JOIN Table

- A SELECT statement can be used to extract data from two or more tables.
- Combination of two tables can be done.

Join Table

- Emp_id and e_id are two inter related columns.
- To display name from employee_data and spouse name from employee_per for those employees who have married.

Join Table

```
select CONCAT(f_name, " ", l_name)
AS Name, s_name as 'Spouse Name'
from employee_data, employee_per
where m_status = 'Y' AND emp_id =
e_id;
```

Join Table

- **FROM** clause will take name from two tables which contains the required data.
- The column names for those tables are unique.
- Alternative way is to use **dot** notation.

Join Table

```
select CONCAT(employee_data.f_name
,
" ", employee_data.l_name) AS
Name, employee_per.s_name AS
'Spouse Name'
from employee_data, employee_per
where employee_per.m_status = 'Y'
AND employee_data.emp_id =
employee_per.e_id;
```

SQL JOINs-outer joins

- return rows that have matching data in the left table, even if there's no matching rows in the right table

SQL JOINs-left outer joins..Syntax

- SELECT column_name(s)
  FROM table_name1
  LEFT JOIN table_name2
  ON
  table_name1.column_name=table_name
  2.column_name

SQL JOINs-outer joins..Syntax

Left Table

Id	FirstName	LastName	UserName
1	Fred	Flinstone	freddo
2	Homer	Simpson	homey
3	Homer	Brown	notsofamous
4	Ozzy	Ozzbourne	sabbath
5	Homer	Gain	noplacelike

Right Table

IndividualId	AccessLevel
1	Administrator
2	Contributor
3	Contributor
4	Contributor
10	Administrator

```
SELECT *
FROM Individual LEFT JOIN Publisher
ON Individual.IndividualId = Publisher.IndividualId
```

Output..

IndividualId	FirstName	LastName	UserName	IndividualId	AccessLevel
1	Fred	Flinstone	freddo	1	Administrator
2	Homer	Simpson	homey	2	Contributor
3	Homer	Brown	notsofamous	3	Contributor
4	Ozzy	Osbourne	sabbath	4	Contributor
5	Homer	Gain	noplacelike	NULL	NULL

SQL JOINs-right outer joins..Syntax

- SELECT column_name(s)
  FROM table_name1
  LEFT JOIN table_name2
  ON
  table_name1.column_name=table_name
  2.column_name

SQL JOINs-outer joins..Syntax

Left Table

Id	FirstName	LastName	UserName
1	Fred	Flinstone	freddo
2	Homer	Simpson	homey
3	Homer	Brown	notsofamous
4	Ozzy	Ozzbourne	sabbath
5	Homer	Gain	noplacelike

Right Table

IndividualId	AccessLevel
1	Administrator
2	Contributor
3	Contributor
4	Contributor
10	Administrator

```
SELECT *
FROM Individual RIGHT JOIN Publisher
ON Individual.IndividualId = Publisher.IndividualId
```

Output..

IndividualId	FirstName	LastName	UserName	IndividualId	AccessLevel
1	Fred	Flinstone	freddo	1	Administrator
2	Homer	Simpson	homey	2	Contributor
3	Homer	Brown	notsofamous	3	Contributor
4	Ozzy	Osbourne	sabbath	4	Contributor
NULL	NULL	NULL	NULL	10	Administrator

SQL JOINs-inner joins

- return rows when there is at least one match in both tables.

SQL JOINs-inner joins..Syntax

- SELECT column_name(s)
  FROM table_name1
  INNER JOIN table_name2
  ON
  table_name1.column_name=table_name
  2.column_name

SQL INNER JOIN Example

The Persons table:

P_Id	LastName	FirstName	Address	City
1	Hansen	Ola	Timoteivn 10	Sandnes
2	Svendson	Tove	Borgvn 23	Sandnes
3	Pettersen	Kari	Storgt 20	Stavanger

The Orders table:

O_Id	OrderNo	P_Id
1	77895	3
2	44678	3
3	22456	1
4	24562	1
5	34764	15

Now we want to list all the persons with any orders.

```
SELECT Persons.LastName, Persons.FirstName,
Orders.OrderNo
FROM Persons
INNER JOIN Orders
ON Persons.P_Id=Orders.P_Id
ORDER BY Persons.LastName
```

LastName	FirstName	OrderNo
Hansen	Ola	22456
Hansen	Ola	24562
Pettersen	Kari	77895
Pettersen	Kari	44678

The INNER JOIN keyword return rows when there is at least one match in both tables. If there are rows in "Persons" that do not have matches in "Orders",those rows will NOT be listed.

NESTED QUERIES

```
SELECT f_Name, yos
FROM employee_data
WHERE emp_id = (SELECT e_id
        FROM employee_per
        WHERE s_name = "betty
  cudly");
```