CURSORS

cursor-1

Calculate Interest for Fixed Deposit Amount Using Cursors

```
SQL> SELECT * FROM fixed;

    ACCNO      YEARS     AMOUNT   INTEREST
---------- ---------- ---------- ----------
       201          4       1200          0
       202          3        800          0
       203          6       2000          0
```

```
SQL> DECLARE
  2  CURSOR cur IS SELECT * FROM fixed;
  3  BEGIN
  4  FOR i IN cur
  5  LOOP
  6  IF i.years<=2 THEN
  7          UPDATE fixed SET INTEREST=i.AMOUNT*0.09*(1/12) WHERE
ACCNO=i.ACCNO;
  8  ELSIF i.years>=2 AND i.years<=5 THEN
  9          UPDATE fixed SET INTEREST=i.AMOUNT*0.11*(1/12) WHERE
ACCNO=i.ACCNO;
 10  ELSE
 11          UPDATE fixed SET INTEREST=i.AMOUNT*0.15*(1/12) WHERE
ACCNO=i.ACCNO;
 12  END IF;
 13  END LOOP;
 14  END;
```

```
 15  /
```

PL/SQL procedure successfully completed.

```
SQL> SELECT * FROM fixed;

    ACCNO      YEARS     AMOUNT   INTEREST
---------- ---------- ---------- ----------
      201          4       1200         11
      202          3        800          7
      203          6       2000         25
```

cursor-2

Calculate Electricity Bill Using Cursors

```
SQL> SELECT * FROM eb_cal;

     EBNO NAME                 UNITS    CHARGES
---------- -------------------- ---------- ----------
         201 Sreelakshmi              130       0
         202 Sreehari                  60       0
         203 Nikhil                   450       0
        204   Jyothika                700       0

SQL> DECLARE
  2  CURSOR BILL IS SELECT * FROM eb_cal;
```

```
 3  BEGIN
 4  FOR I IN BILL
 5  LOOP
 6  IF I.UNITS<=100 THEN
 7  UPDATE EBILL SET CHARGES=I.UNITS*1 WHERE EBNO=I.EBNO;
 8  ELSIF I.UNITS>100 AND I.UNITS<=400 THEN
 9  UPDATE EBILL SET CHARGES=I.UNITS*2 WHERE EBNO=I.EBNO;
10  ELSE
11  UPDATE EBILL SET CHARGES=I.UNITS*3 WHERE EBNO=I.EBNO;
12  END IF;
13  END LOOP;
14  END;
15  /
```

PL/SQL procedure successfully completed.

```
SQL> SELECT * FROM eb_cal;
```

EBNO	NAME	UNITS	CHARGES
201	Sreelakshmi	130	260
202	Sreehari	60	60
203	Nikhil	450	1350
204	Jyothika	700	2100

Cursor-3

Write PL/SQL code to update values in create tables by using implicit cursors.

```
SQL> select * from employ;

        ID NAME                 SALARY
---------- -------------------- ----------
         1 Sreelakshmi          12200
         2 Sreehari              19200
         3 Jyothika             56200
         4 Nikhil                23200

SQL> declare
  2  num_rows number(5);
  3  begin
  4  update emp1 set salary=salary+200;
  5  if sql%notfound then
  6  dbms_output.put_line('None of the salaries where updated');
  7  else if sql%found then
  8  num_rows:=sql%rowcount;
  9  dbms_output.put_line('Salaries for '||num_rows||''||' '||'employees are updated');
 10  end if;
 11  end if;
 12  end;
 13  /
Salaries for 4 employees are updated
```

PL/SQL procedure successfully completed.

SQL> select * from employ;

ID	NAME	SALARY
1	Sreelakshmi	12400
2	Sreehari	19400
3	Jyothika	56400
4	Nikhil	23400

Cursor-4

Given the table works(emp_id,company_name,salary).write a cursor to select the 3 heighest paid employees from the table.

SQL> select * from works;

EMP_ID	COMPANY_NAME	SALARY
E-101	SBI	71000
E-102	SBI	90000
E-103	SBT	40000

```
E-104    Federal              37000
E-105       SBT                  17000
SQL> declare
  2  i number:=0;
  3  cursor cur is select emp_id,company_name,salary from works order by salary desc;
  4  r cur%rowtype;
  5  begin
  6  open cur;
  7  loop
  8  exit when i=3;
  9  fetch cur into r;
 10  dbms_output.put_line(r.emp_id||' '||r.company_name||' '||r.salary);
 11  i:=i+1;
 12  end loop;
 13  close cur;
 14  end;
 15  /
E-102    SBI 9000
E-101    SBI 71000
E-103    SBT 40000

PL/SQL procedure successfully completed.
```

Cursor-5

Calculate the final IA and update the corresponding table for all students.

```
SQL> set serveroutput on;

SQL> create table IAmarks(reg_no int primary key,scode varchar(10),Test1 number(10),Test2 number(10),Test3 number(10),Final_IAmarks number(10));

Table created.

SQL> insert into IAmarks values(121,'java121',45,30,40,null);

1 row created.

SQL> insert into IAmarks values(122,'ds123',47,35,49,null);

1 row created.


SQL> select * from IAmarks;

   REG_NO SCODE          TEST1      TEST2      TEST3 FINAL_IAMARKS
---------- ---------- ---------- ---------- ---------- -------------
       121   java121      45                   30                    40
       122   dbms122    46                    50                     48
       123  ds123          47                   35                     49


SQL> create or replace procedure avgmarks is
  2  cursor curs is
```

```
 3  select greatest(Test1,Test2) as A,greatest(Test1,Test3) as B,greatest(Test3,Test2) as C
 4  from IAmarks where Final_IAmarks is null for update;
 5  C_A number;
 6  C_B number;
 7  C_C number;
 8  C_SM number;
 9  C_AV number;
10  begin
11  open curs;
12  loop
13  fetch curs into C_A, C_B, C_C;
14  exit when curs%notfound;
15  dbms_output.put_line(C_A || ' ' || C_B || ' ' || C_C);
16  if (C_A != C_B) then
17  C_SM:=C_A+C_B;
18  else
19  C_SM:=C_A+C_C;
20  end if;
21  C_AV:=C_SM/2;
22  update IAmarks set Final_IAmarks=C_AV where current of curs;
23  end loop;
24  close curs;
25  end;
26  /

Procedure created.
```

SQL> exec avgmarks;

45 45 40

Sum=85

Average=42.5

50 48 50

Sum=98

Average=49

47 49 49

Sum=96

Average=48

PL/SQL procedure successfully completed.

SQL> select * from IAmarks;

REG_NO	SCODE	TEST1	TEST2	TEST3	FINAL_IAMARKS
121	java121	45	30	40	43
122	dbms122	46	50	48	49
123	ds123	47	35	49	48