**FAMILIARIZATION OF SET OPERATORS AND JOINS**

**AIM :**To familiarize with set operators and joins in sql

**Set operators**

Set operators are used to join the results of two (or more) SELECT statements. The SET operators available in Oracle 11g are UNION,UNION ALL, INTERSECT, and MINUS.

To perform set operation participating select statement must satisfy the following condition

 Same number of columns must be selected by all participating SELECT statements. Column names used in the display are taken from the first query.

 Data types of the column list must be compatible.

## UNION

## When multiple SELECT queries are joined using UNION operator, Oracle displays the combined result from all the compounded SELECT queries,after removing all duplicates and in sorted order (ascending by default), without ignoring the NULL values.

Eg:

SELECT 1 NUM FROM DUAL

UNION

SELECT 5 FROM DUAL

UNION

SELECT 3 FROM DUAL

UNION

SELECT 6 FROM DUAL

UNION

SELECT 3 FROM DUAL;

NUM

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1

3

5

6

**UNION ALL**

UNION and UNION ALL are similar in their functioning with a slight difference. But UNION ALL gives the result set without removing duplication and sorting the data.

Eg:

SELECT 1 NUM FROM DUAL

UNION ALL

SELECT 5 FROM DUAL

UNION ALL

SELECT 3 FROM DUAL

UNION ALL

SELECT 6 FROM DUAL

UNION ALL

SELECT 3 FROM DUAL;

NUM

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1

5

3

6

3

## INTERSECT

Using INTERSECT operator, Oracle displays the common rows from both the SELECT statements, with no duplicates and data arranged in sorted order (ascending by default).

Eg:

SELECT SALARY

FROM employees

WHERE DEPARTMENT\_ID = 10

INTRESECT

SELECT SALARY

FROM employees

WHERE DEPARTMENT\_ID = 20

SALARY

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1500

1200

2000

## MINUS

Minus operator displays the rows which are present in the first query but absent in the second query, with no duplicates and data arranged in ascending order by default.

Eg:

SELECT JOB\_ID

FROM employees

WHERE DEPARTMENT\_ID = 10

MINUS

SELECT JOB\_ID

FROM employees

WHERE DEPARTMENT\_ID = 20;

JOB\_ID

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HR

FIN

ADMIN

## Joins

There are different types of joins available in SQL:

* [INNER JOIN:](https://www.tutorialspoint.com/sql/sql-inner-joins.htm) returns rows when there is a match in both tables.
* [LEFT OUTER JOIN:](https://www.tutorialspoint.com/sql/sql-left-joins.htm) returns all rows from the left table, even if there are no matches in the right table.
* [RIGHT OUTER JOIN:](https://www.tutorialspoint.com/sql/sql-right-joins.htm) returns all rows from the right table, even if there are no matches in the left table.
* [FULL OUTER JOIN:](https://www.tutorialspoint.com/sql/sql-full-joins.htm) returns rows when there is a match in one of the tables.
* [SELF JOIN:](https://www.tutorialspoint.com/sql/sql-self-joins.htm) is used to join a table to itself as if the table were two tables, temporarily renaming at least one table in the SQL statement.
* [CARTESIAN JOIN:](https://www.tutorialspoint.com/sql/sql-cartesian-joins.htm) returns the Cartesian product of the sets of records from the two or more joined tables.