

Assignment No. 6

- Title: Write a PL/SQL block of code using cursor.
- Problem statement: Write a PL/SQL block of code using parametrized cursor, that will merge the data available in the newly created table.
- Objective: To
 - 1) Understand the types of cursors
 - 2) Understand how to use cursors with PL/SQL block.
- S/W & H/W Requirements:
MySQL, PC with the 64-bit OS Fedora or Windows 10, 8 GB RAM.

Theory:

CURSORS:

A cursor is a temporary work area created in the system memory when a SQL command is executed. A cursor contains information on a select statement and the rows of data accessed by it.

This temporary work area is used to store the data retrieved from the database, and manipulate this data. A cursor can hold more than one row, but can process only one row at a time. The set of rows the cursor holds is called the active set.

1) Implicit cursors: These are created by default when DML statements like INSERT, UPDATE and DELETE statements are executed. They are also created when a SELECT statement that returns just one row is executed.

Explicit Cursors - They must be created when you are executing a `SELECT` statement that returns more than one row. Even though the cursor stores multiple records, only one record can be processed at a time, which is called as `current row`. When you fetch a row the `current row` position moves to next row.

Both implicit and explicit cursors have the same functionality, but they differ in the way they are accessed.

Example: Consider the PL/SQL block that uses implicit cursor attributes as shown below:

```

DECLARE var_rows number(5);
BEGIN
    UPDATE Employee
    SET SALARY = Salary + 1000;
    IF SQL% NOTFOUND THEN
        dbms_output.put_line('None of the salaries updated')
    ELSE IF SQL% FOUND THEN
        var_rows := SQL% ROWCOUNT;
        dbms_output.put_line('Salaries for ' || var_rows || ' employees  
are updated');
    END IF; END;

```


In the above example, the salaries of all the employees in the 'employee' table are updated. If none of the employees' salary are updated we get a message 'None of the salaries updated', else we get a message 'Salaries for 1000 employees are updated'. If there are 1000 rows in 'employee' table.

• Test cases:

Input	Expected o/p	Actual o/p	Result
1) select * from OldData	All 8 entries with rollno, name and city displayed	All 8 entries with rollno, name and city displayed	PASS
2) select * from NewData	All 4 entries with rollno, name and city displayed	All 4 entries with rollno, name and city displayed	PASS
3) call mergeTable	Function called, 0 rows affected	Function called, 0 rows affected	PASS
4) select * from newData	All 8 entries displayed	All 8 entries displayed	PASS

• Conclusion: Thus, we learned about cursors, its types, attributes and demonstrated its use by performing the required operations.