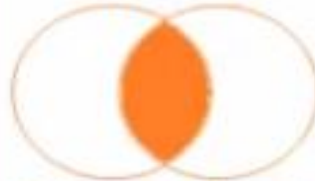


Basic Joins

INNER JOIN



```
SELECT [Column_List]
FROM   tblEmployee E
INNER JOIN tblDepartments D
ON     E.DeptId = D.Id
```

LEFT JOIN



```
SELECT [Column_List]
FROM   tblEmployee E
LEFT JOIN tblDepartments D
ON     E.DeptId = D.Id
```

RIGHT JOIN



```
SELECT [Column_List]
FROM   tblEmployee E
RIGHT JOIN tblDepartments D
ON     E.DeptId = D.Id
```

FULL JOIN



```
SELECT [Column_List]
FROM   tblEmployee E
FULL JOIN tblDepartments D
ON     E.DeptId = D.Id
```

ID	Name	Gender	Salary	DepartmentId
1	Tom	Male	4000	1
2	Pam	Female	3000	3
3	John	Male	3500	1
4	Sam	Male	4500	2
5	Todd	Male	2800	2
6	Ben	Male	7000	1
7	Sara	Female	4800	3
8	Valarie	Female	5500	1
9	James	Male	6500	NULL
10	Russell	Male	8800	NULL

Id	DepartmentName	Location	DepartmentHead
1	IT	London	Rick
2	Payroll	Delhi	Ron
3	HR	New York	Christie
4	Other Department	Sydney	Cindrella

Name	Gender	Salary	DepartmentName
James	Male	6500	NULL
Russell	Male	8800	NULL

Name	Gender	Salary	DepartmentName
NULL	NULL	NULL	Other Department

Name	Gender	Salary	DepartmentName
James	Male	6500	NULL
Russell	Male	8800	NULL
NULL	NULL	NULL	Other Department



```
SELECT [Column_List]
FROM tblEmployee E
LEFT JOIN tblDepartments D
ON E.DeptId = D.Id
WHERE D.Id IS NULL
```



```
SELECT [Column_List]
FROM tblEmployee E
RIGHT JOIN tblDepartments D
ON E.DeptId = D.Id
WHERE E.DeptId IS NULL
```



```
SELECT [Column_List]
FROM tblEmployee E
FULL JOIN tblDepartments D
ON E.DeptId = D.Id
WHERE E.DeptId IS NULL
OR D.Id IS NULL
```

- Advanced or intelligent joins in SQL Server
- Retrieve only the non matching rows from the left table
- Retrieve only the non matching rows from the right table
- Retrieve only the non matching rows from both the left and right table


```
Select * from tblEmployee  
Select * from tblDepartment
```

```
Select      Name, Gender, Salary, DepartmentName  
from        tblEmployee  
Left Join   tblDepartment  
On          tblEmployee.DepartmentId = tblDepartment.Id  
Where       tblEmployee.DepartmentId IS NULL
```

	Name	Gender	Salary	DepartmentName
1	James	Male	6500	NULL
2	Russell	Male	8800	NULL

```
Select * from tblEmployee  
Select * from tblDepartment
```

```
Select      Name, Gender, Salary, DepartmentName  
from        tblEmployee  
Left Join   tblDepartment  
On          tblEmployee.DepartmentId = tblDepartment.Id  
Where       tblDepartment.Id IS NULL
```

	Name	Gender	Salary	DepartmentName
1	James	Male	6500	NULL
2	Russell	Male	8800	NULL

- Purpose of UNION and UNION ALL
- Difference between UNION and UNION ALL
- Difference between JOIN and UNION

UNION & UNION ALL

UNION and UNION ALL operators in SQL Server, are used to combine the result-set of two or more SELECT queries.

tblIndiaCustomers			tblUKCustomers		
Id	Name	Email	Id	Name	Email
1	Raj	R@R.com	1	Ben	B@B.com
2	Sam	S@S.com	2	Sam	S@S.com

```
SELECT Id, Name, Email FROM tblIndiaCustomers  
UNION  
SELECT Id, Name, Email FROM tblUKCustomers
```

UNION

Id	Name	Email
1	Ben	B@B.com
1	Raj	R@R.com
2	Sam	S@S.com

```
SELECT Id, Name, Email FROM tblIndiaCustomers  
UNION ALL  
SELECT Id, Name, Email FROM tblUKCustomers
```

UNION ALL

Id	Name	Email
1	Raj	R@R.com
2	Sam	S@S.com
1	Ben	B@B.com
2	Sam	S@S.com

Note: For UNION and UNION ALL to work, the Number, Data types, and the order of the columns in the select statements should be same.

Microsoft SQL Server Management Studio

Edit View Query Project Debug Tools Window Community Help

New Query [Icons] [Execute] [Icons]

Sample [Execute] [Icons]

Explorer [Icons]

(local) (SQL Server 10.0.1600 - sa)

- Databases
 - System Databases
 - Database Snapshots
 - ReportServer
 - ReportServerTempDB
 - Sample
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 - Tables
 - System Tables
 - dbo.tblDepartment
 - dbo.tblEmployee
 - dbo.tblEmployeeOld
 - dbo.tblGender
 - dbo.tblIndiaCustomers
 - dbo.tblPerson
 - dbo.tblUKCustomers
 - dbo.tblUSCustomers
 - Views
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security

PRASAD-PC.Sample...tblIndiaCustomers SQLQuery1.sql - (L...).Sample (sa (52))*

```
-- Select * from tblIndiaCustomers
UNION ALL
-- Select * from tblUKCustomers
```

Results Messages

	Id	Name	Email
1	1	Raj	R@R.com
2	2	Sam	S@S.com
3	1	Ben	B@B.com
4	2	Sam	S@S.com

UNION & UNION ALL & JOINS

Difference between UNION and UNION ALL

1. UNION removes duplicate rows, where as UNION ALL does not
2. UNION has to perform distinct sort to remove duplicates, which makes it less faster than UNION ALL

Note: Estimated query execution plan - CTRL + L

Sorting results of a UNION or UNION ALL

ORDER BY clause should be used only on the last SELECT statement in the UNION query

Difference between UNION and JOIN

UNION combines the result-set of two or more select queries into a single result-set which includes all the rows from all the queries in the union, where as JOINS, retrieve data from two or more tables based on logical relationships between the tables.

In short, UNION combines rows from 2 or more tables, where JOINS combine columns from 2 or more table.