ASSIGNMENT-9

DBMS LABORATORY

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1. Take the help of implicit cursor to print the total number of rows deleted after a deletion operation performed on a table.

SQL Worksheet

```
1  declare
2  affected char(4);
3  begin
4  delete from emp
5  where empno=7566;
6  affected:=to_char(SQL%ROWCOUNT);
7  dbms_output.put_line('No of Lines affected ' || affected);
8  end;
9  /
```

```
Statement processed.
No of Lines affected 1
```

2. Create a table X that contains two attributes A (number (2)) and B(varchar2(25)). Now, create an explicit cursor that will help you to populate the table X with the value from DEPT table (Ref. Assignment No. - 2) where A is same as deptno and b is same as dname.

```
1  create table X(
2  A number(2),
3  B varchar2(25));
4  declare
5  cursor cur2 is
6  select deptno,dname
7  from dept;
8  a_m dept.deptno%type;
9  b_m dept.dname%type;
10 begin
11 open cur2;
12 if cur2%isopen then
13 delete from emp where empno=7934;
14 loop
15 fetch cur2 into a_m,b_m;
16 exit when cur2%notfound;
17 if cur2%found then
18 insert into x values(a_m,b_m);
19 end if;
20 end loop;
21 commit;
22 else
23 dbms_output.put_line('Unable to open cursor');
24 end if;
25 close cur2;
26 end;
27 /
28 select * from X;
```

A	B
10	Accounting
20	Research
30	Sales
40	Operations

3. Print the second highest salary of the EMP table (Ref. Assignment No. - 2) using an explicit cursor.

SQL Worksheet Clear

```
1  declare
2  cursor cur3 is
3  select max(sal)
4  from emp
5  where sal<(select max(sal) from emp);
6  sal_m emp.sal%type;
7  begin
8  open cur3;
9  if cur3%isopen then
10 fetch cur3 into sal_m;
11 dbms_output.put_line('Second Maximum Salary is '|| to_char(sal_m));
12 else
13 dbms_output.put_line('Unable to open Cursor');
14 end if;
15 close cur3;
16 end;
17 /
```

```
Statement processed.
Second Maximum Salary is 2850
```

4. Create a row trigger that will display the second highest salary of EMP table (or perform any other valid action) after any updation performed on the DEPT table.

SQL Worksheet

Clear Find Actions

```
1  --TRIGGER CREATION
2  create or replace trigger tr1
3  after update on dept
4  for each row
5  declare
6  secondMin emp.sal%type;
7  begin
8  select max(sal) into secondMin
9  from emp
10 where sal<(select max(sal) from emp);
11 dbms_output.put_line('AFTER TRIGGER , Second Highest Salary = '||to_char(secondMin));
12 end;
13 /
14
15 --DEPT TABLE UPDATE
16 update dept
17 set dname='Sales'
18 where deptno=30;
```

```
1 row(s) updated.
AFTER TRIGGER , Second Highest Salary = 3000
```

5. Repeat problem no. 4 for before trigger.

SQL Worksheet Clear Find Actions

```
1  --TRIGGER CREATION
2  create or replace trigger tr2
3  before update on dept
4  for each row
5  declare
6  secondMin emp.sal%type;
7  begin
8  select max(sal) into secondMin
9  from emp
10 where sal<(select max(sal) from emp);
11 dbms_output.put_line('Before Trigger , Second Highest Salary = '||to_char(secondMin));
12 end;
13 /
14
15 -- DEPT TABLE UPDATE
16 update dept
17 set dname='Sales'
18 where deptno=30;
```

```
1 row(s) updated.
Before Trigger , Second Highest Salary = 3000
AFTER TRIGGER , Second Highest Salary = 3000
```

6. Modify the triggers of problem nos. 1 and 2 to statement triggers and observe the changes in the outputs.

SQL Worksheet

```
39
40  -------------------------TRIGGER 3----------------------
41
42  create or replace trigger tr3
43  before update on dept
44  declare
45  SecondMin emp.sal%type;
46  begin
47  select max(sal) into SecondMin
48  from emp
49  where sal<(select max(sal) from emp);
50  dbms_output.put_line('Before Trigger Statement Second Maximum Salary is ' || SecondMin);
51  end;
52  /
53
54
55  create or replace trigger tr4
56  after update on dept
57  declare
58  SecondMin emp.sal%type;
59  begin
60  select max(sal) into SecondMin
61  from emp
62  where sal<(select max(sal) from emp);
63  dbms_output.put_line('After Trigger Statement Second Maximum Salary is ' || SecondMin);
64  end;
65  /
66
67  update dept
68  set loc='Kolkata'
69  where deptno in (10,20);
70
71  ----------------------CURSOR 1--------------------
```

```
Trigger created.


2 row(s) updated.
Before Trigger Statement Second Maximum Salary is 2850
Before Trigger Second Maximum Salary is 2850
After Trigger Second Maximum Salary is 2850
Before Trigger Second Maximum Salary is 2850
After Trigger Second Maximum Salary is 2850
After Trigger Statement Second Maximum Salary is 2850
```