Practical -6
UNION , MINUS & INTERSECT , SUBQUERY

UNION

UNION is used to combine the results of two or more SELECT statements. However it will eliminate duplicate rows from its resultset.

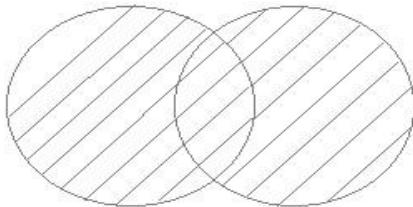Table First :   Teacher
Table second : resercher

ID	Name
4	joy
2	Ved
3	Krish
5	Veena
6	rohan

ID		Name
1		adam
2		Ved
3		krish

Display all the details of Teachers and Researcher both.
SELECT * FROM Teacher;
UNION
SELECT * FROM Resercher

Result

ID	Name
1	adam
2	Ved
3	Krish
4	joy
5	Veena

6	rohan

SUBQUERY

A MySQL subquery is a query nested within another query such as SELECT, INSERT, UPDATE or DELETE. In addition, a MySQL subquery can be nested inside another subquery.
A MySQL subquery is called an inner query while the query that contains the subquery is called an outer query.

Group by and aggregation query can also be used in SUBQUERY.
Syntax of Subquery.

```
Select      select_list
From        table
Where       expr operator
                        ( Select    select_list
                          From      table );
```

Operators can be   =, >, >= , < , =< , != ,<>, NOT IN, IN

E.g Display orderno and quantity ordered of product shirt;

Step 1 : orderno, and qtyorder is available in sales_order_detail. Product name shirt available in product table.
  Productno is common attribute in both the table.
Step 2 : first execute inner query. Find out the productno of item shirt
        select productno from product where description='shirts';
        o19003 | 2
setp 3 : create outer query and join with inner query.
         Outer query is for select orderno and qtyorder attribute where product no
        is p0345 in sales_order_detail.

   select orderno, qtyonhand from sales_order_detail
    where productno= (select productno from product where
description='shirts');

E.g Display all client name who has grater than balance due avg balancedue .

Duebalance and client name both are available in client table.
Step 1 : execute inner query
      select avg(baldue) from client;
      1583.333333
Step 2 : execute outer query , merge with inner query for the result.
      mysql> select cname ,baldue from client where baldue > (select avg(baldue) from client);

| Chhaya godbole | 5000.00 |
| hansel colaco | 2000.00

E.g Display the orders which are delayed more than 30 days. (*Not subquery)

select *from sale_order where datediff(orderdate,delydate) > 30;
```
+---------+----------+------------+-----------+----------+------------+-------------+
| orderno | clientno | orderdate  | salesmanno | delytype | delydate   | orderstatus |
+---------+----------+------------+-----------+----------+------------+-------------+
| o46866  | c00004   | 2005-07-12 | s00002    | p        | 2004-08-02 | cancelled   |
+---------+----------+------------+-----------+----------+------------+-------------+
```

E.g Display the client details whos order is fullfill by salesmanno s00001.

Step1 : select clientno from sale_order where salesmanno='s00001' and orderstatus='fullfilled';

Step 2 : find out the client detail which match with clientno (returns by the innerquery)

select *from client where clientno = (select distinct clientno from sale_order where salesmanno='s00001');

```
clientno | cname      | city   | state     | baldue |
+----------+--------------+--------+-----------+---------+
| c00001   | kriya rajgor | mumbai | maharastra | 1500.00 |
+----------+--------------+--------+-----------+---------+
```

- **IN operator with subquery**

When more than one values returns by inner query , IN operator has to be use.

e.g Display product name whose quantity of order is grater than or equal to 5.

Step 1 : quatity ordered for particular product is available in sales_order_detail table

Fetch productno where qtyorder is >=5 inner query.
 Step 2 : Fetch the product name where productno is match with inner query.

Step 1 : select productno from sales_order_detail where qtyorder >=5;

```
productno |
+-----------+
| p00001   |
| p00001   |
| p00001   |
| p07975
```

Step 2 : **select description from product where productno in (select productno from sales_order_detail where qtyorder >=5);**

```
+-------------+
| description |
+-------------+
| t-shirts    |
| lycra tops  |
+-------------+
```

NOT IN Operator
e.g Display all product name except those whose quantity of order is grater than or equal to 5.
select description from product where productno NOT IN (select productno from sales_order_detail where qtyorder >=5);

EXERCISE
1. Display those productno which are not ordered yet. (hint use NOT IN operator)
2. Display those product no which are common in sales_order_detail and product table.
3. Display only those product details whose quentiy order and quantity displayed is same.
4. Display details of those product whose product sell price is less than sell price of product
    p0345.
5. Select client name whose order status is "inprogress".
6. Select salesman name whose order status is cancelled.
7. select client name whos has ordered[orderdate] before '2005-01-01'
8. Display only those salesman who have not any order . (hint use NOT IN operator)
9. display client name whose order delytype is "f"
10. display the client whose order is supplied by 's00002'