

SPPU-TE-COMP-CONTENT - KSKA Git

#

QUESTIONS:-

Q.1)

What are different type 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 statement 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
```

```
SELECT column1, column2 FROM table_name;
```

```
OPEN cursor_name;
```

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

```
CLOSE cursor_name;
```

```
DEALLOCATE cursor_name;
```

SPPU-TE-COMP-CONTENT - KSKA Git

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 cursor's SQL statement, making it flexible for different values.

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

SPPU-TE-COMP-CONTENT - KSKA Git

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

SYNTAX:-

```
DECLARE cursor_name CURSOR FOR  
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 % NOTFOUND;
```

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

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```
END LOOP;
```

```
CLOSE EmployeeCursor;
```

```
END;
```