELECT * FROM EMP

ENO	ENAME	HOURS_SPENT	PNO
101	ARCHIT	8	4
102	SAAKSHI	8	3
103	AMEY	8	2
104	MEGA	8	1

SELECT * FROM PROJECTS

PNO	PROJ_NAME	TOTAL_HOURS
1	IMAGE PROCESSING	8
2	CLOUD COMPUTING	8
3	NETWORKING	8
4	MACHINE LEARNING	8

Updated

- B. Creating a trigger to change the project of an employee and display the new total_hours(thrs) from the project table.

Ans:

```
CREATE TRIGGER TRIG2
AFTER INSERT ON EMP
FOR EACH ROW
BEGIN
UPDATE PROJECTS
SET TOTAL_HOURS = TOTAL_HOURS + :NEW.HOURS_SPENT WHERE
PNO=:NEW.PNO;
END;
```

Trigger created.

```
UPDATE EMP SET PNO=4 WHERE ENO=102;
```

1 row(s) updated.

SELECT * FROM EMP

ENO	ENAME	HOURS_SPENT	PNO
101	ARCHIT	8	4
102	SAAKSHI	8	4
103	AMEY	8	2
104	MEGA	8	1

Updated

SELECT * FROM PROJECTS

PNO	PROJ_NAME	TOTAL_HOURS
1	IMAGE PROCESSING	8
2	CLOUD COMPUTING	8
3	NETWORKING	8
4	MACHINE LEARNING	16

Updated

C. Creating a trigger to deleting the project of an employee.

Ans:

```
CREATE TRIGGER TRIG3
AFTER DELETE ON EMP
FOR EACH ROW
BEGIN
UPDATE PROJECTS
SET TOTAL_HOURS = TOTAL_HOURS - :OLD.HOURS_SPENT WHERE PNO=
:OLD.PNO;
END;
```

Trigger created.

```
DELETE FROM EMP WHERE ENO=103;
DELETE FROM EMP WHERE ENO=104;
```

1 row(s) deleted.

1 row(s) deleted.

SELECT * FROM EMP

ENO	ENAME	HOURS_SPENT	PNO
101	ARCHIT	8	4
102	SAAKSHI	8	4

SELECT * FROM PROJECTS

PNO	PROJ_NAME	TOTAL_HOURS
1	IMAGE PROCESSING	0
2	CLOUD COMPUTING	0
3	NETWORKING	8
4	MACHINE LEARNING	16

Updated after deletion