CREATE THE FOLLOWING DATABASE SCHEMA EMP-DEPT WITH ALL SPECIFIED CONSTRAINTS AND USE IT TO ANSWER THE GIVEN QUERIES.

A.DEPARTMENT Schema

Dno Integer No PRI NULL
Dname Varchar(50) Yes NULL
Location Varchar(50) Yes New Delhi

B. EMPLOYEE Schema

Field Type NULL KEY DEFAULT

Eno Char(3) NO PRI NIL

Ename Varchar(50) NO NIL

Job_type Varchar(50) NO NIL

SupervisonENO Char(3) Yes FK NIL

Hire_date Date NO NIL

Dno Integer YES FK NIL

Commission Decimal(10,2) YES NIL

Salary Decimal(7,2) NO NIL

MariaDB [(none)]> CREATE SCHEMA EMP_DEPT;

```
MariaDB [(none)]> CREATE SCHEMA EMP_DEPT;
Query OK, 1 row affected (0.001 sec)
```

MariaDB [(none)]> USE EMP_DEPT;

```
MariaDB [(none)]> USE EMP_DEPT;
Database changed
```

MariaDB [EMP_DEPT]> CREATE TABLE DEPARTMENT(DNO INT NOT NULL,

-> DNAME VARCHAR(50),

-> LOCATION VARCHAR(50) DEFAULT 'NEW DELHI' ,

-> PRIMARY KEY(DNO));

```
MariaDB [EMP_DEPT]> CREATE TABLE DEPARTMENT(DNO INT NOT NULL,
    -> DNAME VARCHAR(50),
    -> LOCATION VARCHAR(50) DEFAULT 'NEW DELHI' ,
    -> PRIMARY KEY(DNO));
Query OK, 0 rows affected (0.053 sec)
```

MariaDB [EMP_DEPT]> CREATE TABLE EMPLOYEE (ENO CHAR(3) NOT NULL ,

-> ENAME VARCHAR(50) NOT NULL,

-> JOB_TYPE VARCHAR(50) NOT NULL,

-> S_ENO CHAR(3),

-> HIRE_DATE DATE NOT NULL,

-> DNO INT,

-> COMMISSION DECIMAL(10,2),

-> SALARY DECIMAL(7,2) NOT NULL,

-> PRIMARY KEY(ENO) ,

-> FOREIGN KEY(DNO) REFERENCES DEPARTMENT(DNO),

-> FOREIGN KEY(S_ENO) REFERENCES EMPLOYEE(ENO));

```
MariaDB [EMP_DEPT]> SHOW TABLES;
+--------------------+
| Tables_in_emp_dept |
+--------------------+
| department         |
| employee           |
+--------------------+
```

DESC COMMAND ->

```
MariaDB [EMP_DEPT]> DESC DEPARTMENT;
+----------+-------------+------+-----+-----------+-------+
| Field    | Type        | Null | Key | Default   | Extra |
+----------+-------------+------+-----+-----------+-------+
| DNO      | int(11)     | NO   | PRI | NULL      |       |
| DNAME    | varchar(50) | YES  |     | NULL      |       |
| LOCATION | varchar(50) | YES  |     | NEW DELHI |       |
+----------+-------------+------+-----+-----------+-------+
3 rows in set (0.022 sec)

MariaDB [EMP_DEPT]> DESC EMPLOYEE;
+------------+---------------+------+-----+---------+-------+
| Field      | Type          | Null | Key | Default | Extra |
+------------+---------------+------+-----+---------+-------+
| ENO        | char(3)       | NO   | PRI | NULL    |       |
| ENAME      | varchar(50)   | NO   |     | NULL    |       |
| JOB_TYPE   | varchar(50)   | NO   |     | NULL    |       |
| S_ENO      | char(3)       | YES  | MUL | NULL    |       |
| HIRE_DATE  | date          | NO   |     | NULL    |       |
| DNO        | int(11)       | YES  | MUL | NULL    |       |
| COMMISSION | decimal(10,2) | YES  |     | NULL    |       |
| SALARY     | decimal(7,2)  | NO   |     | NULL    |       |
+------------+---------------+------+-----+---------+-------+
8 rows in set (0.020 sec)
```

PUT VALUES IN DEPARTMENT ->

MariaDB [EMP_DEPT]> INSERT INTO DEPARTMENT VALUES

-> (10,'ACCOUNTING' , 'KOLKATA'),

-> (20,'RESEARCH' , 'CHENNAI'),

-> (30,'SALES' , 'HARYANA'),

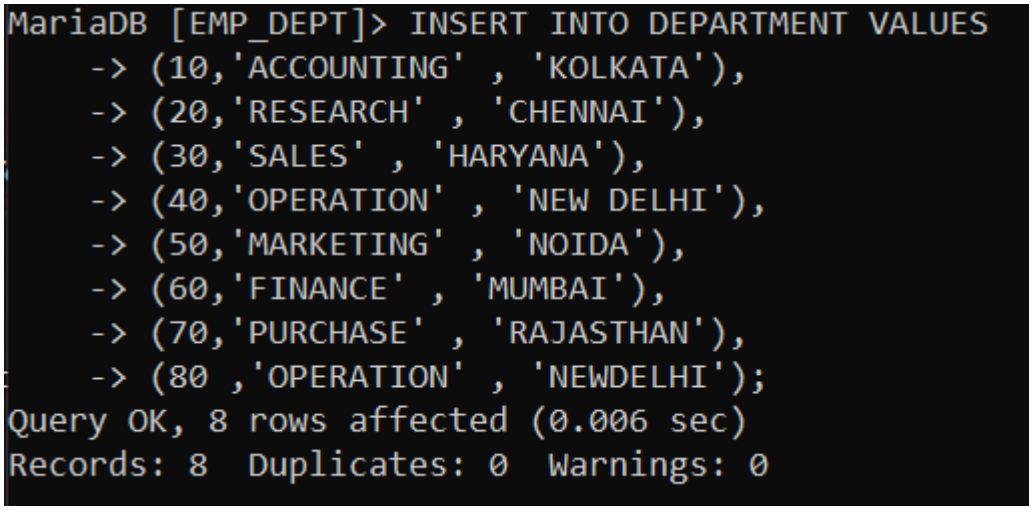
-> (40,'OPERATION' , 'NEW DELHI'),

-> (50,'MARKETING' , 'NOIDA'),

-> (60,'FINANCE' , 'MUMBAI'),

-> (70,'PURCHASE' , 'RAJASTHAN'),

-> (80 ,'OPERATION' , 'NEWDELHI');



```
MariaDB [EMP_DEPT]> SELECT * FROM DEPARTMENT;
+-----+------------+-----------+
| DNO | DNAME      | LOCATION  |
+-----+------------+-----------+
|  10 | ACCOUNTING | KOLKATA   |
|  20 | RESEARCH   | CHENNAI   |
|  30 | SALES      | HARYANA   |
|  40 | OPERATION  | NEW DELHI |
|  50 | MARKETING  | NOIDA     |
|  60 | FINANCE    | MUMBAI    |
|  70 | PURCHASE   | RAJASTHAN |
|  80 | OPERATION  | NEWDELHI  |
+-----+------------+-----------+
8 rows in set (0.004 sec)
```

PUT VALUES IN EMPLOYEE ->

MariaDB [EMP_DEPT]> INSERT INTO EMPLOYEE(ENO , ENAME , JOB_TYPE, HIRE_DATE , DNO ,COMMISSION , SALARY) VALUE

-> ('124' , 'ABC' , 'CLERK' , '2010-12-09',10 , 20000.00,49000.00),

-> ('129' , 'DEF' , 'SALES_MAN' , '2010-10-01' ,20 , 22000.00,51000.00),

-> ('132' , 'FGH' , 'MANAGER' , '2009-12-08' ,30 , 30000.00,79000.00),

-> ('154' , 'JKL' , 'ANALYST' , '2009-12-01' ,40, 40000.00,89000.00),

-> ('151' , 'MNO' , 'PRESIDENT' , '2009-07-01' ,50 , 20000.00,69000.00),

-> ('111' , 'PQR' , 'CLERK' , '2008-08-01' ,60 , 30000.00,99000.00),

-> ('191' , 'STU' , 'SALES_MAN' , '2017-01-01' ,70 , 3000.00,12000.00),

-> ('173' , 'WXY' , 'CLERK' , '2015-01-11' ,80, 21000.00,52000.00);

```
MariaDB [EMP_DEPT]> INSERT INTO EMPLOYEE(ENO , ENAME , JOB_TYPE, HIRE_DATE , DNO ,COMMISSION , SALARY) VALUES
    -> ('124' , 'ABC' , 'CLERK' , '2010-12-09',10 , 20000.00,49000.00),
    -> ('129' , 'DEF' , 'SALES_MAN' , '2010-10-01' ,20 , 22000.00,51000.00),
    -> ('132' , 'FGH' , 'MANAGER' , '2009-12-08' ,30 , 30000.00,79000.00),
    -> ('154' , 'JKL' , 'ANALYST' ,  '2009-12-01' ,40, 40000.00,89000.00),
    -> ('151' , 'MNO' , 'PRESIDENT' , '2009-07-01' ,50 , 20000.00,69000.00),
    -> ('111' , 'PQR' , 'CLERK' , '2008-08-01' ,60 , 30000.00,99000.00),
    -> ('191' , 'STU' , 'SALES_MAN' , '2017-01-01' ,70 , 3000.00,12000.00),
    -> ('173' , 'WXY' , 'CLERK' ,  '2015-01-11' ,80, 21000.00,52000.00);
Query OK, 8 rows affected (0.012 sec)
Records: 8  Duplicates: 0  Warnings: 0
```

```
MariaDB [EMP_DEPT]> SELECT * FROM EMPLOYEE
    -> ;
+-----+-------+-----------+-------+------------+------+------------+----------+
| ENO | ENAME | JOB_TYPE  | S_ENO | HIRE_DATE  | DNO  | COMMISSION | SALARY   |
+-----+-------+-----------+-------+------------+------+------------+----------+
| 111 | PQR   | CLERK     | NULL  | 2008-08-01 |   60 |   30000.00 | 99000.00 |
| 124 | ABC   | CLERK     | NULL  | 2010-12-09 |   10 |   20000.00 | 49000.00 |
| 129 | DEF   | SALES_MAN | NULL  | 2010-10-01 |   20 |   22000.00 | 51000.00 |
| 132 | FGH   | MANAGER   | NULL  | 2009-12-08 |   30 |   30000.00 | 79000.00 |
| 151 | MNO   | PRESIDENT | NULL  | 2009-07-01 |   50 |   20000.00 | 69000.00 |
| 154 | JKL   | ANALYST   | NULL  | 2009-12-01 |   40 |   40000.00 | 89000.00 |
| 173 | WXY   | CLERK     | NULL  | 2015-01-11 |   80 |   21000.00 | 52000.00 |
| 191 | STU   | SALES_MAN | NULL  | 2017-01-01 |   70 |    3000.00 | 12000.00 |
+-----+-------+-----------+-------+------------+------+------------+----------+
8 rows in set (0.000 sec)
```

MariaDB [emp_dept]> UPDATE EMPLOYEE SET S_ENO = '191' WHERE ENO = '111' ;

Query OK, 1 row affected (0.008 sec)

MariaDB [emp_dept]> UPDATE EMPLOYEE SET S_ENO = '154' WHERE ENO = '124' ;

Query OK, 1 row affected (0.004 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [emp_dept]> UPDATE EMPLOYEE SET S_ENO = '151' WHERE ENO = '129' ;

Query OK, 1 row affected (0.006 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [emp_dept]> UPDATE EMPLOYEE SET S_ENO = '132' WHERE ENO = '151' ;

Query OK, 1 row affected (0.006 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [emp_dept]> UPDATE EMPLOYEE SET S_ENO = '173' WHERE ENO = '154' ;

Query OK, 1 row affected (0.005 sec)

Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [emp_dept]> UPDATE EMPLOYEE SET S_ENO = '129' WHERE ENO = '191' ;

Query OK, 1 row affected (0.006 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
MariaDB [emp_dept]> SELECT * FROM EMPLOYEE
    -> ;
+-----+-------+-----------+-------+------------+------+------------+----------+
| ENO | ENAME | JOB_TYPE  | S_ENO | HIRE_DATE  | DNO  | COMMISSION | SALARY   |
+-----+-------+-----------+-------+------------+------+------------+----------+
| 111 | PQR   | CLERK     | 191   | 2008-08-01 |   60 |   30000.00 | 99000.00 |
| 124 | ABC   | CLERK     | 154   | 2010-12-09 |   10 |   20000.00 | 49000.00 |
| 129 | DEF   | SALES_MAN | 151   | 2010-10-01 |   20 |   22000.00 | 51000.00 |
| 132 | FGH   | MANAGER   | NULL  | 2009-12-08 |   30 |   30000.00 | 79000.00 |
| 151 | MNO   | PRESIDENT | 132   | 2009-07-01 |   50 |   20000.00 | 69000.00 |
| 154 | JKL   | ANALYST   | 173   | 2009-12-01 |   40 |   40000.00 | 89000.00 |
| 173 | WXY   | CLERK     | NULL  | 2015-01-11 |   80 |   21000.00 | 52000.00 |
| 191 | STU   | SALES_MAN | 129   | 2017-01-01 |   70 |    3000.00 | 12000.00 |
+-----+-------+-----------+-------+------------+------+------------+----------+
8 rows in set (0.089 sec)
```

1.Query to display Employee Name, Job, Hire Date, Employee Number; for each employee with the Employee Number appearing first.

SELECT ENO, ENAME, JOB_TYPE, HIRE_DATE FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT ENO, ENAME, JOB_TYPE, HIRE_DATE FROM EMPLOYEE;
+-----+-------+-----------+------------+
| ENO | ENAME | JOB_TYPE  | HIRE_DATE  |
+-----+-------+-----------+------------+
| 111 | PQR   | CLERK     | 2008-08-01 |
| 124 | ABC   | CLERK     | 2010-12-09 |
| 129 | DEF   | SALES_MAN | 2010-10-01 |
| 132 | FGH   | MANAGER   | 2009-12-08 |
| 151 | MNO   | PRESIDENT | 2009-07-01 |
| 154 | JKL   | ANALYST   | 2009-12-01 |
| 173 | WXY   | CLERK     | 2015-01-11 |
| 191 | STU   | SALES_MAN | 2017-01-01 |
+-----+-------+-----------+------------+
8 rows in set (0.001 sec)

MariaDB [emp_dept]>
```

---

2. Query to display unique Jobs from the Employee Table.

SELECT DISTINCT JOB_TYPE FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT DISTINCT JOB_TYPE FROM EMPLOYEE;
+-----------+
| JOB_TYPE  |
+-----------+
| CLERK     |
| SALES_MAN |
| MANAGER   |
| PRESIDENT |
| ANALYST   |
+-----------+
5 rows in set (0.005 sec)

MariaDB [emp_dept]>
```

---

3. Query to display the Employee Name concatenated by a Job separated by a comma.

SELECT CONCAT(ENAME, ',', JOB_TYPE) AS NAME_JOB FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT CONCAT(ENAME, ',', JOB_TYPE) AS NAME_JOB FROM EMPLOYEE;
+---------------+
| NAME_JOB      |
+---------------+
| PQR,CLERK     |
| ABC,CLERK     |
| DEF,SALES_MAN |
| FGH,MANAGER   |
| MNO,PRESIDENT |
| JKL,ANALYST   |
| WXY,CLERK     |
| STU,SALES_MAN |
+---------------+
8 rows in set (0.006 sec)
```

---

4. Query to display all the data from the Employee Table. Separate each Column by a comma and name the said column as THE_OUTPUT.

SELECT CONCAT_WS(' , ' ,ENO , ENAME, JOB_TYPE,S_ENO ,HIRE_DATE,DNO ,COMMISSION ,SALARY) AS THE_OUTPUT FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT CONCAT_WS(' , ' ,ENO , ENAME, JOB_TYPE,S_ENO ,HIRE_DATE,DNO ,COMMISSION ,SALARY) AS THE_OUTPUT FROM EMPLOYEE;
+-----------------------------------------------------------------+
| THE_OUTPUT                                                      |
+-----------------------------------------------------------------+
| 111 , PQR , CLERK , 191 , 2008-08-01 , 60 , 30000.00 , 99000.00 |
| 124 , ABC , CLERK , 154 , 2010-12-09 , 10 , 20000.00 , 49000.00 |
| 129 , DEF , SALES_MAN , 151 , 2010-10-01 , 20 , 22000.00 , 51000.00 |
| 132 , FGH , MANAGER , 2009-12-08 , 30 , 30000.00 , 79000.00     |
| 151 , MNO , PRESIDENT , 132 , 2009-07-01 , 50 , 20000.00 , 69000.00 |
| 154 , JKL , ANALYST , 173 , 2009-12-01 , 40 , 40000.00 , 89000.00 |
| 173 , WXY , CLERK , 2015-01-11 , 80 , 21000.00 , 52000.00       |
| 191 , STU , SALES_MAN , 129 , 2017-01-01 , 70 , 3000.00 , 12000.00 |
+-----------------------------------------------------------------+
```

---

5. Query to display the Employee Name and Salary of all the employees earning more than $2850.

SELECT ENAME, SALARY FROM EMPLOYEE WHERE SALARY > 2850;

```
MariaDB [emp_dept]> SELECT ENAME, SALARY FROM EMPLOYEE WHERE SALARY > 2850;
+-------+----------+
| ENAME | SALARY   |
+-------+----------+
| PQR   | 99000.00 |
| ABC   | 49000.00 |
| DEF   | 51000.00 |
| FGH   | 79000.00 |
| MNO   | 69000.00 |
| JKL   | 89000.00 |
| WXY   | 52000.00 |
| STU   | 12000.00 |
+-------+----------+
8 rows in set (0.005 sec)
```

---

6. Query to display Employee Name and Department Number for the Employee No= 79.

SELECT ENAME,DNO FROM EMPLOYEE WHERE ENO='790';

```
MariaDB [emp_dept]> SELECT ENAME,DNO FROM EMPLOYEE WHERE ENO='790';
Empty set (0.005 sec)
```

---

7. Query to display Employee Name and Salary for all employees whose salary is not in the range of $1500 and $2850.

SELECT ENAME,SALARY FROM EMPLOYEE WHERE SALARY NOT BETWEEN 1500 AND 2850;

```
MariaDB [emp_dept]> SELECT ENAME,SALARY FROM EMPLOYEE WHERE SALARY NOT BETWEEN 1500 AND 2850;
+-------+----------+
| ENAME | SALARY   |
+-------+----------+
| PQR   | 99000.00 |
| ABC   | 49000.00 |
| DEF   | 51000.00 |
| FGH   | 79000.00 |
| MNO   | 69000.00 |
| JKL   | 89000.00 |
| WXY   | 52000.00 |
| STU   | 12000.00 |
+-------+----------+
8 rows in set (0.004 sec)
```

---

8. Query to display Employee Name and Department No. of all the employees in Dept 10 and Dept 30 in the alphabetical order by name.

SELECT ENAME,DNO FROM EMPLOYEE WHERE DNO=10 OR DNO=30 ORDER BY ENAME;

```
MariaDB [emp_dept]> SELECT ENAME,DNO FROM EMPLOYEE WHERE DNO=10 OR DNO=30 ORDER BY ENAME;
+-------+------+
| ENAME | DNO  |
+-------+------+
| ABC   |   10 |
| FGH   |   30 |
+-------+------+
2 rows in set (0.004 sec)
```

---

9. Query to display Name and Hire Date of every Employee who was hired in 1981.

SELECT ENAME,HIRE_DATE FROM EMPLOYEE WHERE HIRE_DATE LIKE '1981%';

```
MariaDB [emp_dept]> SELECT Ename,Hire_date FROM EMPLOYEE WHERE Hire_date LIKE '1981%';
Empty set (0.077 sec)
```

10. Query to display Name and Job of all employees who have not assigned a supervisor.

SELECT ENAME,JOB_TYPE FROM EMPLOYEE WHERE S_ENO IS NULL

```
MariaDB [emp_dept]> SELECT Ename,Job_type FROM employee WHERE s_eno IS NULL
    -> ;
+-------+----------+
| Ename | Job_type |
+-------+----------+
| FGH   | MANAGER  |
| WXY   | CLERK    |
+-------+----------+
2 rows in set (0.003 sec)
```

11. Query to display the Name, Salary and Commission for all the employees who earn commission.

SELECT ENAME,SALARY,COMMISSION FROM EMPLOYEE WHERE COMMISSION > 0.00 ORDER BY SALARY DESC,COMMISSION DESC;

```
+-------+----------+------------+
| Ename | Salary   | Commission |
+-------+----------+------------+
| PQR   | 99000.00 |   30000.00 |
| JKL   | 89000.00 |   40000.00 |
| FGH   | 79000.00 |   30000.00 |
| MNO   | 69000.00 |   20000.00 |
| WXY   | 52000.00 |   21000.00 |
| DEF   | 51000.00 |   22000.00 |
| ABC   | 49000.00 |   20000.00 |
| STU   | 12000.00 |    3000.00 |
+-------+----------+------------+
8 rows in set (0.002 sec)
```

12. Sort the data in descending order of Salary and Commission.

SELECT * FROM EMPLOYEE ORDER BY SALARY DESC , COMMISSION DESC;

```
MariaDB [emp_dept]> SELECT * FROM EMPLOYEE ORDER BY SALARY DESC , COMMISSION DESC;
+-----+-------+-----------+-------+------------+------+------------+----------+
| ENO | ENAME | JOB_TYPE  | S_ENO | HIRE_DATE  | DNO  | COMMISSION | SALARY   |
+-----+-------+-----------+-------+------------+------+------------+----------+
| 111 | PQR   | CLERK     | 191   | 2008-08-01 |   60 |   30000.00 | 99000.00 |
| 154 | JKL   | ANALYST   | 173   | 2009-12-01 |   40 |   40000.00 | 89000.00 |
| 132 | FGH   | MANAGER   | NULL  | 2009-12-08 |   30 |   30000.00 | 79000.00 |
| 151 | MNO   | PRESIDENT | 132   | 2009-07-01 |   50 |   20000.00 | 69000.00 |
| 173 | WXY   | CLERK     | NULL  | 2015-01-11 |   80 |   21000.00 | 52000.00 |
| 129 | DEF   | SALES_MAN | 151   | 2010-10-01 |   20 |   22000.00 | 51000.00 |
| 124 | ABC   | CLERK     | 154   | 2010-12-09 |   10 |   20000.00 | 49000.00 |
| 191 | STU   | SALES_MAN | 129   | 2017-01-01 |   70 |    3000.00 | 12000.00 |
+-----+-------+-----------+-------+------------+------+------------+----------+
```

13. Query to display Name of all the employees where the third letter of their name is ‘A’.

SELECT ENAME FROM EMPLOYEE WHERE ENAME LIKE '__A%';

```
MariaDB [emp_dept]> SELECT Ename FROM employee WHERE Ename LIKE '__A%';
Empty set (0.001 sec)
```

14. Query to display Name of all employees either have two ‘R’s or have two ‘A’s in their name and are either in Dept No = 30 or their Manger’s Employee No = 778.

SELECT ENAME,DNO,S_ENO FROM EMPLOYEE WHERE ENAME LIKE '%A%A%' OR ENAME LIKE '%R%R%' AND DNO=30 OR S_ENO='778';

```
MariaDB [emp_dept]> SELECT ENAME,DNO,s_eno FROM EMPLOYEE WHERE ENAME LIKE '%A%A%' OR ENAME LIKE
 '%R%R%' AND DNO=30 OR s_eno='778';
Empty set (0.001 sec)
```

15. Query to display Name, Salary and Commission for all employees whose Commission amount is greater than their Salary increased by 5%.

SELECT ENAME,SALARY,COMMISSION FROM EMPLOYEE WHERE COMMISSION > (SALARY+SALARY*0.05);

```
MariaDB [emp_dept]> SELECT ENAME,SALARY,COMMISSION FROM EMPLOYEE WHERE COMMISSION > (SALARY+SAL
ARY*0.05);
Empty set (0.001 sec)
```

16. Query to display the Current Date along with the day name.

SELECT CURDATE() , DAYNAME(CURDATE());

```
MariaDB [emp_dept]> SELECT CURDATE() , DAYNAME(CURDATE());
+------------+--------------------+
| CURDATE()  | DAYNAME(CURDATE()) |
+------------+--------------------+
| 2022-01-12 | Wednesday          |
+------------+--------------------+
1 row in set (0.000 sec)
```

17. Query to display Name, Hire Date and Salary Review Date which is the 1st Monday after six months of employment.

SELECT ENAME,HIRE_DATE,DATE_ADD(DATE_ADD(HIRE_DATE,INTERVAL 6 MONTH),INTERVAL (7-WEEKDAY(DATE_ADD(HIRE_DATE,INTERVAL 6 MONTH))) DAY) AS REVIEW_DATE FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT ENAME,HIRE_DATE,DATE_ADD(DATE_ADD(HIRE_DATE,INTERVAL 6 MONTH),INTERV
AL (7-WEEKDAY(DATE_ADD(HIRE_DATE,INTERVAL 6 MONTH))) DAY) AS REVIEW_DATE FROM EMPLOYEE;
+-------+------------+-------------+
| ENAME | HIRE_DATE  | REVIEW_DATE |
+-------+------------+-------------+
| PQR   | 2008-08-01 | 2009-02-02  |
| ABC   | 2010-12-09 | 2011-06-13  |
| DEF   | 2010-10-01 | 2011-04-04  |
| FGH   | 2009-12-08 | 2010-06-14  |
| MNO   | 2009-07-01 | 2010-01-04  |
| JKL   | 2009-12-01 | 2010-06-07  |
| WXY   | 2015-01-11 | 2015-07-13  |
| STU   | 2017-01-01 | 2017-07-03  |
+-------+------------+-------------+
8 rows in set (0.005 sec)
```

18. Query to display Name and calculate the number of months between today and the date on which employee was hired of department 'Purchase'.

SELECT ENAME,12 * (YEAR(CURDATE())-YEAR(HIRE_DATE)) + (MONTH(CURDATE())-MONTH(HIRE_DATE)) AS MONTHS FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT ENAME,12 *  (YEAR(CURDATE())-YEAR(HIRE_DATE)) + (MONTH(CURDATE())-MO
NTH(HIRE_DATE)) AS MONTHS FROM EMPLOYEE;
+-------+--------+
| ENAME | MONTHS |
+-------+--------+
| PQR   |    161 |
| ABC   |    133 |
| DEF   |    135 |
| FGH   |    145 |
| MNO   |    150 |
| JKL   |    145 |
| WXY   |     84 |
| STU   |     60 |
+-------+--------+
8 rows in set (0.003 sec)
```

19. Query to display the following for each employee earns < Salary> monthly but wants < 3 * Current Salary >. Label the Column as Dream Salary.

SELECT CONCAT(ENAME,' EARNS ',SALARY,' MONTHLY BUT WANTS ',3*SALARY) AS DREAMY_SALARY FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT CONCAT(ENAME,' EARNS ',SALARY,' MONTHLY BUT WANTS ',3*SALARY) AS D
REAMY_SALARY FROM EMPLOYEE;
+-----------------------------------------------+
| DREAMY_SALARY                                 |
+-----------------------------------------------+
| PQR EARNS 99000.00 MONTHLY BUT WANTS 297000.00 |
| ABC EARNS 49000.00 MONTHLY BUT WANTS 147000.00 |
| DEF EARNS 51000.00 MONTHLY BUT WANTS 153000.00 |
| FGH EARNS 79000.00 MONTHLY BUT WANTS 237000.00 |
| MNO EARNS 69000.00 MONTHLY BUT WANTS 207000.00 |
| JKL EARNS 89000.00 MONTHLY BUT WANTS 267000.00 |
| WXY EARNS 52000.00 MONTHLY BUT WANTS 156000.00 |
| STU EARNS 12000.00 MONTHLY BUT WANTS 36000.00  |
+-----------------------------------------------+
8 rows in set (0.001 sec)
```

20. Query to display Name with the 1st letter capitalized and all other letter lower case and length of their name of all the employees whose name starts with ‘J’, ’A’ and ‘M’.

SELECT CONCAT(UPPER(SUBSTRING(ENAME,1,1)) , LOWER(SUBSTRING(ENAME,2))) AS NAME,LENGTH(ENAME) AS LENGTH FROM EMPLOYEE WHERE ENAME LIKE 'J%' OR ENAME LIKE 'A%' OR ENAME LIKE 'M%';

```
MariaDB [emp_dept]> SELECT CONCAT( UPPER(SUBSTRING(ENAME,1,1)) , LOWER(SUBSTRING(ENAME,2))) AS NAME,
LENGTH(ENAME) AS LENGTH  FROM EMPLOYEE WHERE ENAME LIKE 'J%' OR ENAME LIKE 'A%' OR ENAME LIKE 'M%';
+------+--------+
| NAME | LENGTH |
+------+--------+
| Abc  |      3 |
| Mno  |      3 |
| Jkl  |      3 |
+------+--------+
```

21. Query to display Name, Hire Date and Day of the week on which the employee started.

SELECT ENAME, HIRE_DATE, DAYNAME(HIRE_DATE) AS WEEK_DAY FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT ENAME, HIRE_DATE, DAYNAME(HIRE_DATE) AS WEEK_DAY FROM EMPLOYEE;
+-------+------------+-----------+
| ENAME | HIRE_DATE  | WEEK_DAY  |
+-------+------------+-----------+
| PQR   | 2008-08-01 | Friday    |
| ABC   | 2010-12-09 | Thursday  |
| DEF   | 2010-10-01 | Friday    |
| FGH   | 2009-12-08 | Tuesday   |
| MNO   | 2009-07-01 | Wednesday |
| JKL   | 2009-12-01 | Tuesday   |
| WXY   | 2015-01-11 | Sunday    |
| STU   | 2017-01-01 | Sunday    |
+-------+------------+-----------+
8 rows in set (0.005 sec)
```

22. Query to display Name, Department Name and Department No for all the employees.

SELECT E.ENAME,D.DNAME,E.DNO FROM EMPLOYEE AS E,DEPARTMENT AS D WHERE E.DNO=D.DNO;

```
MariaDB [emp_dept]> SELECT E.ENAME,D.DNAME,E.DNO FROM EMPLOYEE AS E,DEPARTMENT AS D WHERE E.DNO=D.DNO;
+-------+------------+------+
| ENAME | DNAME      | DNO  |
+-------+------------+------+
| PQR   | FINANCE    |   60 |
| ABC   | ACCOUNTING |   10 |
| DEF   | RESEARCH   |   20 |
| FGH   | SALES      |   30 |
| MNO   | MARKETING  |   50 |
| JKL   | OPERATION  |   40 |
| WXY   | OPERATION  |   80 |
| STU   | PURCHASE   |   70 |
+-------+------------+------+
8 rows in set (0.019 sec)
```

23. Query to display Unique Listing of all Jobs that are in Department number 30.

SELECT DISTINCT JOB_TYPE FROM EMPLOYEE WHERE DNO=30;

```
MariaDB [emp_dept]> SELECT DISTINCT JOB_TYPE FROM EMPLOYEE WHERE DNO=30;
+----------+
| JOB_TYPE |
+----------+
| MANAGER  |
+----------+
1 row in set (0.014 sec)
```

24. Query to display Name, Dept Name of all employees who have an ‘A’ in their name.

SELECT E.ENAME,D.DNAME FROM EMPLOYEE AS E,DEPARTMENT AS D WHERE E.ENAME LIKE '%A%' AND E.DNO=D.DNO;

```
MariaDB [emp_dept]> SELECT E.ENAME,D.DNAME FROM EMPLOYEE AS E,DEPARTMENT AS D WHERE E.ENAME LIKE '%A%' AND E.DNO=D.DNO;
+-------+------------+
| ENAME | DNAME      |
+-------+------------+
| ABC   | ACCOUNTING |
+-------+------------+
1 row in set (0.001 sec)
```

25. Query to display Name, Job, Department No. And Department Name for all the employees working at the NEW DELHI location.

SELECT E.ENAME,E.JOB_TYPE,E.DNO,D.DNAME FROM EMPLOYEE AS E,DEPARTMENT AS D WHERE E.DNO=D.DNO AND D.LOCATION='NEW DELHI';

```
MariaDB [emp_dept]> SELECT E.ENAME,E.JOB_TYPE,E.DNO,D.DNAME FROM EMPLOYEE AS E,DEPARTMENT AS D WHERE
 E.DNO=D.DNO AND D.LOCATION='NEW DELHI';
+-------+----------+------+-----------+
| ENAME | JOB_TYPE | DNO  | DNAME     |
+-------+----------+------+-----------+
| JKL   | ANALYST  |   40 | OPERATION |
+-------+----------+------+-----------+
1 row in set (0.004 sec)
```

26. Query to display Name and Employee no. Along with their supervisor’s Name and the supervisor’s employee no; along with the Employees’ Name who do not have a supervisor.

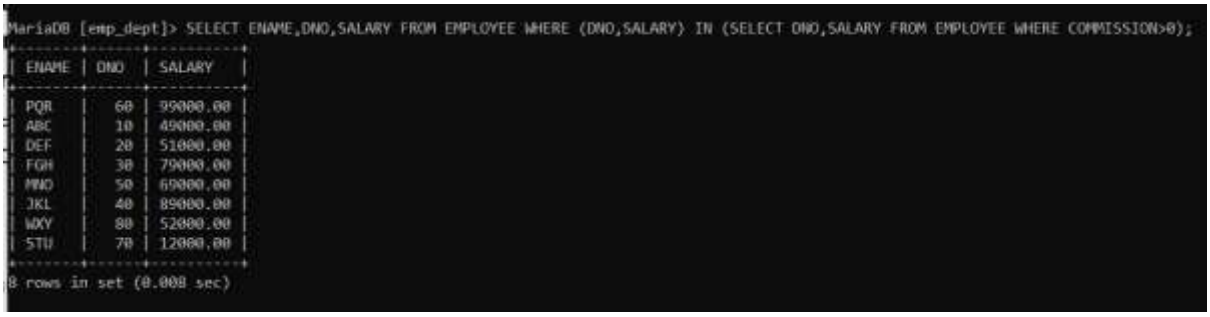
SELECT e.ENAME , e.ENO , d.ENAME , d.ENO FROM EMPLOYEE AS e LEFT OUTER JOIN EMPLOYEE AS d ON e.ENO = d.S_ENO;

```
MariaDB [emp_dept]> SELECT e.ENAME , e.ENO , d.ENAME , d.ENO FROM EMPLOYEE AS e LEFT OUTER JOIN EMPLOYE
E AS d ON e.ENO = d.S_ENO;
+-------+-----+-------+------+
| ENAME | ENO | ENAME | ENO  |
+-------+-----+-------+------+
| PQR   | 111 | NULL  | NULL |
| ABC   | 124 | NULL  | NULL |
| DEF   | 129 | STU   | 191  |
| FGH   | 132 | MNO   | 151  |
| MNO   | 151 | DEF   | 129  |
| JKL   | 154 | ABC   | 124  |
| WXY   | 173 | JKL   | 154  |
| STU   | 191 | PQR   | 111  |
+-------+-----+-------+------+
8 rows in set (0.011 sec)

MariaDB [emp_dept]>
```

27. Query to display Name, Dept No. And Salary of any employee whose department No. and salary matches both the department no. And the salary of any employee who earns a commission.

SELECT ENAME,DNO,SALARY FROM EMPLOYEE WHERE (DNO,SALARY) IN (SELECT DNO,SALARY FROM EMPLOYEE WHERE COMMISSION>0);



28. Query to display Name and Salaries represented by asterisks, where each asterisk (*) signifies $100.

SELECT ENAME,REPEAT ('*',FLOOR(SALARY/1000)) AS SALARY_IN_STAR FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT ENAME,REPEAT ('*',FLOOR(SALARY/1000)) AS SALARY_IN_STAR FROM EMPLOYEE;
+-------+-----------------------------------------------------------------------------------------------------+
| ENAME | SALARY_IN_STAR                                                                                      |
+-------+-----------------------------------------------------------------------------------------------------+
| PQR   | ************************************************************************************************** |
| ABC   | *********************************************                                                       |
| DEF   | ************************************************                                                    |
| FGH   | ***************************************************************************                         |
| MNO   | ********************************************************************                                |
| JKL   | ********************************************************************************************      |
| WXY   | ************************************************                                                    |
| STU   | ***********                                                                                         |
+-------+-----------------------------------------------------------------------------------------------------+
8 rows in set (0.001 sec)
```

29. Query to display the Highest, Lowest, Sum and Average Salaries of all the employees.

SELECT MAX(SALARY),MIN(SALARY),SUM(SALARY),AVG(SALARY) FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT MAX(SALARY),MIN(SALARY),SUM(SALARY),AVG(SALARY) FROM EMPLOYEE;
+-------------+-------------+-------------+--------------+
| MAX(SALARY) | MIN(SALARY) | SUM(SALARY) | AVG(SALARY)  |
+-------------+-------------+-------------+--------------+
|    99000.00 |    12000.00 |   500000.00 | 62500.000000 |
+-------------+-------------+-------------+--------------+
1 row in set (0.000 sec)
```

30. Query to display the number of employees performing the same Job type functions.

SELECT JOB_TYPE , COUNT(ENO) FROM EMPLOYEE GROUP BY JOB_TYPE;

```
MariaDB [emp_dept]> SELECT JOB_TYPE , COUNT(ENO) FROM EMPLOYEE GROUP BY JOB_TYPE;
+-----------+------------+
| JOB_TYPE  | COUNT(ENO) |
+-----------+------------+
| ANALYST   |          1 |
| CLERK     |          3 |
| MANAGER   |          1 |
| PRESIDENT |          1 |
| SALES_MAN |          2 |
+-----------+------------+
5 rows in set (0.000 sec)
```

31. Query to display the total number of supervisors without listing their names.

SELECT COUNT(DISTINCT S_ENO) FROM EMPLOYEE;

```
MariaDB [emp_dept]> SELECT COUNT(DISTINCT S_ENO) FROM EMPLOYEE;
+------------------------+
| COUNT(DISTINCT S_ENO) |
+------------------------+
|                      6 |
+------------------------+
1 row in set (0.003 sec)
```

32. Query to display the Department Name, Location Name, No. of Employees and the average salary for all employees in that department.

SELECT D.DNAME , D.LOCATION , COUNT(E.ENO),AVG(E.SALARY) FROM EMPLOYEE AS E , DEPARTMENT AS D WHERE D.DNO = E.DNO GROUP BY D.DNAME , D.LOCATION;

```
MariaDB [emp_dept]> SELECT D.DNAME , D.LOCATION , COUNT(E.ENO),AVG(E.SALARY)  FROM EMPLOYEE AS E , DEP
ARTMENT AS D WHERE D.DNO = E.DNO GROUP BY D.DNAME , D.LOCATION;
+------------+-----------+-------------+---------------+
| DNAME      | LOCATION  | COUNT(E.ENO) | AVG(E.SALARY) |
+------------+-----------+-------------+---------------+
| ACCOUNTING | KOLKATA   |           1 |  49000.000000 |
| FINANCE    | MUMBAI    |           1 |  99000.000000 |
| MARKETING  | NOIDA     |           1 |  69000.000000 |
| OPERATION  | NEW DELHI |           1 |  89000.000000 |
| OPERATION  | NEWDELHI  |           1 |  52000.000000 |
| PURCHASE   | RAJASTHAN |           1 |  12000.000000 |
| RESEARCH   | CHENNAI   |           1 |  51000.000000 |
| SALES      | HARYANA   |           1 |  79000.000000 |
+------------+-----------+-------------+---------------+
8 rows in set (0.001 sec)
```

33. Query to display Name and Hire Date for all employees in the same dept. as ABC.

SELECT ENAME , HIRE_DATE FROM EMPLOYEE WHERE DNO=(SELECT DNO FROM EMPLOYEE WHERE ENAME = 'ABC');

```
MariaDB [emp_dept]> SELECT ENAME , HIRE_DATE FROM EMPLOYEE WHERE DNO=(SELECT DNO FROM EMPLOYEE WHERE E
NAME = 'ABC');
+-------+------------+
| ENAME | HIRE_DATE  |
+-------+------------+
| ABC   | 2010-12-09 |
+-------+------------+
1 row in set (0.007 sec)
```

34. Query to display the Employee No. And Name for all employees who earn more than the average salary.

SELECT ENO , ENAME FROM EMPLOYEE WHERE SALARY >(SELECT AVG(SALARY) FROM EMPLOYEE);

```
MariaDB [emp_dept]> SELECT ENO , ENAME FROM EMPLOYEE WHERE SALARY >(SELECT AVG(SALARY) FROM EMPLOYEE);

+-----+-------+
| ENO | ENAME |
+-----+-------+
| 111 | PQR   |
| 132 | FGH   |
| 151 | MNO   |
| 154 | JKL   |
+-----+-------+
4 rows in set (0.002 sec)
```

35. Query to display Employee Number and Name for all employees who work in a department with any employee whose name contains a ‘T’.

SELECT ENO , ENAME FROM EMPLOYEE WHERE DNO = (SELECT DNO FROM EMPLOYEE WHERE ENAME LIKE "%T%");

```
MariaDB [emp_dept]> SELECT ENO , ENAME FROM EMPLOYEE WHERE DNO = (SELECT DNO FROM EMPLOYEE WHERE ENAME
 LIKE "%T%");
+-----+-------+
| ENO | ENAME |
+-----+-------+
| 191 | STU   |
+-----+-------+
1 row in set (0.002 sec)
```

36. Query to display the names and salaries of all employees who report to supervisor named ‘WXY’.

MariaDB [emp_dept]> SELECT ENAME , SALARY FROM EMPLOYEE WHERE S_ENO = (SELECT ENO FROM EMPLOYEE WHERE ENAME = 'WXY');

```
MariaDB [emp_dept]> SELECT ENAME , SALARY FROM EMPLOYEE WHERE S_ENO = (SELECT ENO FROM EMPLOYEE W
HERE ENAME = 'WXY');
+-------+----------+
| ENAME | SALARY   |
+-------+----------+
| JKL   | 89000.00 |
+-------+----------+
1 row in set (0.003 sec)
```

37. Query to display the department no, name and job for all employees in the Sales department.

SELECT E.DNO , E.ENAME , E.JOB_TYPE FROM EMPLOYEE AS E , DEPARTMENT AS D WHERE D.DNO = E.DNO AND D.DNAME = 'SALES';

```
MariaDB [emp_dept]> SELECT E.DNO , E.ENAME , E.JOB_TYPE FROM EMPLOYEE AS E , DEPARTMENT AS D WHER
E D.DNO = E.DNO AND D.DNAME = 'SALES';
+------+-------+----------+
| DNO  | ENAME | JOB_TYPE |
+------+-------+----------+
|   30 | FGH   | MANAGER  |
+------+-------+----------+
1 row in set (0.000 sec)
```

```
MariaDB [emp_dept]> select * from department
    -> ;
+-----+------------+-----------+
| DNO | DNAME      | LOCATION  |
+-----+------------+-----------+
|  10 | ACCOUNTING | KOLKATA   |
|  20 | RESEARCH   | CHENNAI   |
|  30 | SALES      | HARYANA   |
|  40 | OPERATION  | NEW DELHI |
|  50 | MARKETING  | NOIDA     |
|  60 | FINANCE    | MUMBAI    |
|  70 | PURCHASE   | RAJASTHAN |
|  80 | OPERATION  | NEW DELHI |
+-----+------------+-----------+
8 rows in set (0.001 sec)

MariaDB [emp_dept]>
```

```
MariaDB [emp_dept]> SELECT * FROM EMPLOYEE;
+-----+-------+-----------+-------+------------+------+------------+----------+
| ENO | ENAME | JOB_TYPE  | S_ENO | HIRE_DATE  | DNO  | COMMISSION | SALARY   |
+-----+-------+-----------+-------+------------+------+------------+----------+
| 111 | PQR   | CLERK     | 191   | 2008-08-01 |   60 |   30000.00 | 99000.00 |
| 124 | ABC   | CLERK     | 154   | 2010-12-09 |   10 |   20000.00 | 49000.00 |
| 129 | DEF   | SALES_MAN | 151   | 2010-10-01 |   20 |   22000.00 | 51000.00 |
| 132 | FGH   | MANAGER   | NULL  | 2009-12-08 |   30 |   30000.00 | 79000.00 |
| 151 | MNO   | PRESIDENT | 132   | 2000-10-01 |   50 |   20000.00 | 69000.00 |
| 154 | JKL   | ANALYST   | 173   | 2009-12-01 |   40 |   40000.00 | 89000.00 |
| 173 | WXY   | CLERK     | NULL  | 2015-01-11 |   80 |   21000.00 | 52000.00 |
| 191 | STU   | SALES_MAN | 129   | 2017-01-01 |   70 |    3000.00 | 12000.00 |
+-----+-------+-----------+-------+------------+------+------------+----------+
8 rows in set (0.001 sec)
```

38. Display names of employees along with their department name who have more than 20 years experience

SELECT E.ename, D.dname from EMPLOYEE AS E, DEPARTMENT AS D WHERE date_add(hire_date, INTERVAL 20

YEAR)<CURRENT_DATE() AND E.Dno = D.dno;

```
MariaDB [emp_dept]> UPDATE EMPLOYEE SET HIRE_DATE='2000-10-01' WHERE ENO=151;
Query OK, 1 row affected (0.008 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [emp_dept]> SELECT E.ename, D.dname from EMPLOYEE AS E, DEPARTMENT AS D WHERE date_add(hire_date, INTERVAL 20 YEAR)
<CURRENT_DATE() AND E.Dno = D.dno;
+-------+-----------+
| ename | dname     |
+-------+-----------+
| MNO   | MARKETING |
+-------+-----------+
1 row in set (0.001 sec)
```

39. Display total number of departments at each location.

SELECT LOCATION , COUNT(*) FROM DEPARTMENT GROUP BY LOCATION;

```
MariaDB [emp_dept]> SELECT LOCATION , COUNT(*) FROM DEPARTMENT GROUP BY LOCATION;
+-----------+----------+
| LOCATION  | COUNT(*) |
+-----------+----------+
| CHENNAI   |        1 |
| HARYANA   |        1 |
| KOLKATA   |        1 |
| MUMBAI    |        1 |
| NEW DELHI |        2 |
| NOIDA     |        1 |
| RAJASTHAN |        1 |
+-----------+----------+
7 rows in set (0.001 sec)

MariaDB [emp_dept]>
```

40. Find the department name in which at least 20 employees work in.

SELECT dname from DEPARTMENT WHERE dno IN (SELECT dno FROM EMPLOYEE GROUP BY dno HAVING COUNT(ENO)>=20);

```
MariaDB [emp_dept]> SELECT dname from DEPARTMENT WHERE dno IN (SELECT dno FROM EMPLOYEE
GROUP BY dno HAVING COUNT(ENO)>=20);
Empty set (0.008 sec)

MariaDB [emp_dept]>
```

41. Query to find the employee’ name who is not supervisor and name of supervisor supervising more than 5 employees.

SELECT ENAME FROM EMPLOYEE WHERE (ENO) NOT IN (SELECT S_ENO FROM EMPLOYEE WHERE S_ENO IS NOT NULL) OR (ENO) IN (SELECT S_ENO FROM EMPLOYEE GROUP BY S_ENO HAVING COUNT(ENO)>5);

```
MariaDB [emp_dept]>  SELECT ENAME FROM EMPLOYEE WHERE (ENO) NOT IN (SELECT S_ENO FROM EMPLOYEE WHERE
 S_ENO IS NOT NULL) OR (ENO) IN (SELECT S_ENO FROM EMPLOYEE GROUP BY S_ENO HAVING COUNT(ENO)>5);
+-------+
| ENAME |
+-------+
| PQR   |
| ABC   |
+-------+
2 rows in set (0.014 sec)
```

42. Query to display the job type with maximum and minimum employees.

SELECT MAX(MYCOUNT),MIN(MYCOUNT) FROM (SELECT JOB_TYPE,COUNT(JOB_TYPE) AS MYCOUNT FROM EMPLOYEE GROUP BY JOB_TYPE) EMPLOYEE;

```
MariaDB [emp_dept]> SELECT MAX(MYCOUNT),MIN(MYCOUNT) FROM (SELECT JOB_TYPE,COUNT(JOB_TYP
E) AS MYCOUNT FROM EMPLOYEE GROUP BY JOB_TYPE) EMPLOYEE;
+--------------+--------------+
| MAX(MYCOUNT) | MIN(MYCOUNT) |
+--------------+--------------+
|            3 |            1 |
+--------------+--------------+
1 row in set (0.007 sec)
```