MySQL - Rank Related Queries

Type 1 >> Show the highest salary value

```
SELECT MAX(SALARY)
FROM employees;
```

Type 1.1 >> Show the highest salary holder employee details

```
SELECT *
FROM employees
WHERE SALARY = (
                    SELECT MAX(SALARY)
                    FROM employees
                );
```

[If more than one employees receive the maximum salary, then all of them will be shown]

practice 1: Show the lowest salary value.
practice 1.1: Show the lowest salary holder employee details.

Type 2 >> Show the nth highest salary value

```
SELECT SALARY
FROM employees as emp1
WHERE n-1 = (
                SELECT COUNT(DISTINCT SALARY)
                FROM employees as emp2
                WHERE emp2.SALARY>emp1.SALARY
            );

/* for 4th highest salary value, use n-1=4-1=3 */
/* for 2nd highest salary value, use n-1=2-1=1 */
```

Type 2.2 >> Show the nth highest salary holder employee details

```
SELECT *
FROM employees as emp1
WHERE n-1 = (
                SELECT COUNT(DISTINCT SALARY)
                FROM employees as emp2
                WHERE emp2.SALARY>emp1.SALARY
            );
```

practice 2: Show the 3rd highest salary value.
practice 2.1: Show the 3rd highest salary holder employee details.
practice 3: Show the 50th highest salary value.
practice 3.1: Show the 50th highest salary holder employee details.
practice 4: Show the 10th lowest salary value.
practice 4.1: Show the 10th lowest salary holder employee details.

Type 3 >> Show department wise highest salary value

```
SELECT DEPARTMENT_ID, MAX(SALARY) AS highest_sal
FROM employees
GROUP BY DEPARTMENT_ID;
```

Type 3.1 >> Show department wise highest salary holder employee details

way 1 – using row subquery:

```
SELECT *
FROM employees
WHERE (DEPARTMENT_ID, SALARY) IN (

                        SELECT DEPARTMENT_ID, MAX(SALARY) AS highest_sal
                        FROM employees
                        GROUP BY DEPARTMENT_ID
                       );
```

way 2 – using correlated subquery:

```
SELECT e1.*
FROM employees e1
WHERE e1.salary = (
                     SELECT MAX(e2.salary)
                     FROM employees e2
                     WHERE e2.department_id = e1.department_id
                   );
```

practice 5: Show the department wise lowest salary value.
practice 5.1: Show the department wise lowest salary holder employee details.
practice 6: Show the department wise most senior employees experience value in no of days.
practice 6.1: Show the department wise most senior employee details.

Type 4 >> Show the department wise nth highest salary value

```
SELECT DEPARTMENT_ID, SALARY
FROM employees as emp1
WHERE n-1 = (
                SELECT COUNT(DISTINCT SALARY)
                FROM employees as emp2
                WHERE emp2.SALARY>emp1.SALARY
                AND emp1.DEPARTMENT_ID=emp2.DEPARTMENT_ID
             );

/* for 4th highest salary value, use n-1=4-1=3 */
/* for 2nd highest salary value, use n-1=2-1=1 */
```

Type 4.1 >> Show the department wise nth highest salary holder employee details

```
SELECT *
FROM employees as emp1
WHERE n-1 = (
                SELECT COUNT(DISTINCT SALARY)
                FROM employees as emp2
                WHERE emp2.SALARY>emp1.SALARY
                AND emp1.DEPARTMENT_ID=emp2.DEPARTMENT_ID
             );
```

practice 7: Show department wise 2nd lowest salary value
practice 7.1: Show department wise 2nd lowest salary holder employee details

Type 5 >> Show the manager id(s) managing maximum no of employees

```
SELECT man.employee_id, COUNT(man.employee_id) AS maxcnt
FROM employees man
GROUP BY man.manager_id
HAVING COUNT(man.employee_id) = (
                                    SELECT MAX(man1.total)
                                    FROM (
                                        SELECT COUNT(*) AS total
                                        FROM employees e1
                                        GROUP BY e1.manager_id
                                    ) AS man1
                                )
```

practice 9: show the manager details managing minimum no of employees
practice 10: show the department details having maximum no of employees

Type 5.1 >> Show the manager managing nth highest total no of employees

```
SELECt mantable.man_id, mantable.emp_cnt
FROM
      (
          SELECT e.manager_id AS man_id, COUNT(e.employee_id) AS emp_cnt
          FROM employees e
          GROUP BY e.manager_id
      ) AS mantable

JOIN
      (
          SELECT e.manager_id AS man_id, COUNT(e.employee_id) AS emp_cnt
          FROM employees e
          GROUP BY e.manager_id
      ) AS mantable1
ON mantable.emp_cnt < mantable1.emp_cnt

GROUP BY mantable.man_id
HAVING COUNT(DISTINCT mantable1.emp_cnt) = n-1;

/* for 4th highest salary value, use n-1=4-1=3 */
/* for 2nd highest salary value, use n-1=2-1=1 */
```