10. Cursor – Implicit and Explicit

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

```
mysql> CREATE TABLE employee (
    ->     id INT PRIMARY KEY,
    ->     name VARCHAR(50),
    ->     department VARCHAR(50),
    ->     salary INT
    -> );
Query OK, 0 rows affected (0.05 sec)

mysql>
mysql> INSERT INTO employee (id, name, department, salary)
    -> VALUES (1, 'John Doe', 'Sales', 30000),
    ->        (2, 'Jane Smith', 'Marketing', 40000),
    ->        (3, 'Bob Johnson', 'Sales', 35000),
    ->        (4, 'Mary Lee', 'IT', 50000),
    ->        (5, 'Tom Jones', 'Marketing', 45000),
    ->        (6, 'Samantha Lee', 'Sales', 40000),
    ->        (7, 'Chris Brown', 'IT', 60000),
    ->        (8, 'Sarah Miller', 'Marketing', 35000),
    ->        (9, 'David Lee', 'Sales', 30000),
    ->        (10, 'Emily Davis', 'IT', 55000),
    ->        (11, 'Alex Johnson', 'Marketing', 45000),
    ->        (12, 'Jacob Smith', 'Sales', 40000),
    ->        (13, 'Maria Rodriguez', 'IT', 65000),
    ->        (14, 'Andrew Lee', 'Marketing', 35000),
    ->        (15, 'Jessica Brown', 'Sales', 30000),
    ->        (16, 'Mark Davis', 'IT', 50000),
    ->        (17, 'Olivia Johnson', 'Marketing', 45000),
    ->        (18, 'Ethan Smith', 'Sales', 40000),
    ->        (19, 'Sophia Rodriguez', 'IT', 60000),
    ->        (20, 'Michael Lee', 'Marketing', 35000),
    ->        (21, 'Isabella Brown', 'Sales', 30000),
    ->        (22, 'William Davis', 'IT', 55000),
    ->        (23, 'Ava Johnson', 'Marketing', 45000),
    ->        (24, 'Liam Smith', 'Sales', 40000),
    ->        (25, 'Emma Rodriguez', 'IT', 65000),
    ->        (26, 'Noah Lee', 'Marketing', 35000),
    ->        (27, 'Mia Brown', 'Sales', 30000),
    ->        (28, 'James Davis', 'IT', 50000),
    ->        (29, 'Abigail Johnson', 'Marketing', 45000),
    ->        (30, 'Benjamin Smith', 'Sales', 40000);
Query OK, 30 rows affected (0.01 sec)
Records: 30  Duplicates: 0  Warnings: 0
```

```
mysql> DELIMITER $$
mysql> CREATE PROCEDURE print_employee_salaries()
    -> BEGIN
    ->     DECLARE done INT DEFAULT FALSE;
    ->     DECLARE emp_name VARCHAR(50);
    ->     DECLARE emp_salary INT;
    ->     DECLARE cur CURSOR FOR SELECT name, salary FROM employee;
    ->     DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = TRUE;
    ->
    ->     OPEN cur;
    ->
    ->     read_loop: LOOP
    ->         FETCH cur INTO emp_name, emp_salary;
    ->         IF done THEN
    ->             LEAVE read_loop;
    ->         END IF;
    ->
    ->         SELECT CONCAT(emp_name, ' earns ', emp_salary, ' per year.') AS message;
    ->     END LOOP;
    ->
    ->     CLOSE cur;
    -> END$$
Query OK, 0 rows affected (0.14 sec)

mysql> DELIMITER ;
mysql> CALL print_employee_salaries();
+--------------------------------+
| message                        |
+--------------------------------+
| John Doe earns 30000 per year. |
+--------------------------------+
1 row in set (0.01 sec)

+---------------------------------+
| message                         |
+---------------------------------+
| Jane Smith earns 40000 per year. |
+---------------------------------+
1 row in set (0.02 sec)

+----------------------------------+
| message                          |
+----------------------------------+
| Bob Johnson earns 35000 per year. |
+----------------------------------+
1 row in set (0.04 sec)

+--------------------------------+
| message                        |
+--------------------------------+
| Mary Lee earns 50000 per year. |
+--------------------------------+
```