


|   |   |  |
|---|---|--|
|    | <p>Bansilal Ramnath Agarwal Charitable Trust's<br/>Vishwakarma Institute of Information Technology</p> <p><b>Department of<br/>Artificial Intelligence and Data Science</b></p> |  |
| <p><b>Student Name:</b> Siddhesh Dilip Khairnar</p>   |   |  |
| <p><b>Class:</b> SY</p>   | <p><b>Division:</b> B</p>   | <p><b>Roll No:</b>272028</p>                 |
| <p><b>Semester:</b> III</p>   |   | <p><b>Academic Year:</b>2022-23</p>          |
| <p><b>Subject Name &amp; Code:</b> DBMS, ADUA21204</p>  |   |  |
| <p><b>Title of Assignment:</b> Write a PL/SQL code to implement all types of cursors and display employee number, name and salary of 5 highest paid employees using cursor.</p> |   |  |
| <p><b>Date of Performance:</b> 09-11-2022</p>   |   | <p><b>Date of Submission:</b> 16-11-2022</p> |

**Aim:** Write a PL/SQL code to implement all types of cursors and display employee number, name and salary of 5 highest paid employees using cursor.

**Problem Statement:** Write a PL/SQL code to implement all types of cursors (Implicit, Explicit) and display employee number, name and salary of 5 highest paid employees using cursor. Employee (employeenno, employeename, join\_date, designation, salary)

## Background information:

|           |
|-----------|
| PAGE NO.: |
| DATE: / / |

### ASSIGNMENT - 4

Q1 What is PL/SQL Procedures & Function?

Ans PL/SQL stored procedure is a PL/SQL block which perform multiple specific tasks.

Syntax:->

```
CREATE PROCEDURE name of procedures  
[ ( Parameter [ Parameter ] ) ]
```

IS

[ declaration ]

BEGIN

execution

[ EXCEPTION

exception\_section ]

END [ name of Procedure ]

PL/SQL function is similar to PL/SQL Procedure. PL/SQL function must always return a value where as ~~procedure~~ procedure may or may not return a value.

Q2 What is cursor?

Ans Cursor is used to retrieve data with one row at a time from a result set. SQL command operate on all rows in result set at one time whereas cursor is used to retrieve data with one row at a time.

Q3 Syntax of cursor?

Ans Declare the cursor cursor name

open the cursor

fetch cursor name into variable

close cursor name.

## Software Requirements: MYSQL Shell

CI X

### Program code with experimental result:

```
Type '\help' or '\?' for help; '\quit' to exit.
MySQL JS > \sql
Switching to SQL mode... Commands end with ;
MySQL SQL > \connect root@localhost:3306
Creating a session to 'root@localhost:3306'
Fetching global names for auto-completion... Press ^C to stop.
Your MySQL connection id is 17
Server version: 8.0.31 MySQL Community Server - GPL
No default schema selected; type 'use <schema>' to set one.
MySQL localhost:3306 ssl SQL > use mysql;
Default schema set to 'mysql'.
Fetching global names, object names from 'mysql' for auto-completion... Press ^C to stop.
MySQL localhost:3306 ssl mysql SQL > select * from employee;
+-----+-----+-----+-----+-----+
| empno | empname | join_date | designation | salary |
+-----+-----+-----+-----+-----+
| 1 | AAA | 14032003 | HR | 50000 |
| 2 | BBB | 15032003 | Manager | 45000 |
| 3 | CCC | 16032004 | Designer | 60000 |
| 4 | DDD | 17032004 | Employee | 30000 |
| 5 | EEE | 16052009 | Executive | 40000 |
+-----+-----+-----+-----+-----+
5 rows in set (0.0007 sec)
MySQL localhost:3306 ssl mysql SQL > delimiter $$;
MySQL localhost:3306 ssl mysql SQL > create procedure assign();
-> begin
-> Declare empno int;
-> declare sal int;
-> declare name varchar(20);
-> declare done int default 0;
-> declare c cursor for select empno,empname,salary from employee a where 5 > (select count(distinct
-> salary) from employee b where b.salary>=a.salary)order by a.salary desc;
-> DECLARE CONTINUE HANDLER FOR NOT FOUND SET done=TRUE;
-> open c;
-> cursorloop:loop
-> if done=true then
-> leave cursorloop;
-> ^C
mysql> delimiter $$;
mysql> create procedure assign5();
-> begin
-> Declare empno int;
-> declare sal int;
-> declare name varchar(20);
-> declare done int default 0;
-> declare c cursor for select empno,empname,salary from employee a where 5>(select count(distinct salary) from employee b where b.salary>=a.salary) order by a.s
-> lary desc;
-> DECLARE CONTINUE HANDLER FOR NOT FOUND SET done=TRUE;
-> open c;
-> cursorloop:loop
-> if done=true then
-> leave cursorloop;
-> end if;
-> fetch c into empno,name,sal;
-> select empno,name,sal;
-> end loop cursorloop;
-> Close c;
-> End; $$
```

```
MySQL localhost:3306 ssl mysql SQL> call assign5();
```

```
+-----+-----+-----+  
| empno | name | sal |  
+-----+-----+-----+  
| NULL  | CCC  | 60000 |  
+-----+-----+-----+  
1 row in set (0.0050 sec)
```

```
+-----+-----+-----+  
| empno | name | sal |  
+-----+-----+-----+  
| NULL  | AAA  | 50000 |  
+-----+-----+-----+  
1 row in set (0.0050 sec)
```

```
+-----+-----+-----+  
| empno | name | sal |  
+-----+-----+-----+  
| NULL  | BBB  | 45000 |  
+-----+-----+-----+  
1 row in set (0.0050 sec)
```

```
+-----+-----+-----+  
| empno | name | sal |  
+-----+-----+-----+  
| NULL  | EEE  | 40000 |  
+-----+-----+-----+  
1 row in set (0.0050 sec)
```

```
+-----+-----+-----+  
| empno | name | sal |  
+-----+-----+-----+  
| NULL  | DDD  | 30000 |  
+-----+-----+-----+  
1 row in set (0.0050 sec)
```

```
+-----+-----+-----+  
| empno | name | sal |  
+-----+-----+-----+  
| NULL  | DDD  | 30000 |  
+-----+-----+-----+
```

**Conclusion:** From this assignment I learned how to Use pl/SQL and cursor and form queries to have desired output