OPEN ENDED EXPERIMENT - 2

Aim: Implementation of Cursors in SQL.

Software Used: MySQL

Theory:

To demonstrate Cursors in MySQL, we use the following tables.

```
CREATE TABLE customer (
 id int PRIMARY KEY,
 c_name nvarchar(45) NOT NULL,
 email nvarchar(45) NOT NULL,
 city nvarchar(25) NOT NULL
 );
```

Next, we will insert values into the table

```
INSERT INTO customer (id, c_name, email, city)
VALUES (1,'Steffen', 'stephen@javatpoint.com', 'Texas'),
(2, 'Joseph', 'Joseph@javatpoint.com', 'Alaska'),
(3, 'Peter', 'Peter@javatpoint.com', 'California'),
(4,'Donald', 'donald@javatpoint.com', 'New York'),
(5, 'Kevin', 'kevin@javatpoint.com', 'Florida'),
(6, 'Marielia', 'Marielia@javatpoint.com', 'Arizona'),
(7,'Antonio', 'Antonio@javatpoint.com', 'New York'),
(8, 'Diego', 'Diego@javatpoint.com', 'California');
```

We can verify the data by executing the SELECT statement:

```
SELECT * FROM customer;
```

After executing the query,

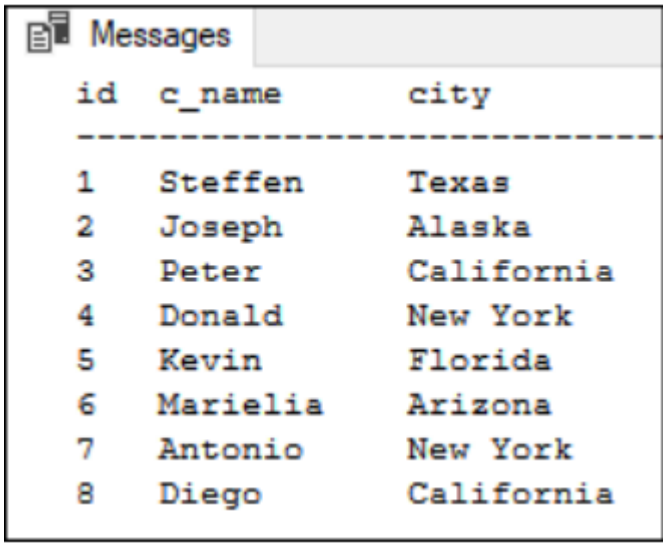
id	c_name	email	city
1	Steffen	stephen@javatpoint.com	Texas
2	Joseph	Joseph@javatpoint.com	Alaska
3	Peter	Peter@javatpoint.com	California
4	Donald	donald@javatpoint.com	New York
5	Kevin	kevin@javatpoint.com	Florida
6	Marielia	Marielia@javatpoint.com	Arizona
7	Antonio	Antonio@javatpoint.com	New York
8	Diego	Diego@javatpoint.com	California

Now, we will create a cursor to display the customer records.

```
--Declare the variables for holding data.
DECLARE @id INT, @c_name NVARCHAR(50), @city NVARCHAR(50)

--Declare and set counter.
DECLARE @Counter INT
SET @Counter = 1

--Declare a cursor
DECLARE PrintCustomers CURSOR
FOR
SELECT id, c_name, city FROM customer

--Open cursor
OPEN PrintCustomers

--Fetch the record into the variables.
FETCH NEXT FROM PrintCustomers INTO
```

```
@id, @c_name, @city

--LOOP UNTIL RECORDS ARE AVAILABLE.
WHILE @@FETCH_STATUS = 0
 BEGIN
 IF @Counter = 1
 BEGIN
 PRINT 'id' + CHAR(9) + 'c_name' + CHAR(9) + CHAR(9) + 'city'
 PRINT '-------------------------'
 END

 --Print the current record
 PRINT CAST(@id AS NVARCHAR(10)) + CHAR(9) + @c_name + CHAR(9) +
CHAR(9
) + @city

 --Increment the counter variable
 SET @Counter = @Counter + 1

 --Fetch the next record into the variables.
 FETCH NEXT FROM PrintCustomers INTO
 @id, @c_name, @city
 END

--Close the cursor
CLOSE PrintCustomers

--Deallocate the cursor
DEALLOCATE PrintCustomers
```

After executing a cursor, we will get


Messages

id	c_name	city
1	Steffen	Texas
2	Joseph	Alaska
3	Peter	California
4	Donald	New York
5	Kevin	Florida
6	Marielia	Arizona
7	Antonio	New York
8	Diego	California

Conclusion: Cursor queries were demonstrated.