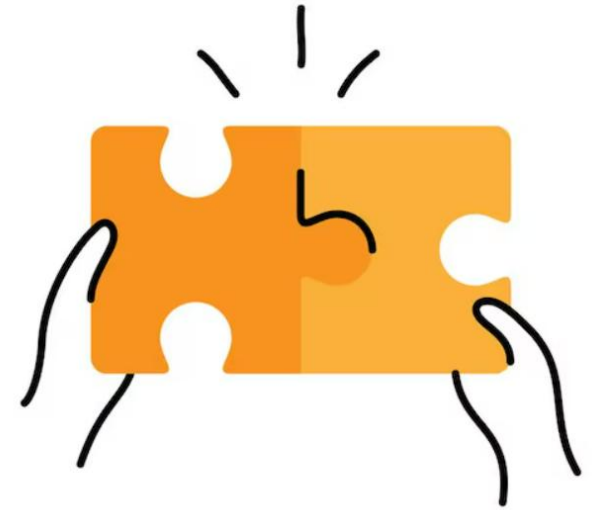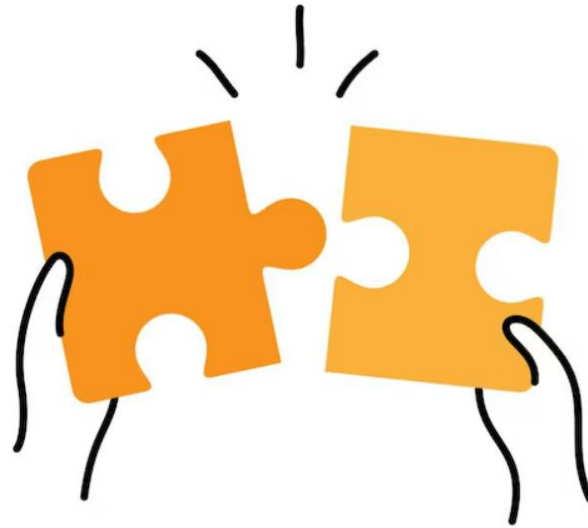# SESSION WILL BE DIVIDED INTO

1. What is a JOIN?

2. Concept of JOINS in SQL?

3. Types of JOINS in SQL

4. Syntax of JOIN

5. Exploring each JOIN type

6. Advance JOINS

7. Interview Questions

What Is A Join?

What is a JOIN?

Concept Of Join In SQL

Understanding Joins

- Joins are used in SQL to combine rows from two or more tables based on a related column between them.

- They are essential when querying data from multiple tables.

- In simple terms, join operation in SQL is used when we want to combine two or more than two tables based on some conditions on a related column between them.

Employees Table

Id	Name	Loc
1	Raj	India
2	James	US
3	Brian	US

Organization Table

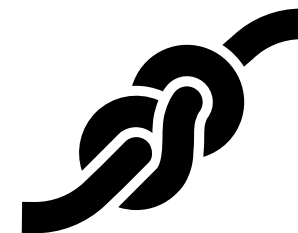| Id	Position
1	Senior Manager
2	Manager
3	Analyst

Concept Of Join In SQL

Understanding Joins

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Employees Table

Id	Name	Loc
1	Raj	India
2	James	US
3	Brian	US

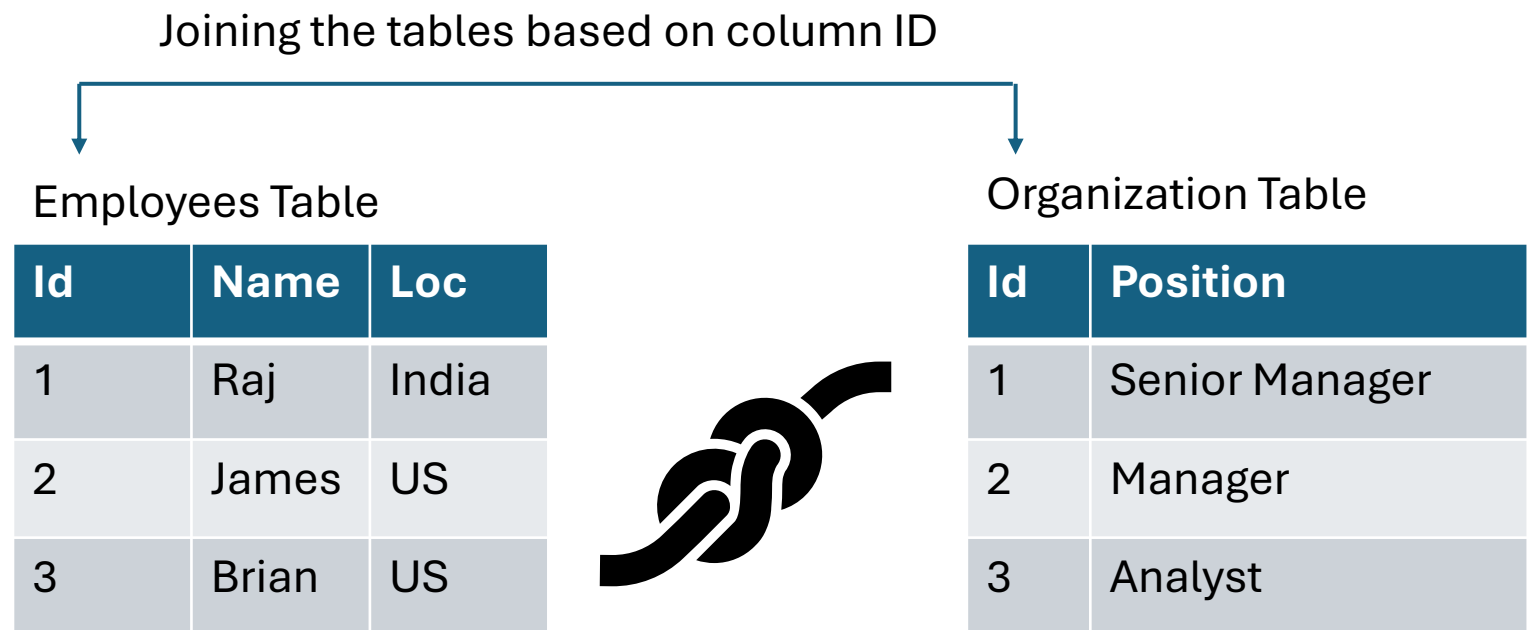Organization Table

Id	Position
1	Senior Manager
2	Manager
3	Analyst

Concept Of Join In SQL

Understanding Joins

- Now, Suppose you want to write a query which returns us the result of all the employees who are senior manager.

- In such case, we can use the concept of joins.

Joining the tables based on column ID

Employees Table

Id	Name	Loc
1	Raj	India
2	James	US
3	Brian	US

Organization Table

Id	Position
1	Senior Manager
2	Manager
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Concept Of Join In SQL

Understanding Joins

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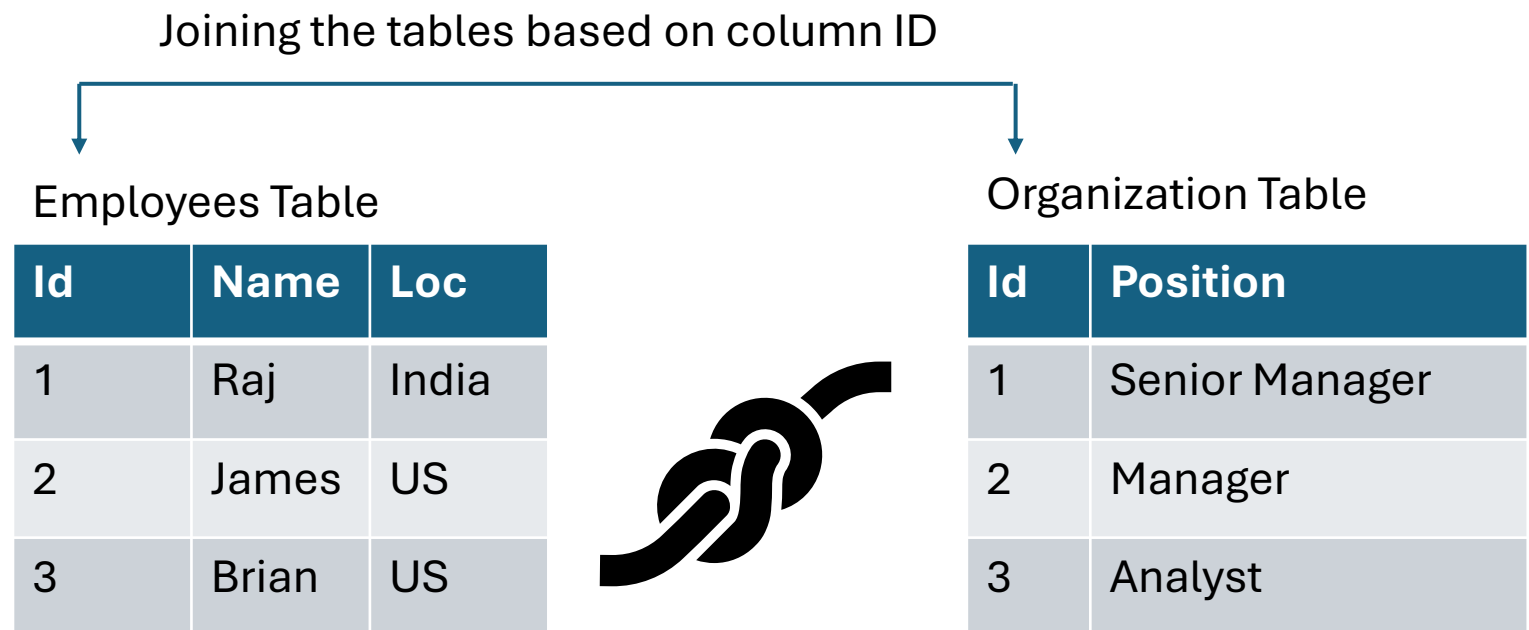
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Joining the tables based on column ID

Employees Table

Id	Name	Loc
1	Raj	India
2	James	US
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1	Senior Manager
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Concept Of Join In SQL

Understanding Joins

- Now, Suppose you want to write a query which returns us the result of all the employees who are senior manager.

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Joining the tables based on column ID

Id	Name	Loc	Position
1	Raj	India	Senior Manager

Concept Of Join In SQL

Understanding Joins

- Now, Suppose you want to write a query which returns us the result of all the employees who are senior manager.

- In such case, we can use the concept of joins.

Joining the tables based on column ID

Id	Name	Loc	Position
1	Raj	India	Senior Manager

Types Of JOIN Operation

Different types of Joins

- INNER JOIN

- LEFT JOIN OR LEFT OUTER JOIN

- RIGHT JOIN OR RIGHT OUTER JOIN

- FULL JOIN OR FULL OUTER JOIN

- SELF JOIN (NOT DIFFERENT)

SECTION 2

Types Of JOIN Operation
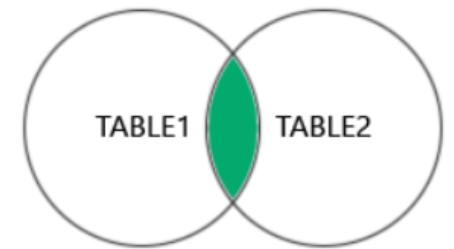
Different types of Joins

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- SELF JOIN (NOT DIFFERENT)

Types Of JOIN Operation

Different types of Joins

- INNER JOIN

Types Of JOIN Operation

Different types of Joins

- INNER JOIN

  - Find the list of all customers who have placed at least one order.

  - Find the total amount of all orders placed by each customer.

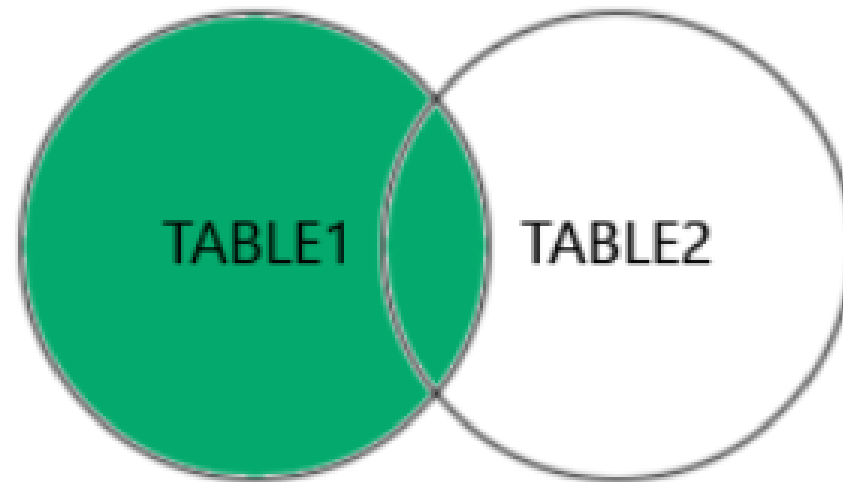 - Find the details of orders placed by customers from the USA.

Types Of JOIN Operation

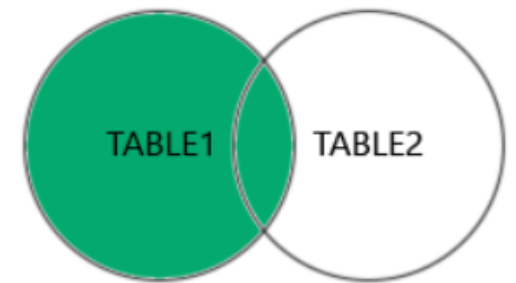**Different types of Joins**

- LEFT JOIN OR LEFT OUTER JOIN

Types Of JOIN Operation

Different types of Joins

- LEFT JOIN OR LEFT OUTER JOIN

  - Find the list of all customers who have placed at least one order.

  - Find the total number of orders for each customer from USA, including customers who haven't placed any orders.   Sort the customers based on the count of their orders in ASC.

  - Retrieve a list of all customers and the number of their orders, but show only those who have placed fewer than two orders or no orders at all.
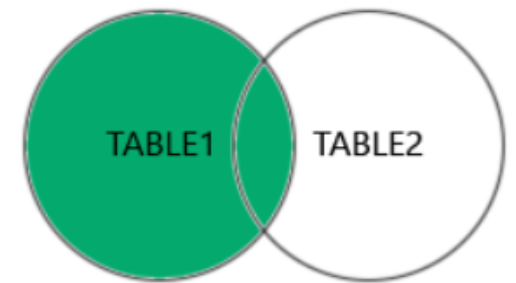
Types Of JOIN Operation

Different types of Joins

- LEFT JOIN OR LEFT OUTER JOIN

  - Write a SQL query to retrieve all customers from the USA and UK. The query should display the sum of the total order amount for each customer. If a customer has no orders or the total order amount is NULL, display 'No Orders'. Otherwise, display the sum of the orders amount.
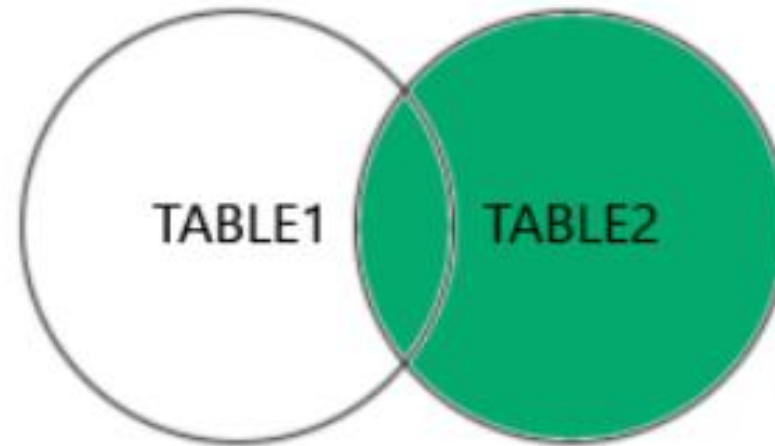
Types Of JOIN Operation

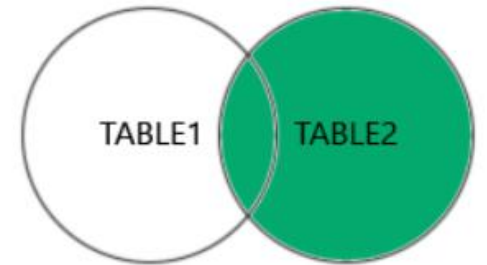**Different types of Joins**

- RIGHT JOIN OR RIGHT OUTER JOIN

Types Of JOIN Operation

Different types of Joins

- RIGHT JOIN OR RIGHT OUTER JOIN

  - Find the list of all customers who have placed at least one order.

  - Find the total number of orders for each customer from USA, including customers who haven't placed any orders.   Sort the customers based on the count of their orders in ASC.

  - Retrieve a list of all customers and the number of their orders, but show only those who have placed fewer than two orders or no orders at all.
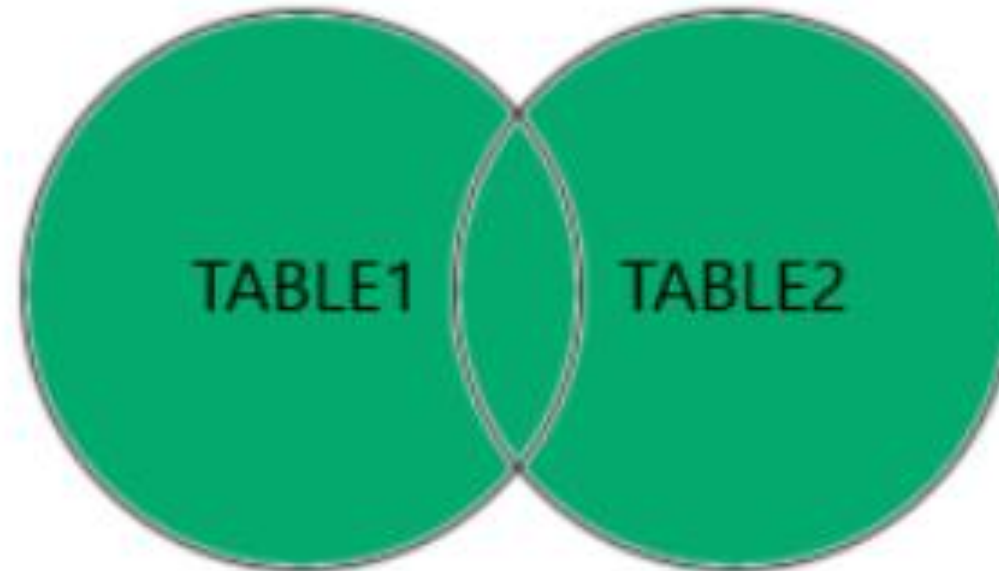
Types Of JOIN Operation

Different types of Joins

- FULL JOIN OR FULL OUTER JOIN

Types Of JOIN Operation

Different types of Joins

- FULL JOIN OR FULL OUTER JOIN

  - List all students and the courses they are enrolled in, including students who are not enrolled in any course and courses that have no students.