***PL/SQL LAB 2***

**2.1.3)**DECLARE

-- Create a Record

TYPE empRec IS

RECORD

(

id employee.empno%TYPE,

name employee.ename%TYPE,

hiredate employee.hiredate%TYPE,

salary employee.sal%TYPE,

deptno employee.deptno%TYPE

);

erec empRec;

Err\_Num NUMBER(8);

Err\_Msg VARCHAR2(120);

--- DECLARE EXCEPTION

No\_Such\_Emp EXCEPTION;

BEGIN

-- Select values

SELECT empno,ename,hiredate,sal,deptno

INTO erec

FROM employee

WHERE empno='&emp';

-- Display Output

DBMS\_OUTPUT.PUT\_LINE('\*\*\*\*\*Employee Details\*\*\*\*\*\*\*\*\*');

DBMS\_OUTPUT.PUT\_LINE(' Id :'||erec.id);

DBMS\_OUTPUT.PUT\_LINE(' Name :'||erec.name);

DBMS\_OUTPUT.PUT\_LINE(' hiredate :'||erec.hiredate);

DBMS\_OUTPUT.PUT\_LINE(' Salary :'||erec.salary);

DBMS\_OUTPUT.PUT\_LINE(' Department No :'||erec.deptno);

DBMS\_OUTPUT.PUT\_LINE('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('No Employee Exist with the given code');

WHEN OTHERS THEN

Err\_Num := SQLCODE;

Err\_Msg :=SUBSTR( SQLERRM, 1, 100);

DBMS\_OUTPUT.PUT\_LINE('Error!!! '||err\_num||' '|| err\_msg );

END;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**2.1.4)** DECLARE

deptName department\_master.dept\_name%TYPE;

deptCode department\_master.dept\_code%TYPE;

BEGIN

SELECT dept\_code,dept\_name

INTO deptCode,deptName

FROM department\_master

WHERE dept\_code=820;

DBMS\_OUTPUT.PUT\_LINE('----Employee Details ----');

DBMS\_OUTPUT.PUT\_LINE(' Department Code : '||deptCode);

DBMS\_OUTPUT.PUT\_LINE(' Department Name : '||deptName);

DBMS\_OUTPUT.PUT\_LINE('-----------------------');

EXCEPTION

WHEN NO\_DATA\_FOUND THEN  
 DBMS\_OUTPUT.PUT\_LINE(‘No department details found’);

END;

**2.1.5)** DECLARE

-- Create a Record

TYPE empRec IS

RECORD

(

id employee.empno%TYPE,

name employee.ename%TYPE,

hiredate employee.hiredate%TYPE,

salary employee.sal%TYPE,

deptno employee.deptno%TYPE

);

erec empRec;

BEGIN

-- Select values

SELECT empno,ename,hiredate,sal,deptno

INTO erec

FROM employee

WHERE empno='7369';

-- Display Output

DBMS\_OUTPUT.PUT\_LINE('\*\*\*\*\*Employee Details\*\*\*\*\*\*\*\*\*');

DBMS\_OUTPUT.PUT\_LINE(' Id :'||erec.id);

DBMS\_OUTPUT.PUT\_LINE(' Name :'||erec.name);

DBMS\_OUTPUT.PUT\_LINE(' hiredate :'||erec.hiredate);

DBMS\_OUTPUT.PUT\_LINE(' Salary :'||erec.salary);

DBMS\_OUTPUT.PUT\_LINE(' Department No :'||erec.deptno);

DBMS\_OUTPUT.PUT\_LINE('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

EXCEPTION

WHEN NO\_DATA\_FOUND THEN  
 DBMS\_OUTPUT.PUT\_LINE(‘No employee details found’);

END;

**2.1.6)** --Declare variables and cursor

DECLARE

CURSOR eCur is SELECT staff\_code,staff\_name,staff\_sal FROM staff\_master WHERE dept\_Code=&dept;

ID staff\_master.staff\_code%TYPE;

ename staff\_master.staff\_name%TYPE;

salary staff\_master.staff\_sal%TYPE;

Err\_Num NUMBER(8);

Err\_Msg VARCHAR2(120);

NO\_DATA EXCEPTION;

---Begin select to process rows

BEGIN

OPEN eCur;

-- Process the rows

LOOP

FETCH eCur INTO ID,ename,salary;

DBMS\_OUTPUT.PUT\_LINE('--Employee Details--');

DBMS\_OUTPUT.PUT\_LINE('Id :'||ID);

DBMS\_OUTPUT.PUT\_LINE('Name :'||ename);

DBMS\_OUTPUT.PUT\_LINE('Salary :'||salary);

DBMS\_OUTPUT.PUT\_LINE('--------------------');

EXIT WHEN eCur%NOTFOUND;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE(eCur%ROWCOUNT||' Employee Details displayed');

**IF(eCur%ROWCOUNT=0) THEN**

**RAISE NO\_DATA;**

**END IF;**

CLOSE eCur;

EXCEPTION

WHEN NO\_DATA THEN  
 DBMS\_OUTPUT.PUT\_LINE(‘No staff details found with given department code’);

WHEN CURSOR\_ALREADY\_OPEN THEN

DBMS\_OUTPUT.PUT\_LINE('Opening the wrong cursor');

WHEN OTHERS THEN

Err\_Num := SQLCODE;

Err\_Msg :=SUBSTR( SQLERRM, 1, 100);

DBMS\_OUTPUT.PUT\_LINE('Error!!! '||err\_num||' '|| err\_msg );

END;

**2.1.7)** DECLARE

CURSOR empCUR is SELECT ename,sal FROM emp WHERE deptno='&dept' FOR UPDATE OF sal;

name emp.ename%TYPE;

salary emp.sal%TYPE;

BEGIN

OPEN empCUR;

LOOP

FETCH empCUR INTO name,salary;

EXIT WHEN empCUR%NOTFOUND;

salary:=salary\*0.3;

IF(salary>5000) THEN

UPDATE emp SET sal=sal+5000 WHERE current of empCUR;

DBMS\_OUTPUT.PUT\_LINE('Empname' ||' '||name);

DBMS\_OUTPUT.PUT\_LINE('Empsalary'||' '||salary);

ELSIF(salary<5000) THEN

UPDATE emp SET sal=sal+salary WHERE current of empCUR;

DBMS\_OUTPUT.PUT\_LINE('Empname'||' '||name);

DBMS\_OUTPUT.PUT\_LINE('Empsalary'||' '||salary);

ELSE

DBMS\_OUTPUT.PUT\_LINE(name||' '||salary);

END IF;

END LOOP;

CLOSE empCUR;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('No staff Exist with the given code');

WHEN CURSOR\_ALREADY\_OPEN THEN

DBMS\_OUTPUT.PUT\_LINE('Opening the wrong cursor');

END;

**2.1.8)** DECLARE cursor ecur is SELECT s.student\_name,s.student\_code,sm.subject1,sm.subject2,sm.subject3 FROM student\_master s,student\_marks sm

WHERE

(s.student\_code=sm.student\_code )and (sm.student\_year=&year) AND (s.dept\_code=&dept);

total number(10);

percent number(5);

grade varchar2(2);

id number(5);

name varchar2(10);

m1 number(3);

m2 number(3);

m3 number(3);

Err\_Num NUMBER(8);

Err\_Msg VARCHAR2(120);

NO\_SUCH\_DEPT EXCEPTION;

DCOUNTER number(4);

BEGIN

open ecur;

LOOP

FETCH ecur INTO name,id,m1,m2,m3;

total:=m1+m2+m3;

percent:=(total/300)\*100;

IF(percent>80) THEN

grade:='A';

ELSIF(percent>=70 AND percent<80) THEN

grade:='B';

ELSIF(percent>=60 AND percent<70) THEN

grade:='C';

else

grade:='D';

END IF;

DBMS\_OUTPUT.PUT\_LINE('\*\*\*\*\*\*\*\*\*STUDENT REPORT\*\*\*\*\*\*\*\*\*');

DBMS\_OUTPUT.PUT\_LINE('ID'||id);

DBMS\_OUTPUT.PUT\_LINE('name'||name);

DBMS\_OUTPUT.PUT\_LINE('subject1'||m1);

DBMS\_OUTPUT.PUT\_LINE('subject2'||m2);

DBMS\_OUTPUT.PUT\_LINE('subject3'||m3);

DBMS\_OUTPUT.PUT\_LINE('Total'||total);

DBMS\_OUTPUT.PUT\_LINE('Percentage'||percent);

DBMS\_OUTPUT.PUT\_LINE('Grade'||grade);

DBMS\_OUTPUT.PUT\_LINE('\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*');

EXIT WHEN ecur%NOTFOUND;

END LOOP;

DCOUNTER:=ecur%ROWCOUNT;

**IF(DCOUNTER=0) THEN**

**RAISE NO\_SUCH\_DEPT;**

**END IF;**

CLOSE ecur;

EXCEPTION

WHEN NO\_SUCH\_DEPT THEN  
 DBMS\_OUTPUT.PUT\_LINE(‘No department details found’);

WHEN CURSOR\_ALREADY\_OPEN THEN

DBMS\_OUTPUT.PUT\_LINE('Opening the wrong cursor');

WHEN OTHERS THEN

Err\_Num := SQLCODE;

Err\_Msg :=SUBSTR( SQLERRM, 1, 100);

DBMS\_OUTPUT.PUT\_LINE('Error!!! '||err\_num||' '|| err\_msg );

END;

**2.1.9)** --Declare variables and cursor

DECLARE

CURSOR eCur is SELECT \* FROM staff\_master WHERE dept\_Code='&dept';

emp staff\_master%ROWTYPE;

Err\_Num NUMBER(8);

Err\_Msg VARCHAR2(120);

---Begin select to process rows

BEGIN

OPEN eCur;

-- Process the rows

LOOP

FETCH eCur INTO emp;

DBMS\_OUTPUT.PUT\_LINE('--Staff Details--');

DBMS\_OUTPUT.PUT\_LINE('Id :'||emp.staff\_Code);

DBMS\_OUTPUT.PUT\_LINE('Name :'||emp.staff\_name);

DBMS\_OUTPUT.PUT\_LINE('Salary :'||emp.staff\_sal);

DBMS\_OUTPUT.PUT\_LINE('Hiredate :'||emp.hiredate);

DBMS\_OUTPUT.PUT\_LINE('Department:'||emp.dept\_code);

DBMS\_OUTPUT.PUT\_LINE('--------------------');

EXIT WHEN eCur%NOTFOUND;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE(eCur%ROWCOUNT||' Staff Details displayed');

CLOSE eCur;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN  
 DBMS\_OUTPUT.PUT\_LINE(‘No staff details found with the given department number’);

WHEN CURSOR\_ALREADY\_OPEN THEN

DBMS\_OUTPUT.PUT\_LINE('Opening the wrong cursor');

WHEN OTHERS THEN

Err\_Num := SQLCODE;

Err\_Msg :=SUBSTR( SQLERRM, 1, 100);

DBMS\_OUTPUT.PUT\_LINE('Error!!! '||err\_num||' '|| err\_msg );

END;

**2.2)** DECLARE

v\_sal staff\_master.staff\_sal%TYPE;

v\_bonus v\_sal%TYPE;

BEGIN

SELECT staff\_sal INTO v\_sal

FROM staff\_master

WHERE mgr\_code=10000006;

v\_bonus:=2\*v\_sal;

DBMS\_OUTPUT.PUT\_LINE(‘staff\_salary is’||v\_Sal);

DBMS\_OUTPUT.PUT\_LINE(‘staff\_bonus is’||v\_bonus);

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE(‘Given code is not valid.Enter valid code’);

END;

**2.3)** DECLARE

v\_sal staff\_master.staff\_sal%TYPE;

v\_bonus v\_sal%TYPE;

NO\_DATA\_FOUND EXCEPTION;

CURSOR c1 is SELECT staff\_Sal INTO v\_Sal

FROM staff\_master

WHERE mgr\_code=10000006;

BEGIN

OPEN c1;

LOOP

FETCH c1 INTO v\_sal;

EXIT WHEN c1%NOTFOUND;

v\_bonus:=2\*v\_sal;

DBMS\_OUTPUT.PUT\_LINE(‘staff\_salary is’||v\_Sal);

DBMS\_OUTPUT.PUT\_LINE(‘staff\_bonus is’||v\_bonus);

END LOOP;

IF(c1%ROWCOUNT=0)

THEN

RAISE NO\_DATA\_FOUND;

END IF;

CLOSE c1;

EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE(‘Given manager code is not valid.Enter valid manager code’);

WHEN OTHERS THEN

DBMS\_OUTPUT.PUT\_LINE(‘Multiple rows are selected’);

END;

**2.4)**

DECLARE

fname emp.ename%TYPE;

BEGIN

SELECT ename INTO fname

FROM emp

WHERE 1=2;

DBMS\_OUTPUT.PUT\_LINE('This statement will print');

EXCEPTION

WHEN OTHERS THEN

DBMS\_OUTPUT.PUT\_LINE('Some inner block error');

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('No data found in fname');

END;

**2.5)** DECLARE

fname emp.ename %TYPE;

BEGIN

Select ename into fname from emp where ename=’&fname’;

DBMS\_OUTPUT.PUT\_LINE(‘this statement will print’);

EXCEPTION

WHEN NO\_DATA\_FOUND then

DBMS\_OUTPUT.PUT\_LINE('No data found in fname');

WHEN OTHERS THEN

DBMS\_OUTPUT.PUT\_LINE('Some other block error');

END;

**2.6)** DECLARE

Type emprec is

Record

(

Name emp.ename%type,

Ecomm emp.comm%type,

Ecode emp.empno%type,

Dept emp.deptno%type

);

Erec emprec;

Comm\_null EXCEPTION;

BEGIN  
 SELECT ename,comm,empno,deptno INTO erec FROM emp WHERE emp.empno=7369;

IF(erec.ecomm IS NULL) THEN

RAISE comm\_null;

END IF;

EXCEPTION

WHEN comm\_null THEN

DBMS\_OUTPUT.PUT\_LINE(‘error occured’);

END**;**