DBMS Lab 6.0

SQL JOIN

JOIN means to combine something. In case of SQL, JOIN means "to combine two or more tables".

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

A JOIN works on two or more tables if they have at least one common field and have a relationship between them.

JOIN keeps the base tables (structure and data) unchanged.

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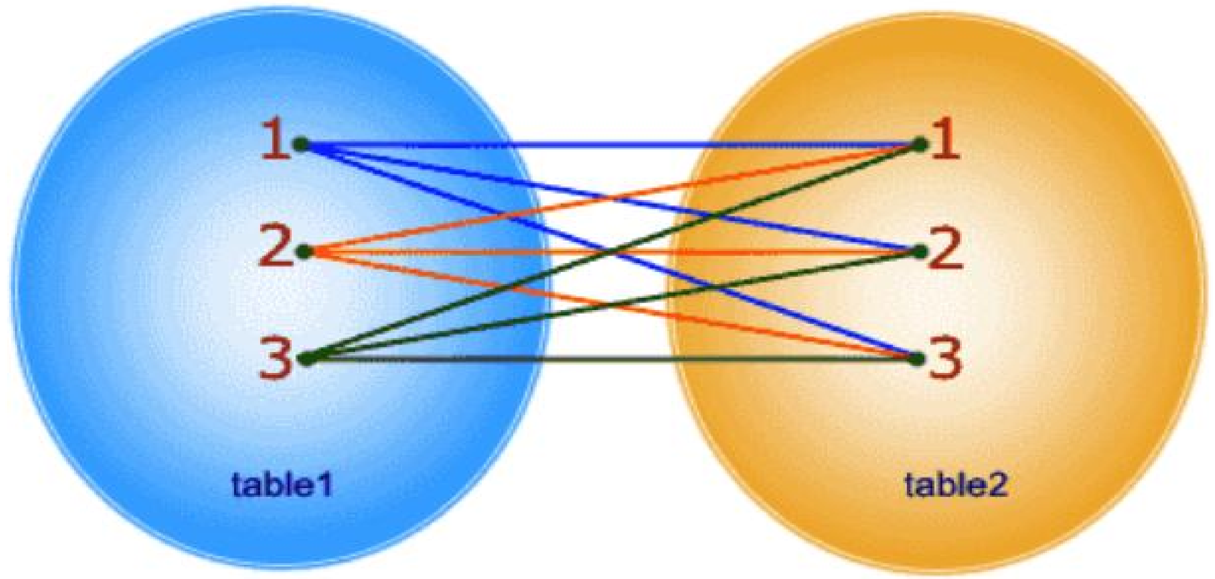
CROSS JOIN

CROSS JOIN produces a result set which is the number of rows in the first table multiplied by the number of rows in the second table if no WHERE clause is used along with CROSS JOIN.This kind of result is called as Cartesian Product.

If WHERE clause is used with CROSS JOIN, it functions like an INNER JOIN.

```
SELECT * FROM table1 CROSS JOIN  table2;
```

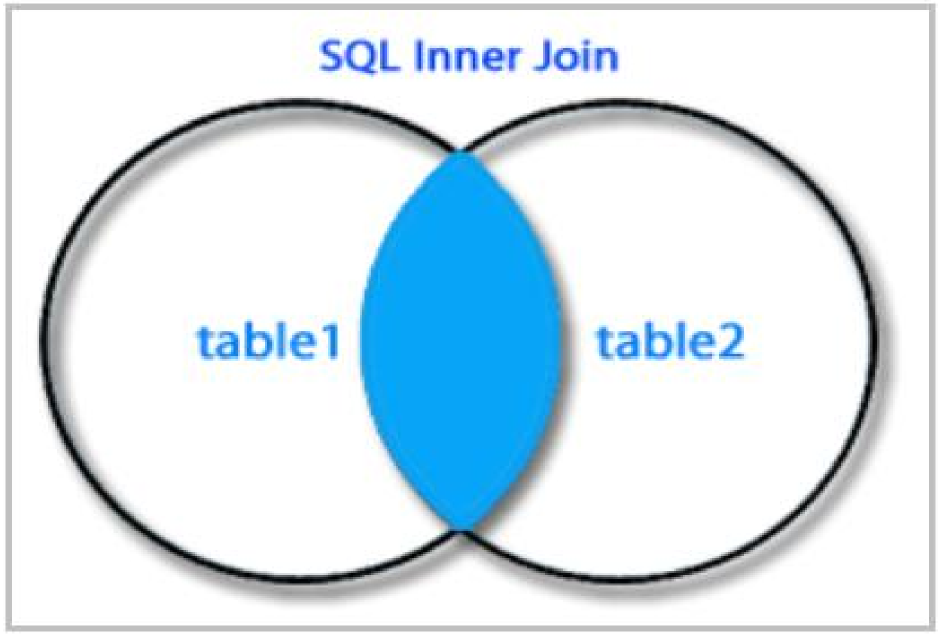


In CROSS JOIN, each row from 1st table joins with all the rows of another table.
If 1st table contain x rows and y rows in 2nd one the result set will be x * y rows.

INNER JOIN

INNER JOIN selects all rows from both participating tables as long as there is a match between the columns. An SQL INNER JOIN is same as JOIN clause, combining rows from two or more tables.

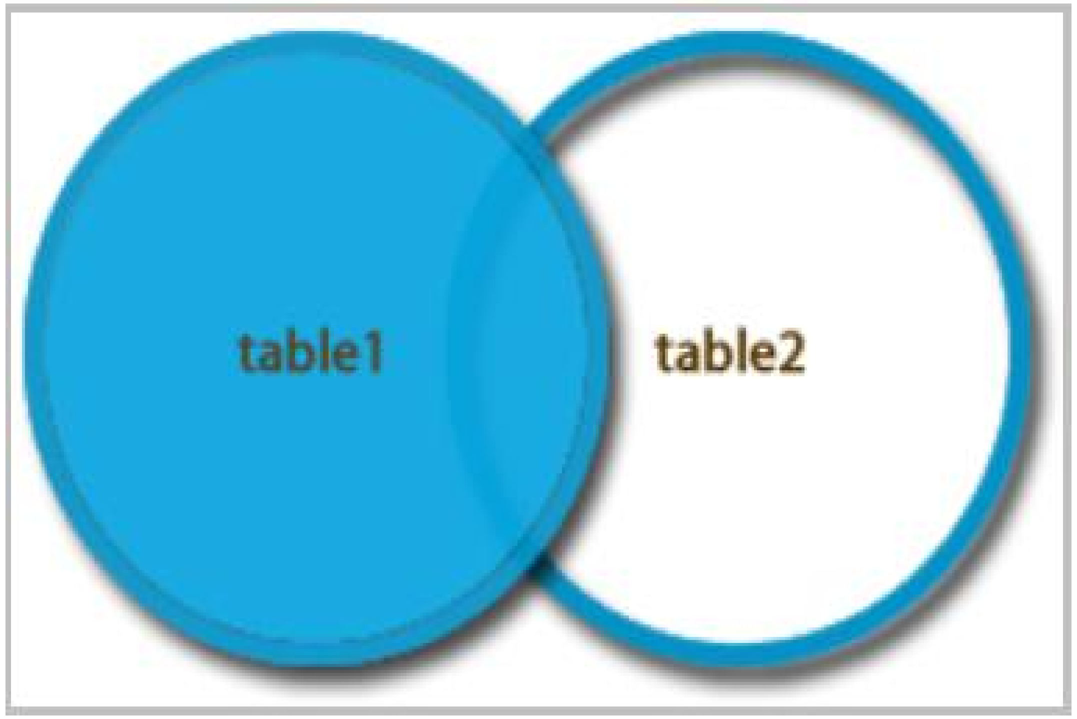
```
SELECT *
FROM table1 INNER JOIN table2
ON table1.column_name = table2.column_name;
```



LEFT OUTER JOIN

LEFT JOIN (specified with the keywords LEFT JOIN and ON) joins two tables and fetches all matching rows of two tables for which the SQL-expression is true, plus rows from the frist table that do not match any row in the second table.

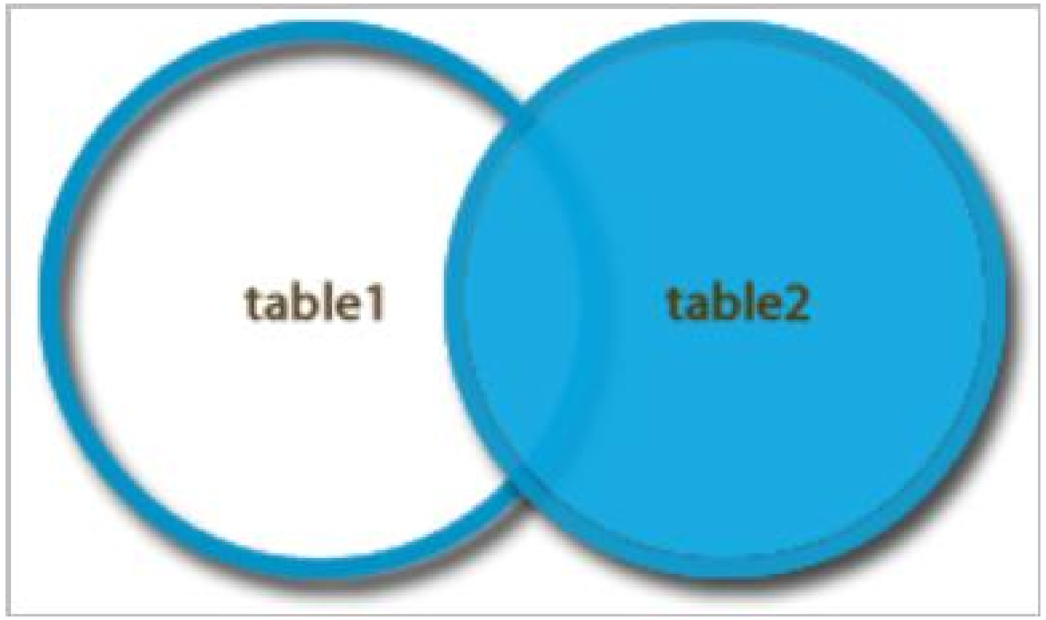
```
SELECT *
FROM table1
LEFT [ OUTER ] JOIN table2
ON table1.column_name=table2.column_name;
```



RIGHT OUTER JOIN

RIGHT JOIN, joins two tables and fetches rows based on a condition, which is matching in both the tables (before and after the JOIN clause mentioned in the syntax below) , and the unmatched rows will also be available from the table written after the JOIN clause

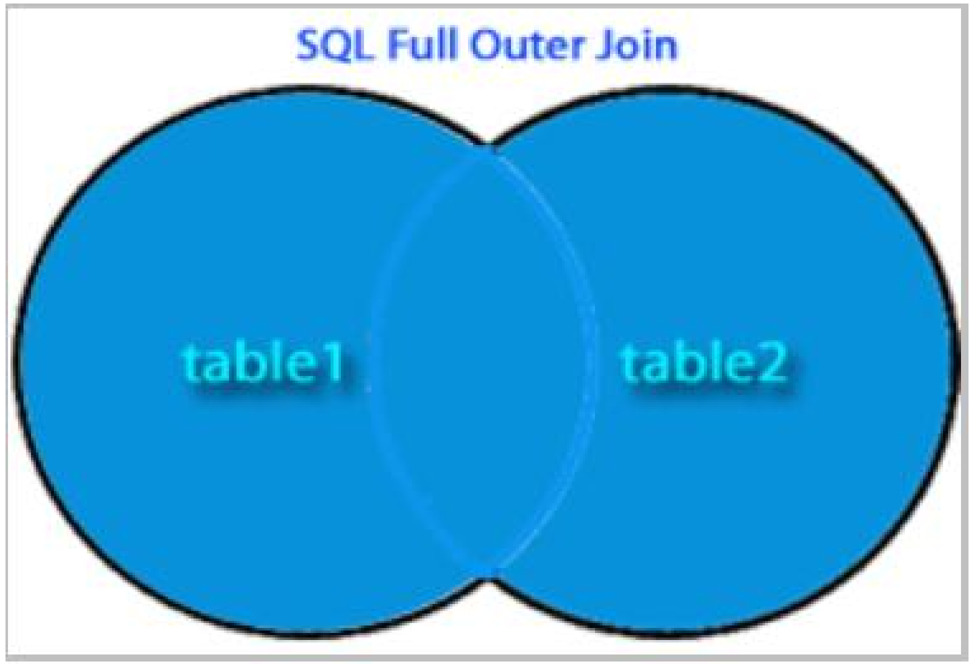
```
SELECT *
FROM table1
RIGHT [ OUTER ] JOIN table2
ON table1.column_name=table2.column_name;
```

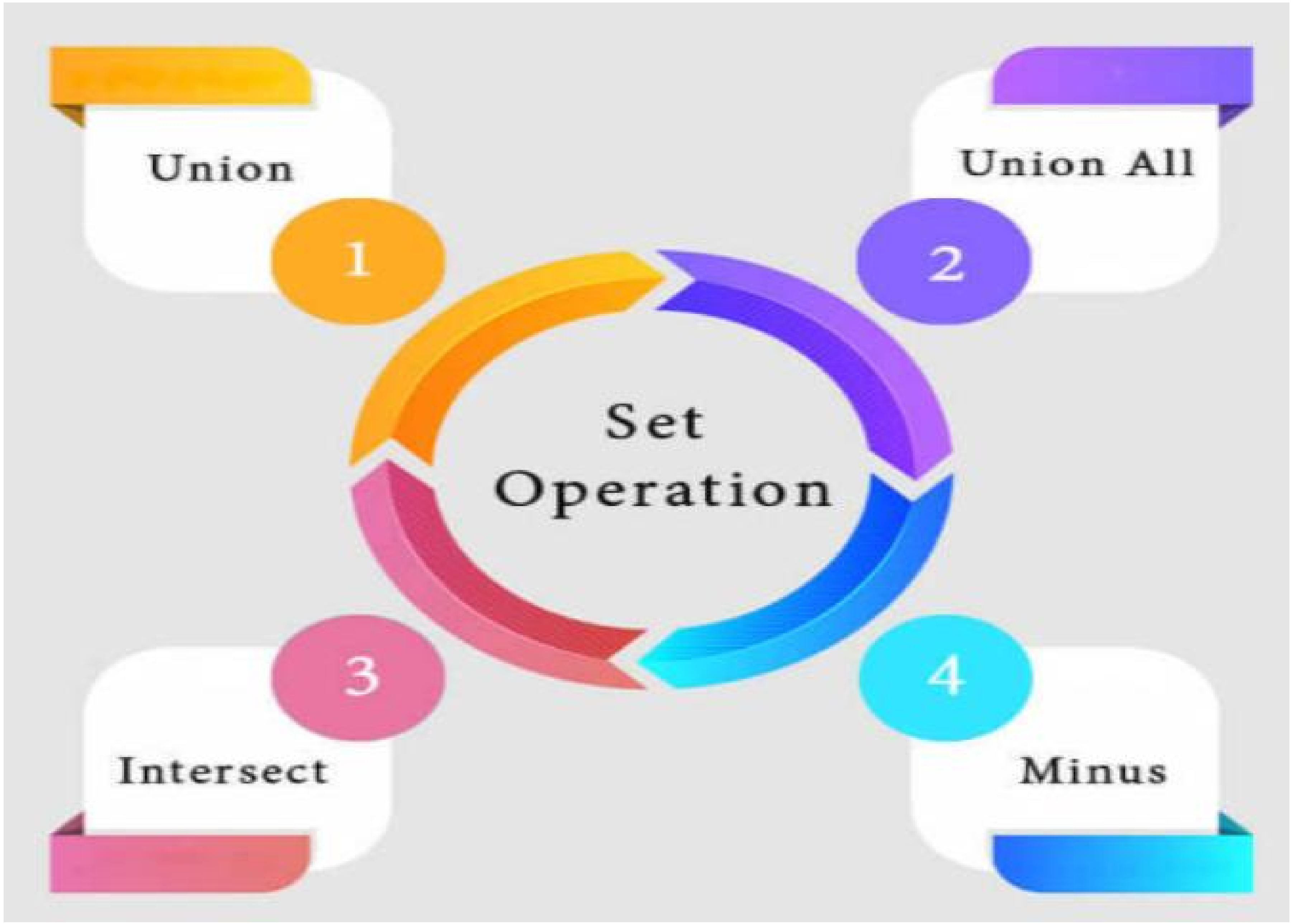


FULL OUTER JOIN

FULL OUTER JOIN combines the results of both left and right outer joins and returns all (matched or unmatched) rows from the tables on both sides of the join clause.

```
SELECT *
FROM table1
FULL OUTER JOIN table2
ON table1.column_name=table2.column_name;
```




Union
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Union

- The SQL Union operation is used to combine the result of two or more SQL SELECT queries.
- In the union operation, all the number of datatype and columns must be same in both the tables on which UNION operation is being applied.
- The union operation eliminates the duplicate rows from its resultset.

Syntax

```
SELECT column_name FROM table1
UNION
SELECT column_name FROM table2;
```

Union All

Union All operation is equal to the Union operation. It returns the set without removing duplication and sorting the data.

Syntax:

```
SELECT column_name FROM table1
UNION ALL
SELECT column_name FROM table2;
```

Intersect

- It is used to combine two SELECT statements. The Intersect operation returns the common rows from both the SELECT statements.
- In the Intersect operation, the number of datatype and columns must be the same.
- It has no duplicates and it arranges the data in ascending order by default.

Syntax

```
SELECT column_name FROM table1
INTERSECT
SELECT column_name FROM table2;
```

Minus

- It combines the result of two SELECT statements. Minus operator is used to display the rows which are present in the first query but absent in the second query.
- It has no duplicates and data arranged in ascending order by default.

Syntax:

```
SELECT column_name FROM table1
MINUS
SELECT column_name FROM table2;
```

END