

SPPU-TE-COMP-CONTENT - KSKA Git

QUESTIONS:-

Q1) What are different types of cursors? Explain each type with syntax.

ANS. A cursor is a method by which we can assign a name to a result of select statements and manipulate the data within that SQL statement.

- Oracle server uses SQL work areas or result set to execute SQL statements and store its processing information.
- A PL/SQL cursor allows us to name a work-area or result set and accesses its stored information.

There are two main types of cursor:-

- i.) Implicit Cursor.
- ii.) Explicit Cursor.

i) IMPLICIT CURSOR:-

Automatically created by SQL when a SQL statement is executed.

Syntax: No explicit syntax is needed; the cursor is managed by the database system.

For Eg:- Implicit cursor created by SELECT statement.

```
SELECT * FROM Employees;
```

ii) EXPLICIT CURSOR:-

• Declared and controlled by the user.

• Allows for more complex operations.

Syntax: - declare cursor_name cursor for

```
DECLARE cursor_name CURSOR FOR  
SELECT column1, column2 ... FROM table_name;
```

OPEN cursor_name;

```
FETCH NEXT FROM cursor_name INTO variable1, variable2;
```

```
CLOSE cursor_name;
```

```
DEALLOCATE cursor_name;
```

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Q2) What are the different attributes of a cursor?

ANS.

The cursor has various attributes that provide information about the cursor's state.

1.) SQL%OPEN: Returns true if the cursor is currently open.

This statement returns a boolean value TRUE or FALSE.

2.) SQL%FOUND:

Returns true if the last fetch was successful.

This statement will return TRUE if cursor active set is having more than one row to be processed after current row. Otherwise, it returns FALSE.

This statement is used to check all rows in Active sets are processed or not.

3.) SQL%NOTFOUND:

Returns TRUE if the last fetch was unsuccessful.

This statement will return FALSE if an INSERT, UPDATE or DELETE statement is affecting more than one row or a SELECT INTO statement returned more than one row. otherwise, it returns TRUE.

4.) SQL%ROWCOUNT:

Returns the Number of rows fetched so far.

It gives an integer output.

It gives output when affected by a DML statement, or returned by a SELECT INTO statement.

Q3) What is a Parameterized cursor?

ANS.

A Parameterized cursor allows you to pass parameters to the cursors SQL statement, making it flexible for different values.

This is useful when you want to filter results based on variable criteria.

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- In this case, the parameter can be a variable or a literal value passed at runtime.

SYNTAX:-

```
DECLARE cursor-name CURSOR FOR {ANSI}
SELECT column1, column2 FROM table-name WHERE
column3 = : parameter;

OPEN cursor-name;
FETCH NEXT FROM cursor-name INTO variable1, variable2;
CLOSE cursor-name;
DEALLOCATE cursor-name;
```

→ For Example:-

DECLARE

```
v_DeptName employees.department%TYPE := 'Sales';
```

CURSOR Employeecursor IS

```
SELECT employee_id, first_name, last_name  
FROM employees  
WHERE department = v_DeptName;
```

V_EMPID employees.employee-ID%TYPE;

v_FirstName employees.first_name%TYPE;

v_LastName employees.last_name% TYPE

BEGIN

```
open Employeecursor;
```

LOOP

FETCH EmployeeCursor INTO .V_EmpID, V-FirstName,
V-LastName

EXIT WHEN EmployeeCursor %NOT FOUND;

```
DBMS_OUTPUT.PUT_LINE ('ID: ' || v_EmpID || ', Name : ' ||  
v_FirstName || ' ' || v_LastName);
```

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```
    END LOOP;
```

```
CLOSE EmployeeCursor;
```

```
END;
```