SQL Lab Exercices

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1) Get the first 5 products of category "meat" sorted by description.
SELECT * from products where category='meat' order by description limit 5;

```
+----+----------+---------------------+
| id | category | description         |
+----+----------+---------------------+
| 14 | meat     |  roast chicken      |
| 96 | meat     | Beef Flat Iron Steak |
| 97 | meat     | Chevere Logs        |
| 22 | meat     | Chicken - Breast    |
| 56 | meat     | Cornish Hen         |
+----+----------+---------------------+
```

2) Which products contain Beers?
SELECT*from products where description like "%beer%";

```
+----+----------+------------------+
| id | category | description      |
+----+----------+------------------+
| 29 | spirits  | Beer - Moosehead |
| 33 | spirit   | Beer - Blue Light |
+----+----------+------------------+
```

3) Get all products details of all items in the catalog.
SELECT*from products;

```
+-----+-----------+--------------------------------+
| id  | category  | description                    |
+-----+-----------+--------------------------------+
|  1 | soda      | mountain dew                    |
|  2 | dairy     | skimmed milk                    |
|  3 | spirits   | rhein                           |
|  4 | dairy     | milk                            |
|  5 | Cleaning  | soap-2                          |
|  6 | Cleaning  | dixan                           |
...
```

4) Get the 5 customers that have purchased more products in stock.
select sum(quant), count(distinct o.prodId),custId from orders o,stock s where o.prodId=s.id and s.quantity>0 group by o.custId order by sum(quant) desc limit 5;

```
+------------+-------------------------+--------+
| sum(quant) | count(distinct o.prodId) | custId |
+------------+-------------------------+--------+
|        491 |                       6 |     46 |
|        434 |                      11 |     75 |
|        422 |                       7 |     78 |
|        393 |                       7 |     52 |
|        354 |                       5 |      9 |
+------------+-------------------------+--------+
```
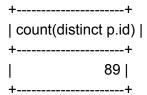
5) Get the providers for the custumers of the last query.

select o.id order_id, o.prodId,o.custId,p.name provider_name,c.qqq from orders o,providers p,(select custId,sum(quant) qqq from orders o,stock s where o.prodId=s.id and s.quantity>0 group by o.custId order by sum(quant) desc limit 5) c where o.provId = p.id and o.custId=c.custId order by o.custId;

```
+----------+--------+--------+---------------+------+
| order_id | prodId | custId | provider_name | qqq  |
+----------+--------+--------+---------------+------+
|      135 |     35 |      9 | Twinder       |  354 |
|       97 |     90 |      9 | Zoovu         |  354 |
|      281 |      0 |      9 | Jatri         |  354 |
|       10 |     11 |      9 | Eamia         |  354 |
|      252 |     45 |      9 | Mycat         |  354 |
|      158 |     67 |      9 | Riffpedia     |  354 |
|      144 |     11 |      9 | Flashpoint    |  354 |
...
```
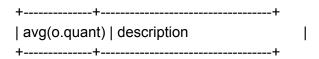
6) How many providers have products in stock?

select count(distinct p.id) from providers p,orders o,stock s where p.id = o.provId and o.prodId=s.id and s.quantity!=0 order by p.id;

```
+----------------------+
| count(distinct p.id) |
+----------------------+
|                   89 |
+----------------------+
```

7) Which is the average purchased quantity of products in stock?

select avg(o.quant),prod.description from orders o,stock s, products prod where o.prodId=s.id and prod.id = o.prodId and s.quantity>0 group by o.prodId;

```
+--------------+----------------------------------+
| avg(o.quant) | description                      |
+--------------+----------------------------------+
```

```
|      35.3333 | mountain dew           |
|      68.5000 | skimmed milk           |
|      47.7500 | rhein                  |
|      29.0000 | milk                   |
|      58.6000 | soap-2                 |
...
```

8) Is there any city in common between providers and customers?

select distinct a.city from customers a, providers b where a.city = b.city;

```
+--------+
| city   |
+--------+
| Krakow |
+--------+
```

9) Is there any product with the double of quantity in different orders?

select a.id,b.id,a.prodId,a.quant,b.quant from orders a, orders b where a.prodId = b.prodId and a.id != b.id and (a.quant = 2*b.quant or 2*a.quant = b.quant);

```
+-----+-----+--------+-------+-------+
| id  | id  | prodId | quant | quant |
+-----+-----+--------+-------+-------+
| 253 | 21  |    89  |    8  |   16  |
| 253 | 24  |    89  |    8  |   16  |
| 165 | 32  |    88  |   64  |   32  |
| 266 | 56  |    74  |   14  |    7  |
|  96 | 59  |    89  |   20  |   40  |
...
```

10) Can you find the total number of customers for each city?

select city, count(city) from orders join customers on (orders.custId=customers.id) group by city;

```
+--------------------+-------------+
| city               | count(city) |
+--------------------+-------------+
| ?abbar             |          4  |
| A? ?urrah          |          3  |
| Akim Swedru        |          7  |
| Atsipópoulon       |          3  |
| Avignon            |          4  |
| Banjar Penyalin    |          2  |
...
```