EX 12   **PL/SQL TRIGGERS**

e_id	e_name	e_salary	e_age	e_gender	e_dept
1	Sam	95000	45	Male	Operations
2	Bob	80000	21	Male	Support
3	Anne	125000	25	Female	Analytics
4	Julia	73000	30	Female	Analytics
5	Matt	159000	33	Male	Sales
6	Jeff	112000	27	Male	Operations

Create a row-level trigger for the EMPLOYEE table that would get executed by the DML statement like UPDATE OR INSERT on that table.

The trigger will compute and show the SALARY difference between current and previous values.(Hint: previous salary: , current salary: , salary difference:)

```
create table emp(e_id int,e_name varchar(20),e_salary int,e_age int,e_gender
varchar(20),e_dept varchar(20));
insert into emp values(1,'Sam',95000,45,'Male','Operations');
insert into emp values(2,'Bob',80000,21,'Male','Support');
insert into emp values(3,'Anne',125000,25,'Female','Analytics');
insert into emp values(4,'Julia',73000,30,'Female','Analytics');
insert into emp values(5,'Matt',159000,33,'Male','Sales');
insert into emp values(6,'Jeff',112000,27,'Male','Operations');
CREATE OR REPLACE TRIGGER display_salary_changes
BEFORE DELETE OR INSERT OR UPDATE ON emp
FOR EACH ROW
WHEN (NEW.e_id > 0)
DECLARE
  sal_diff number;
BEGIN
  sal_diff := :NEW.e_salary  - :OLD.e_salary;
  dbms_output.put_line('Old salary: ' || :OLD.e_salary);
  dbms_output.put_line('New salary: ' || :NEW.e_salary);
```

```
    dbms_output.put_line('Salary difference: ' || sal_diff);
END;
/


UPDATE emp
SET e_salary = e_salary + 1000
WHERE e_id = 2;


INSERT INTO emp VALUES(7,'Ram',100000,44,'Male','Operations');
```

id	first_name	last_name	department_id
1	John	Doe	1
2	Bush	Lily	2
3	David	Dave	3
4	Mary	Jane	4
5	Jonatha	Josh	5
6	Mateo	More	1

Create a trigger for the STUDENT table that would get executed by the DML statement like UPDATE OR INSERT on that table.

The trigger will compute and show the message "Department does not exist if the department_ id is greater than 5".


```
create table student(id int,first_name varchar(20),last_name varchar(20),department_id int);

insert into student values(1,'Josh','Doe',1);

 insert into student values(2,'Bush','Lily',2);

 insert into student values(3,'David','Dave',3);

 insert into student values(4,'Mary','jane',4);

 insert into student values(5,'Jonatha','Josh',5);

 insert into student values(6,'Mateo','More',1);

CREATE OR REPLACE TRIGGER id_war
```

BEFORE DELETE OR INSERT OR UPDATE ON student

FOR EACH ROW

WHEN(NEW.department_id>5)

BEGIN

DBMS_OUTPUT.PUT_LINE('Department does not exist if the department_ id is greater than 5');

END;

/

	DEPARTMENT_ID	MaxSalary	FIRST_NAME	MinSalary	FIRST_NAME
1	10	4400.00	Jennifer	4400.00	Jennifer
2	20	13000.00	Michael	6000.00	Pat
3	30	11000.00	Den	2500.00	Karen
4	40	6500.00	Susan	6500.00	Susan
5	50	8200.00	Adam	2100.00	TJ
6	60	9000.00	Alexander	4200.00	Diana
7	70	10000.00	Hermann	10000.00	Hermann
8	80	14000.00	John	6100.00	Sundita
9	90	24000.00	Steven	17000.00	Lex
10	90	24000.00	Steven	17000.00	Neena
11	100	12008.00	Nancy	6900.00	Luis
12	110	12008.00	Shelley	8300.00	William

Create a trigger for the EMPLOYEE table that would get executed by the DML statement like UPDATE OR INSERT on that table.

The trigger will compute and show the difference between the min salary and max salary.