

1. Get the 3rd highest salary

```
MySQL 8.0 Command Line Client
mysql> select * from employee order by sal desc;
+-----+-----+-----+-----+-----+-----+-----+
| eid | ename | sal | dno | sid | designation | city |
+-----+-----+-----+-----+-----+-----+-----+
| 900 | Dev | 2589760 | NULL | NULL | MD | Kolkata |
| 511 | Shivaay | 986789 | 2 | NULL | Manager | Panaji |
| 599 | Daksh | 277899 | 1 | NULL | Foreman | Ahmedabad |
| 347 | Amber | 126783 | 3 | NULL | Chairman | Kolkata |
| 780 | Sonakshi | 89765 | NULL | NULL | Nutritionist | Kolkata |
| 400 | Nia | 86789.6 | 2 | 511 | intern | Bangalore |
| 123 | Annika | 39000 | 1 | 599 | intern | Bangalore |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> select sal from employee order by sal desc limit 2,1;
+-----+
| sal |
+-----+
| 277899 |
+-----+
1 row in set (0.00 sec)

mysql> select sal from employee order by sal desc limit 3,1;
+-----+
| sal |
+-----+
| 126783 |
+-----+
1 row in set (0.00 sec)

mysql>
```

Fig-1 : Get the nth highest salary

Select sal from employee order by sal desc limit n-1,1; to get the nth largest salary

2. Department-wise data:

```
mysql> select * from department;
+-----+-----+-----+
| dno | dname | dloc |
+-----+-----+-----+
| 1 | Accounts | Bangalore |
| 2 | HR | Mumbai |
| 3 | Deployment | Bangalore |
| 4 | NULL | Trivandrum |
| 111 | Counselling | Chennai |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from employee;
+-----+-----+-----+-----+-----+-----+-----+
| eid | ename | sal | dno | sid | designation | city |
+-----+-----+-----+-----+-----+-----+-----+
| 123 | Annika | 39000 | 1 | 599 | intern | Bangalore |
| 347 | Amber | 126783 | 3 | NULL | Chairman | Kolkata |
| 400 | Nia | 86789.6 | 2 | 511 | intern | Bangalore |
| 511 | Shivaay | 986789 | 2 | NULL | Manager | Panaji |
| 599 | Daksh | 277899 | 1 | NULL | Foreman | Ahmedabad |
| 780 | Sonakshi | 89765 | NULL | NULL | Nutritionist | Kolkata |
| 900 | Dev | 2589760 | NULL | NULL | MD | Kolkata |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)
```

Fig-2 : Employee and department tables

```

MySQL 8.0 Command Line Client
mysql> select d.dname,max(e.sal) from department d natural join employee e group by e.dno;
+-----+-----+
| dname      | max(e.sal) |
+-----+-----+
| Accounts   | 277899     |
| Deployment | 126783     |
| HR         | 986789     |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select d.dname,min(e.sal) from department d natural join employee e group by e.dno;
+-----+-----+
| dname      | min(e.sal) |
+-----+-----+
| Accounts   | 39000      |
| Deployment | 126783     |
| HR         | 86789.6    |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select d.dname,avg(e.sal) from department d natural join employee e group by e.dno;
+-----+-----+
| dname      | avg(e.sal) |
+-----+-----+
| Accounts   | 158449.5   |
| Deployment | 126782.90625 |
| HR         | 536789.29296875 |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select d.dname,count(e.eid) from department d natural join employee e group by e.dno;
+-----+-----+
| dname      | count(e.eid) |
+-----+-----+
| Accounts   | 2            |
| HR         | 2            |
| Deployment | 1            |
+-----+-----+
3 rows in set (0.00 sec)

```

Fig-3 : Department-wise minimum salary,maximum salary,number of employees,average salary

3.Display odd records/even records(alternate records):

- use rownum. Rownum is a pseudo-column which numbers rows of the table,starting from 1.
- rownum cannot be used with *
- rownum has no physical record
- get the nth record,get alternate records etc., using **rownum**

```

MySQL 8.0 Command Line Client
mysql> select * from employee order by eid desc limit 2;
+-----+-----+-----+-----+-----+-----+-----+
| eid | ename  | sal      | dno | sid | designation | city |
+-----+-----+-----+-----+-----+-----+-----+
| 900 | Dev    | 2589760 | NULL | NULL | MD          | Kolkata |
| 780 | Sonakshi | 89765 | NULL | NULL | Nutritionist | Kolkata |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from employee order by eid limit 2;
+-----+-----+-----+-----+-----+-----+-----+
| eid | ename  | sal      | dno | sid | designation | city |
+-----+-----+-----+-----+-----+-----+-----+
| 123 | Annika | 39000    | 1 | 599 | intern      | Bangalore |
| 347 | Amber | 126783   | 3 | NULL | Chairman    | Kolkata |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from employee;
+-----+-----+-----+-----+-----+-----+-----+
| eid | ename  | sal      | dno | sid | designation | city |
+-----+-----+-----+-----+-----+-----+-----+
| 123 | Annika | 39000    | 1 | 599 | intern      | Bangalore |
| 347 | Amber | 126783   | 3 | NULL | Chairman    | Kolkata |
| 400 | Nia    | 86789.6  | 2 | 511 | intern      | Bangalore |
| 511 | Shivaay | 986789 | 2 | NULL | Manager     | Panaji |
| 599 | Daksh  | 277899   | 1 | NULL | Foreman     | Ahmedabad |
| 780 | Sonakshi | 89765 | NULL | NULL | Nutritionist | Kolkata |
| 900 | Dev    | 2589760 | NULL | NULL | MD          | Kolkata |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> _

```

Fig-4 : Get the 1st N rows or last N rows

```

MySQL 8.0 Command Line Client
mysql> select designation from employee group by designation having count(designation) >1 ;
+-----+
| designation |
+-----+
| intern      |
+-----+
1 row in set (0.00 sec)

mysql> select * from employee;
+-----+-----+-----+-----+-----+-----+-----+
| eid | ename  | sal      | dno | sid | designation | city |
+-----+-----+-----+-----+-----+-----+-----+
| 123 | Annika | 39000    | 1 | 599 | intern      | Bangalore |
| 347 | Amber | 126783   | 3 | NULL | Chairman    | Kolkata |
| 400 | Nia    | 86789.6  | 2 | 511 | intern      | Bangalore |
| 511 | Shivaay | 986789 | 2 | NULL | Manager     | Panaji |
| 599 | Daksh  | 277899   | 1 | NULL | Foreman     | Ahmedabad |
| 780 | Sonakshi | 89765 | NULL | NULL | Nutritionist | Kolkata |
| 900 | Dev    | 2589760 | NULL | NULL | MD          | Kolkata |
+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> _

```

Fig-5 : Retrieve duplicate data

Duplicate data occurs more than once. So, use count() to get frequency and then wherever freq>1