

SQL query to find second maximum salary of Employee

```
mysql> SELECT * FROM Employee;
+-----+-----+-----+-----+
| emp_id | emp_name | dept_id | salary |
+-----+-----+-----+-----+
| 1      | James   | 10      | 2000   |
| 2      | Jack    | 10      | 4000   |
| 3      | Henry   | 11      | 6000   |
| 4      | Tom     | 11      | 8000   |
+-----+-----+-----+-----+
4 rows IN SET (0.00 sec)
```

If you look data, you will find that second maximum salary in this case is 6000 and employee name is Henry. Now let's see some SQL example to find out this second maximum salary.

Second maximum salary using sub query and IN clause

Sub queries in SQL are great tool for this kind of scenario, here we first select maximum salary and then another maximum excluding result of subquery. To learn more about Subquery see [correlate and non-correlate subquery in SQL](#)

```
mysql> SELECT max(salary) FROM Employee WHERE salary NOT IN (SELECT max(salary) FROM Employee);
+-----+
| max(salary) |
+-----+
| 6000        |
+-----+
1 row IN SET (0.00 sec)
```

Here is another SQL query to find second highest salary using subquery and < operator instead of IN clause:

```
mysql> SELECT max(salary) FROM Employee WHERE salary < (SELECT max(salary) FROM Employee);
+-----+
| max(salary) |
+-----+
| 6000        |
+-----+
1 row IN SET (0.00 sec)
```

Both of above SQL example will work on all database including Oracle, MySQL, Sybase and SQL Server as they are written using standard SQL keywords. But sometime you can also use database specific features like TOP keyword of SQL Server or Sybase database to find out second highest salary of Employee.

Second highest salary using TOP keyword of Sybase or SQL Server database

TOP keyword of Sybase and SQL Server database is used to select top record or row of any result set, by carefully using TOP keyword you can find out second maximum or Nth maximum salary as shown below.

```
SELECT TOP 1 salary FROM ( SELECT TOP 2 salary FROM employees ORDER BY salary DESC ) AS emp ORDER BY salary ASC
```

Here is what this SQL query is doing : First find out top 2 salary from Employee table and list them in descending order, Now second highest salary of employee is at top so just take that value. Though you need to keep in mind of using distinct keyword if there are more than one employee with top salary, because in that case same salary will be repeated and TOP 2 may list same salary twice.

Second maximum salary using LIMIT keyword of MYSQL database

LIMIT keyword of MySQL database is little bit similar with TOP keyword of SQL Server database and allows to take only certain rows from result set. If you look at below SQL example, its very much similar to SQL Server TOP keyword example.

```
mysql> SELECT salary FROM (SELECT salary FROM Employee ORDER BY salary DESC LIMIT 2) AS emp ORDER BY salary LIMIT 1;
+-----+
| salary |
+-----+
| 6000   |
+-----+
1 row IN SET (0.00 sec)
```

That's on How to find second highest salary of Employee using SQL query. This is good question which really test your SQL knowledge, its not tough but definitely tricky for beginners. As follow up question you can ask him to find third maximum salary or Nth maximum salary as well.