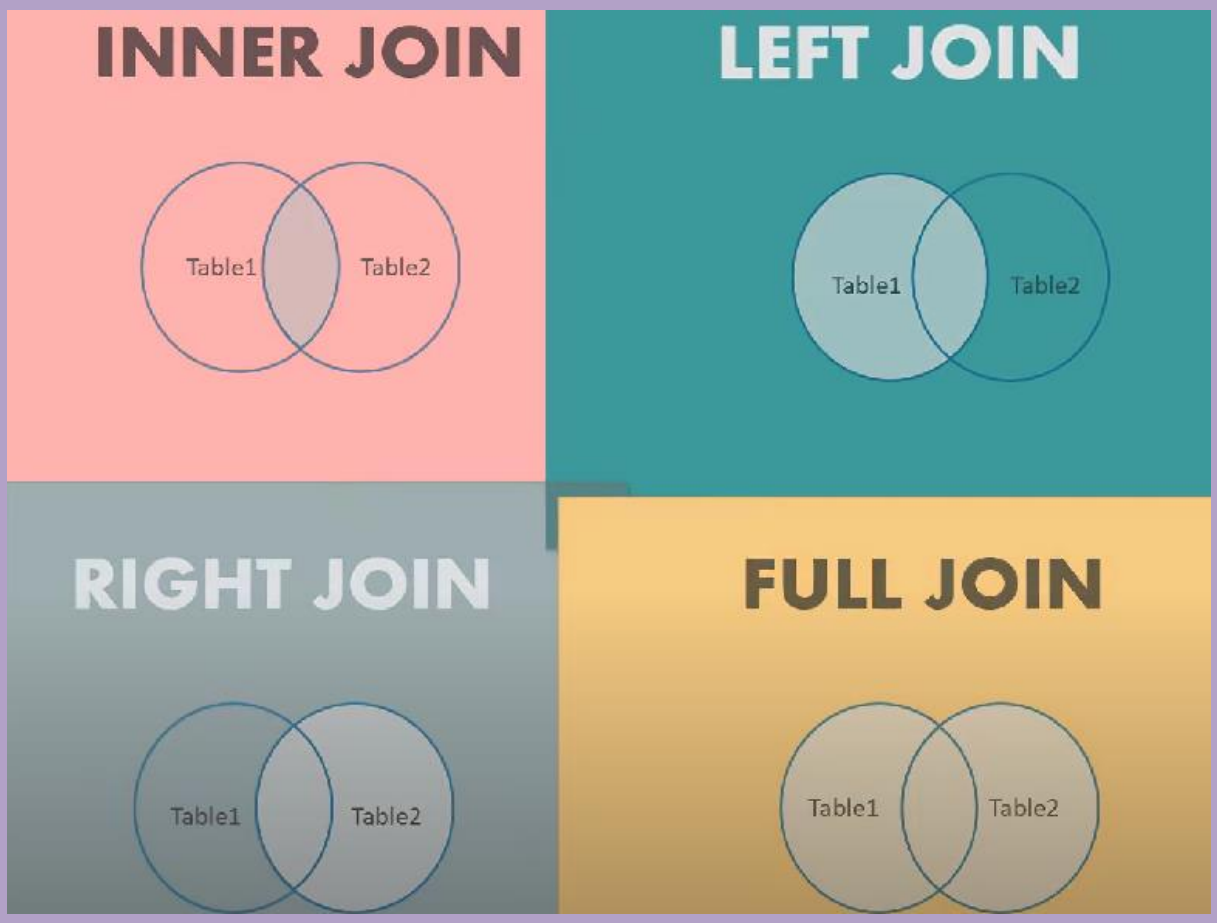
COMPLETE JOINS TUTORIAL

MySQL JOINS



What are JOINS?

*Joins help retrieving data from two or more database tables.

*The tables are mutually related using primary and foreign keys.

LET'S SEE ALL JOINS IN DETAIL

COMPLETE JOINS TUTORIAL

INNER JOIN

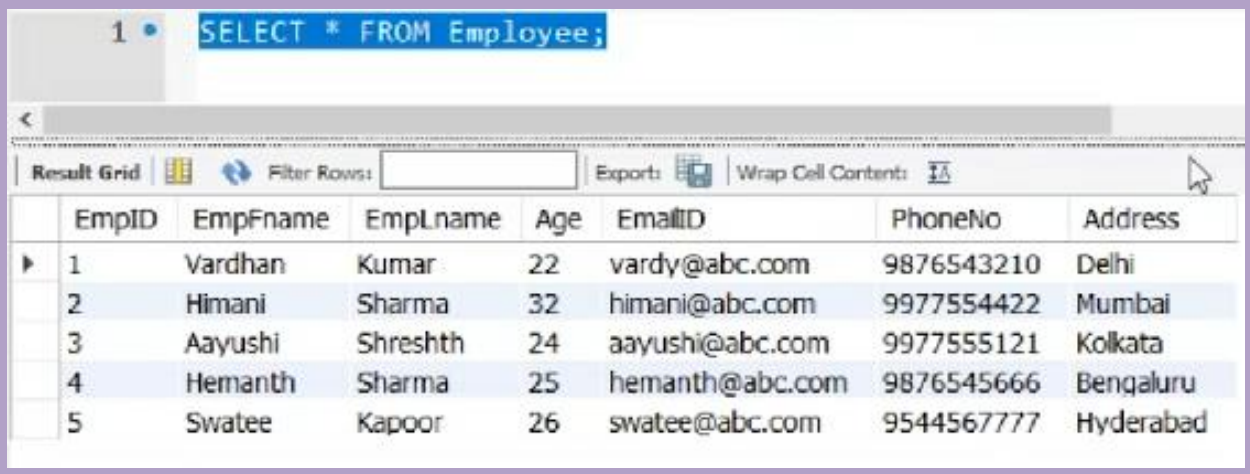
INNER JOIN

This type of join returns those records which have matching values in both tables. So, if you perform an INNER JOIN operation between the Employee table and the Projects table, all the tuples which have matching values in both the tables will be given as output.

Syntax:

```
SELECT Table1.Column1,Table1.Column2,Table2.Column1,....
FROM Table1
INNER JOIN Table2
ON Table1.MatchingColumnName = Table2.MatchingColumnName;
```

Create Tables :



```
1 • SELECT * FROM Employee;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

EmpID	EmpFname	EmpLname	Age	EmailID	PhoneNo	Address
1	Vardhan	Kumar	22	vardy@abc.com	9876543210	Delhi
2	Himani	Sharma	32	himani@abc.com	9977554422	Mumbai
3	Aayushi	Shreshth	24	aayushi@abc.com	9977555121	Kolkata
4	Hemanth	Sharma	25	hemanth@abc.com	9876545666	Bengaluru
5	Swatee	Kapoor	26	swatee@abc.com	9544567777	Hyderabad

COMPLETE JOINS TUTORIAL

```
1 • SELECT * FROM Employee;
2 • SELECT * FROM Project;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ProjectID	EmpID	ClientID	ProjectName	ProjectStartDate
111	1	3	Project1	2019-04-21
222	2	1	Project2	2019-02-12
333	3	5	Project3	2019-01-10
444	3	2	Project4	2019-04-16
555	5	4	Project5	2019-05-23
666	9	1	Project6	2019-01-12
777	7	2	Project7	2019-07-25
888	8	3	Project8	2019-08-20

Write Query for Inner Join

```
SELECT * FROM Employee;
SELECT * FROM Project;
SELECT Employee.EmpID, Employee.EmpFname, Employee.EmpLname, Project.ProjectID, Project.ProjectName
FROM Employee
INNER JOIN Project ON Employee.EmpID=Project.EmpID;
```

OUTPUT :

EmpID	EmpFname	EmpLname	ProjectID	ProjectName
1	Vardhan	Kumar	111	Project1
2	Himani	Sharma	222	Project2
3	Aayushi	Shreshth	333	Project3
3	Aayushi	Shreshth	444	Project4
5	Swatee	Kapoor	555	Project5

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LEFT JOIN

LEFT JOIN

The LEFT JOIN or the LEFT OUTER JOIN returns all the records from the left table and also those records which satisfy a condition from the right table. Also, for the records having no matching values in the right table, the output or the result-set will contain the NULL values.

Syntax:

```
SELECT Table1.Column1,Table1.Column2,Table2.Column1,....
FROM Table1
LEFT JOIN Table2
ON Table1.MatchingColumnName = Table2.MatchingColumnName;
```

Create Tables :

```
1 • SELECT * FROM Employee;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

EmpID	EmpFname	EmpLname	Age	EmailID	PhoneNo	Address
1	Vardhan	Kumar	22	vardy@abc.com	9876543210	Delhi
2	Himani	Sharma	32	himani@abc.com	9977554422	Mumbai
3	Aayushi	Shreshth	24	aayushi@abc.com	9977555121	Kolkata
4	Hemanth	Sharma	25	hemanth@abc.com	9876545666	Bengaluru
5	Swatee	Kapoor	26	swatee@abc.com	9544567777	Hyderabad

COMPLETE JOINS TUTORIAL

```
1 • SELECT * FROM Employee;
2 • SELECT * FROM Project;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ProjectID	EmpID	ClientID	ProjectName	ProjectStartDate
111	1	3	Project1	2019-04-21
222	2	1	Project2	2019-02-12
333	3	5	Project3	2019-01-10
444	3	2	Project4	2019-04-16
555	5	4	Project5	2019-05-23
666	9	1	Project6	2019-01-12
777	7	2	Project7	2019-07-25
888	8	3	Project8	2019-08-20

Write Query for Left Join

```
SELECT * FROM Employee;
SELECT * FROM Project;
SELECT Employee.EmpID, Employee.EmpFname, Employee.EmpLname, Project.ProjectID, Project.ProjectName
FROM Employee
INNER JOIN Project ON Employee.EmpID=Project.EmpID;

SELECT Employee.EmpFname, Employee.EmpLname, Project.ProjectID, Project.ProjectName
FROM Employee
LEFT JOIN Project ON Employee.EmpID=Project.EmpID;
```

OUTPUT :

EmpFname	EmpLname	ProjectID	ProjectName
Vardhan	Kumar	111	Project1
Himani	Sharma	222	Project2
Aayushi	Shreshth	333	Project3
Aayushi	Shreshth	444	Project4
Swatee	Kapoor	555	Project5
Hemanth	Sharma	NULL	NULL

COMPLETE JOINS TUTORIAL

RIGHT JOIN

Create Tables :

```
1 • SELECT * FROM Employee;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

EmpID	EmpFname	EmpLname	Age	EmailID	PhoneNo	Address
1	Vardhan	Kumar	22	vardy@abc.com	9876543210	Delhi
2	Himani	Sharma	32	himani@abc.com	9977554422	Mumbai
3	Aayushi	Shreshth	24	aayushi@abc.com	9977555121	Kolkata
4	Hemanth	Sharma	25	hemanth@abc.com	9876545666	Bengaluru
5	Swatee	Kapoor	26	swatee@abc.com	9544567777	Hyderabad

COMPLETE JOINS TUTORIAL

```
1 • SELECT * FROM Employee;
2 • SELECT * FROM Project;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ProjectID	EmpID	ClientID	ProjectName	ProjectStartDate
111	1	3	Project1	2019-04-21
222	2	1	Project2	2019-02-12
333	3	5	Project3	2019-01-10
444	3	2	Project4	2019-04-16
555	5	4	Project5	2019-05-23
666	9	1	Project6	2019-01-12
777	7	2	Project7	2019-07-25
888	8	3	Project8	2019-08-20

Write Query for Right Join

```
SELECT Employee.EmpFname, Employee.EmpLname, Project.ProjectID, Project.ProjectName
FROM Employee
RIGHT JOIN Project ON Employee.EmpID=Project.EmpID;
```

OUTPUT :

EmpFname	EmpLname	ProjectID	ProjectName
Vardhan	Kumar	111	Project1
Himani	Sharma	222	Project2
Aayushi	Shreshth	333	Project3
Aayushi	Shreshth	444	Project4
Swatee	Kapoor	555	Project5
NULL	NULL	666	Project6
NULL	NULL	777	Project7
NULL	NULL	888	Project8

COMPLETE JOINS TUTORIAL

FULL JOIN

FULL JOIN

Full Join or the Full Outer Join returns all those records which either have a match in the left(Table1) or the right(Table2) table.

Syntax:

```
SELECT Table1.Column1,Table1.Column2,Table2.Column1,....
FROM Table1
FULL JOIN Table2
ON Table1.MatchingColumnName = Table2.MatchingColumnName;
```

Create Tables :

```
1 • SELECT * FROM Employee;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

EmpID	EmpFname	EmpLname	Age	EmailID	PhoneNo	Address
1	Vardhan	Kumar	22	vardy@abc.com	9876543210	Delhi
2	Himani	Sharma	32	himani@abc.com	9977554422	Mumbai
3	Aayushi	Shreshth	24	aayushi@abc.com	9977555121	Kolkata
4	Hemanth	Sharma	25	hemanth@abc.com	9876545666	Bengaluru
5	Swatee	Kapoor	26	swatee@abc.com	9544567777	Hyderabad

COMPLETE JOINS TUTORIAL

```
1 • SELECT * FROM Employee;
2 • SELECT * FROM Project;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

ProjectID	EmpID	ClientID	ProjectName	ProjectStartDate
111	1	3	Project1	2019-04-21
222	2	1	Project2	2019-02-12
333	3	5	Project3	2019-01-10
444	3	2	Project4	2019-04-16
555	5	4	Project5	2019-05-23
666	9	1	Project6	2019-01-12
777	7	2	Project7	2019-07-25
888	8	3	Project8	2019-08-20

Write Query for Full Join

```
SELECT Employee.EmpFname, Employee.EmpLname, Project.ProjectID, Project.ProjectName
FROM Employee
LEFT JOIN Project ON Employee.EmpID=Project.EmpID;
UNION
SELECT Employee.EmpFname, Employee.EmpLname, Project.ProjectID, Project.ProjectName
FROM Employee
RIGHT JOIN Project ON Employee.EmpID=Project.EmpID;
```

OUTPUT :

EmpFname	EmpLname	ProjectID
Vardhan	Kumar	111
Himani	Sharma	222
Aayushi	Shreshth	333
Aayushi	Shreshth	444
Swatee	Kapoor	555
Hemanth	Sharma	NULL
NULL	NULL	666
NULL	NULL	777
NULL	NULL	888