

Subject Code : CSA0540

Subject Name: DBMS (Database for Mobile Systems)

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Department: ai&ml(2ndyear)

Ex=10 Cursor – Implicit and Explicit

Create a table employee and insert 30 records and implement the above cursor concepts with example.

```
mysql> create database db;
Query OK, 1 row affected (0.01 sec)

mysql> use db;
Database changed
mysql> CREATE TABLE employee (
  -> id INT AUTO_INCREMENT PRIMARY KEY,
  -> name VARCHAR(50),
  -> age INT,
  -> salary DECIMAL(10,2),
  -> department VARCHAR(50)
  -> );
Query OK, 0 rows affected (0.04 sec)

mysql>
mysql> INSERT INTO employee (name, age, salary, department)
  -> VALUES
  -> ("John Doe", 25, 50000, "IT"),
  -> ("Jane Doe", 32, 55000, "Marketing"),
  -> ("Jim Smith", 28, 45000, "HR"),
  -> ("Sarah Johnson", 35, 60000, "Sales"),
  -> ("Mike Brown", 22, 35000, "IT"),
  -> ("Emily Davis", 30, 52000, "Marketing"),
  -> ("William Wilson", 26, 48000, "HR"),
  -> ("Elizabeth Wilson", 33, 58000, "Sales"),
  -> ("Daniel Smith", 27, 46000, "IT"),
  -> ("Jessica Anderson", 24, 49000, "Marketing"),
  -> ("Thomas Wilson", 29, 51000, "HR"),
  -> ("Deborah Smith", 31, 56000, "Sales"),
  -> ("David Johnson", 25, 50000, "IT"),
  -> ("Susan Davis", 33, 57000, "Marketing"),
  -> ("William Anderson", 26, 49000, "HR"),
  -> ("Elizabeth Johnson", 32, 56000, "Sales"),
  -> ("Christopher Smith", 28, 47000, "IT"),
  -> ("Samantha Anderson", 31, 55000, "Marketing"),
  -> ("Michael Davis", 24, 45000, "HR"),
  -> ("Sarah Wilson", 34, 59000, "Sales"),
  -> ("James Anderson", 27, 48000, "IT"),
  -> ("Jane Smith", 31, 50000, "Marketing"),
  -> ("William Wilson", 29, 51000, "HR"),
  -> ("Emily Johnson", 25, 50000, "Sales"),
  -> ("Christopher Anderson", 26, 49000, "IT"),
  -> ("Samantha Smith", 32, 56000, "Marketing"),
  -> ("Michael Johnson", 24, 45000, "HR"),
  -> ("Sarah Davis", 33, 57000, "Sales");
Query OK, 28 rows affected (0.02 sec)
Records: 28 Duplicates: 0 Warnings: 0

mysql> desc table employee;
```

	id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
	1		employee		PRIMARY		id	4		28	100	

```
MySQL 8.0 Command Line CL X +
| 21 | James Anderson | 27 | 48000.00 | IT |
| 22 | Jane Smith | 31 | 54000.00 | Marketing |
| 23 | William Wilson | 29 | 51000.00 | HR |
| 24 | Emily Johnson | 25 | 50000.00 | Sales |
| 25 | Christopher Anderson | 26 | 49000.00 | IT |
| 26 | Samantha Smith | 32 | 55000.00 | Marketing |
| 27 | Michael Johnson | 24 | 45000.00 | HR |
| 28 | Sarah Davis | 33 | 57000.00 | Sales |
+-----+
28 rows in set (0.00 sec)

mysql> DELIMITER $$
mysql> CREATE PROCEDURE cursor_example()
-> BEGIN
-> DECLARE done INT DEFAULT 0;
-> DECLARE id, age INT;
-> DECLARE name, department VARCHAR(50);
-> DECLARE salary DECIMAL(10,2);
-> DECLARE cur CURSOR FOR SELECT id, name, age, salary, department FROM employee;
-> DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
->
-> OPEN cur;
->
-> read_loop: LOOP
-> FETCH cur INTO id, name, age, salary, department;
-> IF done THEN
-> LEAVE read_loop;
-> END IF;
-> SELECT id, name, age, salary, department;
-> END LOOP;
->
-> CLOSE cur;
-> END $$
Query OK, 0 rows affected (0.02 sec)

mysql> DELIMITER ;
mysql>
mysql> CALL cursor_example();
+-----+
| id | name | age | salary | department |
+-----+
| NULL | NULL | NULL | NULL | NULL |
+-----+
1 row in set (0.01 sec)

+-----+
| id | name | age | salary | department |
+-----+
| NULL | NULL | NULL | NULL | NULL |
+-----+
1 row in set (0.02 sec)
```

```
MySQL 8.0 Command Line CL X +
| 21 | James Anderson | 27 | 48000.00 | IT |
| 22 | Jane Smith | 31 | 54000.00 | Marketing |
| 23 | William Wilson | 29 | 51000.00 | HR |
| 24 | Emily Johnson | 25 | 50000.00 | Sales |
| 25 | Christopher Anderson | 26 | 49000.00 | IT |
| 26 | Samantha Smith | 32 | 55000.00 | Marketing |
| 27 | Michael Johnson | 24 | 45000.00 | HR |
| 28 | Sarah Davis | 33 | 57000.00 | Sales |
+-----+
28 rows in set (0.00 sec)

mysql> DELIMITER $$
mysql> CREATE PROCEDURE cursor_example()
-> BEGIN
-> DECLARE done INT DEFAULT 0;
-> DECLARE id, age INT;
-> DECLARE name, department VARCHAR(50);
-> DECLARE salary DECIMAL(10,2);
-> DECLARE cur CURSOR FOR SELECT id, name, age, salary, department FROM employee;
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-> OPEN cur;
->
-> read_loop: LOOP
-> FETCH cur INTO id, name, age, salary, department;
-> IF done THEN
-> LEAVE read_loop;
-> END IF;
-> SELECT id, name, age, salary, department;
-> END LOOP;
->
-> CLOSE cur;
-> END $$
Query OK, 0 rows affected (0.02 sec)

mysql> DELIMITER ;
mysql>
mysql> CALL cursor_example();
+-----+
| id | name | age | salary | department |
+-----+
| NULL | NULL | NULL | NULL | NULL |
+-----+
1 row in set (0.01 sec)

+-----+
| id | name | age | salary | department |
+-----+
| NULL | NULL | NULL | NULL | NULL |
+-----+
1 row in set (0.02 sec)
```

```
MySQL 8.0 Command Line CL  X  +  -  
+-----+  
| NULL | NULL | NULL | NULL | NULL |  
+-----+  
1 row in set (0.09 sec)  
  
+-----+  
| id | name | age | salary | department |  
+-----+  
| NULL | NULL | NULL | NULL | NULL |  
+-----+  
1 row in set (0.09 sec)  
  
+-----+  
| id | name | age | salary | department |  
+-----+  
| NULL | NULL | NULL | NULL | NULL |  
+-----+  
1 row in set (0.10 sec)  
  
+-----+  
| id | name | age | salary | department |  
+-----+  
| NULL | NULL | NULL | NULL | NULL |  
+-----+  
1 row in set (0.10 sec)  
  
+-----+  
| id | name | age | salary | department |  
+-----+  
| NULL | NULL | NULL | NULL | NULL |  
+-----+  
1 row in set (0.10 sec)  
  
+-----+  
| id | name | age | salary | department |  
+-----+  
| NULL | NULL | NULL | NULL | NULL |  
+-----+  
1 row in set (0.11 sec)  
  
Query OK, 0 rows affected (0.12 sec)  
  
mysql> |
```