**JOIN OPERATIONS**

Join operation combines two relations with respect to a condition, It is denoted by ⋈. Joins are of different types, Outer join, Left outer join, Right outer join, Inner Join**.**

Example

consider an example of an online hotel booking system that utilizes join operations in a database management system (DBMS).

Suppose our database has the following tables:

1. Customers table:
   * customer\_id (primary key)
   * customer\_name
   * customer\_email
2. Bookings table:
   * booking\_id (primary key)
   * customer\_id (foreign key referencing Customers table)
   * hotel\_id (foreign key referencing Hotels table)
   * check\_in\_date
   * check\_out\_date
3. Hotels table:
   * hotel\_id (primary key)
   * hotel\_name
   * Location

* Suppose we want to Retrieve booking details with customer and hotel information. Perform inner join combines records from two tables based on a matching condition and returns only the matched records
* Retrieve booking details with customer information. Include bookings with no customer information. Perform left join operation The left join which returns all records from the left (first) table and the matched records from the right (second) table. If there is no match, NULL values are returned for the right table.
* Retrieve booking details with hotel information. Include hotels with no bookings. Here perform right join operation The right join returns all records from the right (second) table and the matched records from the left (first) table. If there is no match, NULL values are returned for the left table.
* Retrieve all booking details with hotel information, including bookings without corresponding hotels. Perform full outer join operations , a Full Outer Join is used to fetch all booking details along with the corresponding hotel information. The result includes all the bookings, even if there is no matching hotel record.