Course :   CSE 2004 – Database Management Systems

Lab slot :   L55+ L56

Faculty :   Dr. B Saleena

Ex. No: 8   Date: 22/9/17

PL/SQL Cursors

Create a table Employee Details(eno, ename, address, salary) with minimum five records.

SQL> ALTER TABLE EmployeeDetails ADD CONSTRAINT empno_pk PRIMARY KEY(Emp_No);

Table altered.

Table: EmployeeDetails

EMP_NO	EMP_NAME	SALARY	EMP_ADDRESS
1190	Dhruv Garg	15500	Silicon Valley
3212	Aditya Chitlangia	20000	New York
2948	Raagul Nagendran	8200	London
3206	Aakash Tiwari	21600	Washington D.C.
4464	Chahat Agarwal	8200	Paris
3285	Vishnu Nagpal	18200	Seattle
2616	Rachit Tiwari	16900	Huoston
2781	Shantanu Gupta	7800	Frankfurt
1427	Swaraj Phadtare	16000	Sydney
1426	Aravind Krisnan	13600	Tokyo

10 rows selected.

SQL> DESCRIBE EmployeeDetails;

Name	Null?	Type
EMP_NO	NOT NULL	NUMBER
EMP_NAME	NOT NULL	VARCHAR2(25)
SALARY	NOT NULL	NUMBER
EMP_ADDRESS		VARCHAR2(20)

QUESTION 1

Write a PL/SQL code to using explicit cursors to display the details of all employees with their emp number, name and salary increase by 10%.

CODE

```
SQL> set serveroutput on;
SQL> DECLARE
 2  var_empno EmployeeDetails.Emp_No%TYPE;
 3  var_empname EmployeeDetails.Emp_Name%TYPE;
 4  var_empsal EmployeeDetails.Salary%TYPE;
 5  var_empaddr EmployeeDetails.Emp_Address%TYPE;
 6  CURSOR e_empDetails IS
 7  SELECT Emp_No, Emp_name, Salary, Emp_Address FROM EmployeeDetails;
 8  BEGIN
 9  UPDATE EmployeeDetails SET Salary = Salary + (0.1 * Salary);
10  OPEN e_empDetails;
11  dbms_output.put_line('  Emp num    Emp Name    Salary    Emp Address ');
12  LOOP
13  FETCH e_empDetails INTO var_empno, var_empname, var_empsal, var_empaddr;
14  EXIT WHEN e_empDetails%notfound;
15  dbms_output.put_line(' ' || var_empno || '     ' || var_empname || '     ' || var_empsal || '
' || var_empaddr);
16  dbms_output.put_line(' ');
17  END LOOP;
18  CLOSE e_empDetails;
19  END;
20  /
```

OUTPUT

Emp num	Emp Name	Salary	Emp Address
1190	Dhruv Garg	17050	Silicon Valley
3212	Aditya Chitlangia	22000	New York
2948	Raagul Nagendran	9020	London
3206	Aakash Tiwari	23760	Washington D.C.
4464	Chahat Agarwal	9020	Paris
3285	Vishnu Nagpal	20020	Seattle
2616	Rachit Tiwari	18590	Huoston
2781	Shantanu Gupta	8580	Frankfurt
1427	Swaraj Phadtare	17600	Sydney
1426	Aravind Krisnan	14960	Tokyo

PL/SQL procedure successfully completed.

QUESTION 2

Create an explicit Cursor to read all the employees earning salary >15000 and transfer it to a new table.

SQL> CREATE TABLE EmpHighPay AS (SELECT * FROM EmployeeDetails);

Table created.

SQL> DESCRIBE EmpHighPay;

Name	Null?	Type
EMP_NO	NOT NULL	NUMBER
EMP_NAME	NOT NULL	VARCHAR2(25)
SALARY	NOT NULL	NUMBER
EMP_ADDRESS		VARCHAR2(20)

SQL> ALTER TABLE EmpHighPay ADD CONSTRAINT empnum_pk PRIMARY KEY(Emp_No);

Table altered.

CODE

```
SQL> set serveroutput on;

SQL> DECLARE

 2  var_empno EmployeeDetails.Emp_No%TYPE;

 3  var_empname EmployeeDetails.Emp_Name%TYPE;

 4  var_empsal EmployeeDetails.Salary%TYPE;

 5  var_empaddr EmployeeDetails.Emp_Address%TYPE;

 6  CURSOR e_EmpHighPaid IS

 7  SELECT Emp_No, Emp_Name, Salary, Emp_Address FROM EmployeeDetails WHERE Salary >= 15000;

 8  BEGIN

 9  OPEN e_empHighPaid;

10  dbms_output.put_line(' ');

11  dbms_output.put_line('THE VALUE(s) INSERTED ARE AS FOLLOWS : ');

12  dbms_output.put_line('  Emp No    Emp Name     Salary    Emp Address');

13  LOOP

14  FETCH e_empHighPaid INTO var_empno, var_empname, var_empsal, var_empaddr;

15  EXIT WHEN e_empHighPaid%notfound;

16  dbms_output.put_line(' ' || var_empno || '    ' || var_empname || '    ' || var_empsal || '  ' || var_empaddr);

17  INSERT INTO EmpHighPay(Emp_No, Emp_Name, Salary, Emp_Address) VALUES (var_empno, var_empname, var_empsal, var_empaddr);

18  END LOOP;

19  CLOSE e_empHighPaid;

20  END;

21  /
```

OUTPUT

THE VALUE(s) INSERTED ARE AS FOLLOWS :

Emp No	Emp Name	Salary	Emp Address
1190	Dhruv Garg	17050	Silicon Valley
3212	Aditya Chitlangia	22000	New York
3206	Aakash Tiwari	23760	Washington D.C.
3285	Vishnu Nagpal	20020	Seattle
2616	Rachit Tiwari	18590	Huoston
1427	Swaraj Phadtare	17600	Sydney

PL/SQL procedure successfully completed.

SQL> SELECT * FROM EmpHighPay;

EMP_NO	EMP_NAME	SALARY	EMP_ADDRESS
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1190	Dhruv Garg	17050	Silicon Valley
3212	Aditya Chitlangia	22000	New York
3206	Aakash Tiwari	23760	Washington D.C.
3285	Vishnu Nagpal	20020	Seattle
2616	Rachit Tiwari	18590	Huoston
1427	Swaraj Phadtare	17600	Sydney

6 rows selected.

QUESTION 3

Write an implicit cursor to display the details of employee residing in New York.

CODE

```
SQL> set serveroutput on;

SQL> DECLARE

 2  var_empno EmployeeDetails.Emp_No%TYPE;

 3  var_empname EmployeeDetails.Emp_Name%TYPE;

 4  var_empsal EmployeeDetails.Salary%TYPE;

 5  var_empaddr EmployeeDetails.Emp_Address%TYPE;

 6  BEGIN

 7  SELECT Emp_No, Emp_Name, Salary, Emp_Address

 8  INTO var_empno, var_empname, var_empsal, var_empaddr

 9  FROM EmployeeDetails

10  WHERE Emp_Address = 'New York';

11  dbms_output.put_line('EMPLOYEE DETAILS : ');

12  dbms_output.put_line('Emp num : ' || var_empno);

13  dbms_output.put_line('Emp name : ' || var_empname);

14  dbms_output.put_line('Emp salary : ' || var_empsal);

15  dbms_output.put_line('Emp address : ' || var_empaddr);

16  EXCEPTION

17  WHEN no_data_found THEN

18  dbms_output.put_line('There is no employee who lives in New York!');

19  END;

20  /
```

OUTPUT

EMPLOYEE DETAILS :

Emp num : 3212

Emp name : Aditya Chitlangia

Emp salary : 20000

Emp address : New York

PL/SQL procedure successfully completed.