33231

classmate
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ASSIGNMENT 10

Aim : Write and execute PL/SQL block to implement all types of cursor on above DB.

Problem Statement : • PL/SQL assignments based on created tables
• Write simple PL/SQL programs to perform different operations on tables
• Write cursor and execute it on table

Objective : • To understand PL/SQL
• To understand the concept of cursor.

Theory :-
Cursor :- • Oracle creates a memory area, known as context area for processing an SQL statement which contains all the information needed for processing the statement.
• A cursor is a pointer to this context area. PL/SQL controls the context area through a cursor. A cursor holds the rows returned by a SQL statement. The set of rows the cursor holds is referred to as the active set.
• You can name a cursor so that it could be refered to in a program to fetch and process the rows returned by the SQL statement. There are two types of cursors -
1) Implicit   2) Explicit

Implicit Cursors :- • They are automatically created when an SQL statement is executed, when there is no explicit cursor for the statement. Programmers cannot control the implicit cursors and the information in it.
• Whenever a DML statement is issued, an implicit cursor is associate with it. For INSERT, the cursor holds the data to be inserted. For UPDATE & DELETE, the cursor identifies the rows that would be affected

- Attributes for implicit cursor - % FOUND, % ISOPEN, % NOTFOUND, % ROWCOUNT, % BULK_ROWCOUNT, % BULK_EXCEPTIONS. Any sql cursor attribute will be accessed as sql % attribute_name.

Eg :-
```
declare total_rows number (2);
begin
update customers set salary = salary + 500;
if sql % notfound then
   dbms_output.put_line ('no customers selected');
elsif sql % found then
   total rows := sql % rowcount ;
   dbms_output.put_line (total rows || 'customer selected');
end if;
end;
```

Explicit Cursor : These are program defined cursors for gaining more control over the context area. An explicit cursor should be defined in the declaration section of the PL/SQL block. It is created on a SELECT statement which returns more than one row.

1) Creating : cursor cursor_name is select_statement ;
2) Declaring : cursor c_customers is select id, name from customers;
3) Opening : open c_customers;
4) Fetching : fetch c_customers into c_id, c_name;
5) Closing : close c_customers;

Eg :
```
cursor c_customers is select id, name fron customers
  begin open c_customers; loop
  fetch c_customers into c_id, c_name; end loop;
  close c_customers; end; /
```

Conclusion : Understood the concept of PL/SQL block by implementing all types of cursors on DB.