Basics of SQL Syntax

1. **To retrieve all the records from tables we use ***

   Query : - SELECT * FROM table_name;

2. **To edit the structure of the table we use ALTER**

   Query: - ALTER TABLE table_name ADD COLUMN col_name {datatype} AFTER col_name;

3. **To Update data within the table we use UPDATE**

   Query: - UPDATE table_name SET col_name = {values} or {query};

4. **To Count the number of records in the table we use COUNT keyword**

   Query: - SELECT COUNT(*) FROM table_name;

5. **To Get DISTINCT records from the database**

   Query : - SELECT DISTINCT col_name FROM table_name;

6. **To count distinct records in columns**

   Query: - SELECT COUNT(DISTINCT(col_name)) FROM table_name;

7. **Using Conditions and get specific records only**

   Query: - SELECT * FROM table_name WHERE conditions;

8. **Get the specific text available in a row as an output**

   Query: - SELECT col_name FROM table_name WHERE LIKE '%condition%';

9. **Grouping the data**

   Query: - SELECT col_name1, col_name2 FROM table_name GROUP BY col_name1;

10. Sorting Data in Ascending & Descending Order

Query: - SELECT col_name1, col_name2 FROM table_name ORDER BY col_name1 DESC;

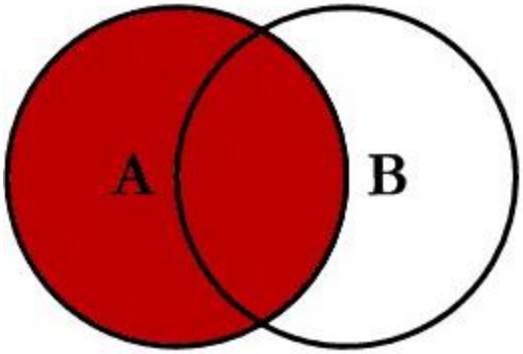
Note: - The default ORDER BY takes Ascending Order

11. Aggregate Conditions in SQL

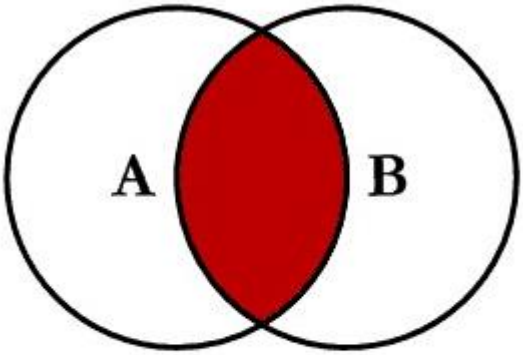
Query: - SELECT col_name1 FROM table_name GROUP BY col_name1 HAVING condition;

Concept of Joins

Inner Join and Left outer Join is mostly used in industry.



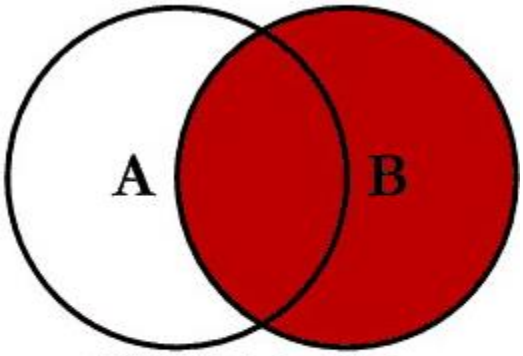

```
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
```



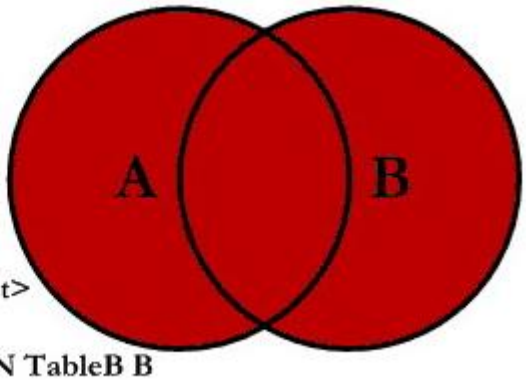

```
SELECT <select_list>
FROM TableA A
INNER JOIN TableB B
ON A.Key = B.Key
```

Other Popular Joins

Right Outer Join and Full Outer Joins are other Popular Joins




```
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
```




```
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key
```

COMMON TABLE EXPRESSION(CTE)

It always starts with WITH keyword

WITH AS (QUERY) SELECT QUERY —--> To get the desired output

The QUERY in the brackets can be any complex or multiple queries

We use CTE to save a tons of space on our SQL server and optimize it