

Ex.No.: 12 WORKING WITH CURSOR, PROCEDURES AND FUNCTIONS

Date:

Name: Arun Bharathi M B

Roll no:231901007

AIM:

Create PL/SQL Blocks to perform the Item Transaction Operations using CURSOR, FUNCTION and PROCEDURE.

ALGORITHM:

STEP-1: Start.

STEP-2: Create two tables Item Master and Item Trans.

itemmaster(itemid , itemname, stockonhand )

itemtrans(itemid ,itemname ,dateofpurchase ,quantity)

STEP-3: Create a PROCEDURE with id, name and quantity as parameters which make a call to the FUNCTION by passing id, name, dop, and quantity as parameters dop is set as sysdate.

STEP-4: Using FUNCTION fetch each record from the table Item Master using CURSOR inside a Loop statement,

If Item Master's ItemId is equal to the entered ID value then exit the loop otherwise fetch the next record.

loop

fetch master into masterrec

exit when master%notfound

if masterrec.itemid=id then

exit;

end if;

end loop;

STEP-5: If Itemmaster's itemid = id then,

Add the Itemmaster's stockonhand with the given quantity and update the ItemMaster table and insert the Item information into the ItemTrans table.

STEP-6: Else, if the inputted item is not present in the ItemMaster table then insert the

Ex.No.: 12

WORKING WITH CURSOR, PROCEDURES AND

FUNCTIONS Date:

new Item in both the tables.

STEP-7: Call the Procedure by passing the Item informations which calls the

Function. STEP-8: Exit.

### ### Factorial of a Number Using Function

**\*\*1. Program to calculate the factorial of a number using a PL/SQL function.\*\***

```
```sql
CREATE OR REPLACE FUNCTION factorial(n NUMBER) RETURN NUMBER IS
    result NUMBER := 1;
BEGIN
    FOR i IN 1..n LOOP
        result := result * i;
    END LOOP;
    RETURN result;
END factorial;
/
```

-- Testing the function

```
DECLARE
    num NUMBER := 5;
    fact NUMBER;
BEGIN
    fact := factorial(num);
    DBMS_OUTPUT.PUT_LINE('Factorial of ' || num || ' is ' || fact);
END;
/
```
```

---

### ### Program 2: Retrieve Book Information in Library Using IN, INOUT, and OUT Parameters

**\*\*PL/SQL procedure to retrieve book information using `IN`, `INOUT`, and `OUT` parameters.\*\***

```
```sql
CREATE OR REPLACE PROCEDURE get_book_info(
    p_book_id IN NUMBER,
    p_book_name OUT
    VARCHAR2, p_author INOUT
    VARCHAR2
) IS
BEGIN
    SELECT book_name, author INTO p_book_name, p_author
    FROM library_books
    WHERE book_id = p_book_id;

    DBMS_OUTPUT.PUT_LINE('Book Name: ' || p_book_name);
    DBMS_OUTPUT.PUT_LINE('Author: ' || p_author);
END get_book_info;
```

/

-- Testing the procedure

DECLARE

    v\_book\_id NUMBER := 101;

    v\_book\_name VARCHAR2(100);

    v\_author VARCHAR2(100) := 'Unknown Author';

BEGIN

    get\_book\_info(v\_book\_id, v\_book\_name, v\_author);

    DBMS\_OUTPUT.PUT\_LINE('Retrieved Book Info: ' || v\_book\_name || ' by ' || v\_author);

END;

/

---

---

### Program to Display Employee ID and Name Using Explicit Cursor

**\*\*PL/SQL block to display the employee ID and employee name where department number is 11 using an explicit cursor.\*\***

```sql

DECLARE

    CURSOR cen1 IS

        SELECT eid, ename FROM ssempp WHERE dno = 11;

    ecode ssempp.eid%TYPE;

    ename ssempp.ename%TYPE;

BEGIN

    OPEN cen1;

    LOOP

        FETCH cen1 INTO ecode, ename;

        EXIT WHEN cen1%NOTFOUND;

        DBMS\_OUTPUT.PUT\_LINE('Employee ID: ' || ecode || ' and Employee Name: ' || ename);

    END LOOP;

    CLOSE cen1;

END;

/

---

---

### Program to Update Salary Using Implicit Cursor

**\*\*PL/SQL block to update the salary by 5000 where the job is 'Lecturer' and check updates using implicit cursors.\*\***

```sql

DECLARE

    county NUMBER;

BEGIN

    UPDATE ssempp SET sal = sal + 5000 WHERE job = 'lecturer';

    county := SQL%ROWCOUNT;

    IF county > 0 THEN

        DBMS\_OUTPUT.PUT\_LINE('The number of rows updated is ' || county);

    END IF;

    IF SQL%FOUND THEN

        DBMS\_OUTPUT.PUT\_LINE('Employee record modification  
successful'); ELSIF SQL%NOTFOUND THEN

        DBMS\_OUTPUT.PUT\_LINE('No Employee record found with job Lecturer');

    END IF;

END;

/

```