

Name	Shreeya Nemade, Dnyandeep Yashwant Gaonkar, Rudrapratapsing Rajput																																																																																																																																																																																																		
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rows in set (0.01 sec)</pre></div></div> <div><div>Blood Table.</div><div><pre>mysql> Select * from Blood;</pre><table><tr><th>id</th><th>bloodgroup</th><th>quantity</th><th>expiry_date</th><th>bloodStatus</th></tr><tr><td>101</td><td>A+</td><td>50</td><td>2024-10-13</td><td>Available</td></tr><tr><td>102</td><td>B+</td><td>100</td><td>2024-10-09</td><td>Available</td></tr><tr><td>103</td><td>AB+</td><td>150</td><td>2024-10-15</td><td>Expired</td></tr><tr><td>104</td><td>O+</td><td>170</td><td>2024-10-20</td><td>Available</td></tr><tr><td>105</td><td>A+</td><td>60</td><td>2024-10-14</td><td>Available</td></tr></table><pre>5 rows in set (0.00 sec)</pre></div></div> <div><div>Blood_Donation Table</div><div><pre>mysql> Select * from 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Inner Join:

```
mysql> Select D.id, D.firstname, D.lastname, D.bloodgroup
-> from Donor D INNER JOIN
-> Donne De on D.id = De.id;
```

id	firstname	lastname	bloodgroup
103	Harsha	Surwase	B+
102	Shreeya	Nemade	A+
101	Sujal	Dingankar	O+
104	Avi	Patil	AB+
105	Shruti	Bhuvad	A+

5 rows in set (0.00 sec)

This query retrieves the ID, first name, last name, and blood group of donors who also exist in the Donne table by matching their IDs.

Left Join:

```
mysql> Select D.id, D.firstname, D.lastname, D.bloodgroup
-> from Donor D LEFT JOIN
-> Donne De on D.id = De.id order by D.id;
```

id	firstname	lastname	bloodgroup
101	Sujal	Dingankar	O+
102	Shreeya	Nemade	A+
103	Harsha	Surwase	B+
104	Avi	Patil	AB+
105	Shruti	Bhuvad	A+
106	John	Doe	O+
107	Jane	Smith	O+
108	Mark	Taylor	O+
109	Lucy	Brown	A+

9 rows in set (0.00 sec)

This query retrieves the ID, first name, last name, and blood group of all donors, and includes matching records from the Donne table (if any), with the results ordered by the donor ID.

Right Join:

```
mysql> Select D.id, De.id, De.firstname, De.lastname, De.bloodgroup
-> from Donor D RIGHT JOIN
-> Donne De on D.id = De.id order by D.id;
```

id	id	firstname	lastname	bloodgroup
101	101	Shubham	Bhuvad	A+
102	102	Sanjay	Kadam	AB+
103	103	Harshvardan	Nemade	O+
104	104	Soham	Bhojane	A+
105	105	Shruti	Bhuvad	O+

5 rows in set (0.00 sec)

This query retrieves the donor ID, donor name, and blood group of all entries from the Donne table, including those that do not have a corresponding match in the Donor table, with the results ordered by the donor ID.

Cross Join:

```
mysql> Select D.id, D.firstname, D.lastname, D.bloodgroup  
-> from Donor D  
-> CROSS JOIN Donne De;
```

id	firstname	lastname	bloodgroup
101	Sujal	Dingankar	O+
101	Sujal	Dingankar	O+
101	Sujal	Dingankar	O+
101	Sujal	Dingankar	O+
101	Sujal	Dingankar	O+
102	Shreeya	Nemade	A+
102	Shreeya	Nemade	A+
102	Shreeya	Nemade	A+
102	Shreeya	Nemade	A+
102	Shreeya	Nemade	A+
103	Harsha	Surwase	B+
103	Harsha	Surwase	B+
103	Harsha	Surwase	B+
103	Harsha	Surwase	B+
103	Harsha	Surwase	B+
104	Avi	Patil	AB+
104	Avi	Patil	AB+
104	Avi	Patil	AB+
104	Avi	Patil	AB+
104	Avi	Patil	AB+
105	Shruti	Bhuvad	A+
105	Shruti	Bhuvad	A+
105	Shruti	Bhuvad	A+
105	Shruti	Bhuvad	A+
105	Shruti	Bhuvad	A+
106	John	Doe	O+
106	John	Doe	O+
106	John	Doe	O+
106	John	Doe	O+
106	John	Doe	O+
107	Jane	Smith	O+
107	Jane	Smith	O+
107	Jane	Smith	O+
107	Jane	Smith	O+
107	Jane	Smith	O+
108	Mark	Taylor	O+
108	Mark	Taylor	O+
108	Mark	Taylor	O+
108	Mark	Taylor	O+
108	Mark	Taylor	O+
109	Lucy	Brown	A+
109	Lucy	Brown	A+
109	Lucy	Brown	A+
109	Lucy	Brown	A+
109	Lucy	Brown	A+

45 rows in set (0.00 sec)

This query performs a cross join between the `Donor` and `Donne` tables, returning the Cartesian product of both tables. It will combine every row from the `Donor` table with every row from the `Donne` table, displaying the donor's ID, first name, last name, and blood group for all combinations.

Self Join:

```
mysql> SELECT D.id, D.firstname, D.lastname, D.bloodgroup
-> FROM Donor D
-> JOIN Donne De ON D.contact = De.contact
-> WHERE D.id = '101';
```

id	firstname	lastname	bloodgroup
101	Sujal	Dingankar	O+

1 row in set (0.00 sec)

This query retrieves the `id`, `firstName`, `lastName`, and `bloodgroup` from the `Donor` table, joining it with the `Donne` table where the `Contact` matches in both tables. It filters the result to display only the donor with `id = '101'`.

Full Join / Outer Join:

```
mysql> Select D.id, D.firstname, D.lastname, D.bloodgroup,
-> De.id, De.firstname, De.lastname, De.bloodgroup
-> from Donor D
-> LEFT JOIN Donne De on D.id = De.id
-> UNION
-> Select D.id, D.firstname, D.lastname, D.bloodgroup,
-> De.id, De.firstname, De.lastname, De.bloodgroup
-> from Donor D
-> RIGHT JOIN Donne De on D.id = De.id;
```

id	firstname	lastname	bloodgroup	id	firstname	lastname	bloodgroup
101	Sujal	Dingankar	O+	101	Shubham	Bhuvad	A+
102	Shreeya	Nemade	A+	102	Sanjay	Kadam	AB+
103	Harsha	Surwase	B+	103	Harshvardan	Nemade	O+
104	Avi	Patil	AB+	104	Soham	Bhojane	A+
105	Shruti	Bhuvad	A+	105	Shruti	Bhuvad	O+
106	John	Doe	O+	NULL	NULL	NULL	NULL
107	Jane	Smith	O+	NULL	NULL	NULL	NULL
108	Mark	Taylor	O+	NULL	NULL	NULL	NULL
109	Lucy	Brown	A+	NULL	NULL	NULL	NULL

9 rows in set (0.00 sec)

This query performs a full join by combining the results of a left join and a right join, returning all matching and non-matching rows from both the Donor and Donne tables.

Conclusion

From this experiment, I learnt different join operations in MySQL & also implemented them.