```sql
/*
------------------------- UNION -------------------------
                         -------

It is used to combine the result-set of two or more SELECT statements.
Gives UNIQUE records.

To use it:
-> Every SELECT should have same no. of columns.
-> columns must have similar data types.
-> columns in every SELECT should be in same order.

SYNTAX:
-------
        SELECT column(s) FROM tableA
        UNION
        SELECT column(s) FROM tableB

and
        SELECT column(s) FROM tableA
        UNION ALL
        SELECT column(s) FROM tableB

- the last query will give duplicates also.

*/


/*
------------------------ SQL SUB QUERIES ------------------------
                    ---------------------

-> A subquery or inner query or a nested query is a query within another SQL query.
-> It involves 2 select statements.

SELECT column(s)
FROM table_name
WHERE col_name operator
(subquery);

*/

SELECT * FROM student;

/*
Example:
    Get names of all students who scored more than class average.

    Step 1: Find the avg of class
    Step 2: Find the names of students with marks > avg
*/

SELECT AVG(marks) FROM student; -- 87.667

SELECT name
FROM student
WHERE marks > 87.667;

-- But if more students join later then this will change.
-- so for that reason we can use sub queries.

SELECT name, marks
FROM student
WHERE marks > (
    SELECT AVG(marks)  FROM student
);
-- the above sub query will also give us the same result.
-- this subquery is dynamic SQL query.

-- Qs: Find the name of all students with even roll nubmers.
-- Step 1: Find the even roll numbers.
-- Step 2: Find the names of students will even roll no.

SELECT rollNo
FROM student
WHERE rollNo % 2 = 0;

SELECT name
FROM student
WHERE rollNo IN(102, 104, 106);
/*
Result:
------
bhumika
dhruv
farah
*/

-- Now using sub query
SELECT name
FROM student
WHERE rollNo IN (
    SELECT rollNo
    FROM student
    WHERE rollNo % 2 = 0
);

-- this will also give us the same result
/*
Result:
------
bhumika
dhruv
farah
*/


/*

Example using FROM:
------------------

Qs: Find the max marks from the students of Delhi.

Step 1: Find the students of Delhi.
Step 2: Find the max marks using the sublist in step 1

*/

SELECT *
FROM student
WHERE city = "delhi";

SELECT MAX(marks)
FROM (
    SELECT *
    FROM student
    WHERE city = "delhi"
) AS temp;
/**
Result:
------
96
/

-- as Temp is like a temporary table which we get from the sub query
-- and if we are using FROM then we have to write this kind of aliases.

/*
Using sub-queries inside SELECT
*/

SELECT (SELECT MAX(marks) FROM student), name FROM student;
/*
Result:
-------
96      anil
96      bhumika
96      chetan
96      dhruv
96      emanuel
96      farah
*/

--------------------------------------------------
 /*
 -------------------    VIEWS   ------------------
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-> A view is a virtual table based on the result-set of an SQL statement.
NOTE:
----
    A view always show us up-to-date data.
    The database engine recreates the view each time a user make a
    query.
*/

CREATE VIEW view1 AS
SELECT rollNo, name
FROM student;

/*
After creating a view we can make multiple queries in this view
as like a table.
*/

SELECT name  FROM view1;

/*
Result:
-------
anil
bhumika
chetan
dhruv
emanuel
farah
*/

---------------------------------------------------------------
```