

Rupesh Dharma

31124

Assignment 6

Title: Cursors (Implicit, Explicit, cursor for loop, parameterized cursors)

problem statement:

Write PLSQL block of code using parameterized cursor that will merge the data available in the newly created table

Objectives:

Understand types of cursors

Understand how to use cursors with PLSQL

S/W H/W requirements:

MySQL, win 10 64 bit, 4GB RAM 512GB SSD

Theory:

Cursor: For the processing of any SQL statement, database needs to allocate memory. This memory is called context area. This area is a part of PGA and is allocated on oracle server.

A cursor is associated with this work area by oracle for multrow queries.

A cursor is a handle or pointer to the context area. The cursor allows to process contents in the context area row by row.

Teacher's Signature

Types of cursors:

1. Implicit cursors

Defined by oracle implicitly.
oracle defines implicit cursor

2. Explicit cursor

These are user defined cursors which are defined in declaration section of PL/SQL block

using a cursor:

1. Declare
2. Open
3. Fetch rows
4. close

Syntax:

Declare

cursor cursor-name is query;

Begin

open cursor-name;

Fetch cursor name into list-of-variables;

close cursor-name;

end;

attributes of explicit cursors:

% FOUND → true if previous fetch return row;

% NOTFOUND → opposite of FOUND

% ISOPEN → true if cursor is open.

% ROWCOUNT → return no. of rows.

Teacher's Signature

Conclusion: successfully implemented concept of cursors to merge data from old to new table.

```
mysql>
mysql> drop database assignment06;
Query OK, 2 rows affected (0.04 sec)
```

```
mysql>
mysql> create database assignment06;
Query OK, 1 row affected (0.00 sec)
```

```
mysql>
mysql> use assignment06;
Database changed
```

```
mysql>
mysql> create table O_Emps(
  ->     id int not null auto_increment,
  ->     name varchar(20) not null,
  ->     salary int not null default 10000,
  ->     primary key(id)
  -> );
Query OK, 0 rows affected (0.02 sec)
```

```
mysql>
mysql> desc O_Emps;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(20)	NO		NULL	
salary	int	NO		10000	

```
3 rows in set (0.00 sec)
```

```
mysql>
mysql> create table N_Emps(
```



Query OK, 0 rows affected (0.02 sec)

```
mysql>
mysql> desc N_Emps;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(20)	NO		NULL	
salary	int	NO		20000	

```
3 rows in set (0.00 sec)
```

```
mysql> insert into O_Emps (id, name)
->      values (1, 'Rupesh'),
->            (2, 'Rohan'),
->            (3, 'Nikhil'),
->            (5, 'Omkar'),
->            (7, 'Dheeraj');
```

```
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql>
mysql> select * from O_Emps;
```

id	name	salary
1	Rupesh	10000
2	Rohan	10000
3	Nikhil	10000
5	Omkar	10000
7	Dheeraj	10000

```
mysql>
mysql> insert into N_Emps (id, name)
->      values (1, 'Rama'),
->            (2, 'Ramesh'),
->            (3, 'Omkar');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

```

+-----+-----+-----+
| id | name | salary |
+-----+-----+-----+
| 1 | Rama | 20000 |
| 2 | Ramesh | 20000 |
| 3 | omkar | 20000 |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

```
mysql>
mysql> delimiter //
mysql>
mysql> create procedure merge()
-> begin
->     declare v_name varchar(20);
->     declare v_salary int;
->     declare c1 cursor for select name, salary from O_Emps;
->     declare exit handler for NOT FOUND select "Successfully Merged";
->     open c1;
->     loop
->         fetch c1 into v_name, v_salary;
->         if v_name not in (select name from N_Emps) then
->             insert into N_Emps (name, salary) values (v_name, v_salary);
->         end if;
->     end loop;
->     close c1;
-> end //
```

Query OK, 0 rows affected (0.01 sec)

```
mysql>
mysql> delimiter ;
mysql>
mysql> select * from N_Emps;
```

id	name	salary
1	Rama	20000
2	Ramesh	20000
3	Omkar	20000

3 rows in set (0.00 sec)



MySQL 8.0 Command Line Client - Unicode

```
mysql>
```

```
mysql> call merge();
```

```
+-----+
| Successfully Merged |
```

```
+-----+
| Successfully Merged |
```

```
+-----+
1 row in set (0.01 sec)
```

Query OK, 0 rows affected (0.02 sec)

mysql>

```
mysql> select * from N_Emps;
```

```
+---+-----+-----+
| id | name      | salary |
+---+-----+-----+
```

1	Rama	20000
---	------	-------

2	Ramesh	20000
3	Omkar	20000

4	Rupesh	10000
5	Rohan	10000

6	Nikhil	10000
7	Dheeraj	10000

```
+-----+-----+-----+
7 rows in set (0.00 sec)
```

```
mysql> _
```