A join is a query that combines

Rows

from Two or More tables

WHY I NEED TO LEARN JOINS

PATIENT

DOCTOR

MEDICINE

For Normalization

If I WANT TO KNOW

Pname

Doc name

Med name

Write 3 different queries

Select pname from patient ;

Select docname from doctor ;

Select medname from medicine;

Combine (Join) all these 3 tables
And write a single query

JOIN

Having all information in single Table is known as

De Normalization

Separating the information
Into 3 different tables
is known as

Normalization

Why should I do Normalization

1 . To Avoid Duplicates

2 . Organize Relevant Data

3 . Apply Data Integrity (Constraints)

4 . Scalability

LET

US

JOIN

NO:I

EQUI JOIN

Oracle Example for EQUI JOIN

ASSUME OUR HEROS STOP ACTING

AND WORKS FOR A COMPANY

TABLE ACTORS

ANO	DEPTNO	ANAME
7782	10	AMIR
7934	10	SHAHRUKH
7876	20	SANJAY
7902	20	SALMAN
7900	30	HRITHIK

TABLE DEPT

DEPTNO	DEPTNAME
10	ACCOUNTS
20	RESEARCH
30	SALES

Example for EQUI JOIN

```
select deptname, aname
from dept, actors
where
dept.deptno=actors.deptno
```

Example for EQUI JOIN

Is COMPLETED

NEXT

NO:2

SELF JOIN

One more example

Some of you asked a Doubt after Reading my 7:05 script (employees)

mgr number(4) constraint E_MGR_FK references employees

IT IS USED FOR PERFORMING SELF JOIN

One more example

Oracle Example for SELF JOIN

KIDS

SNO	FNO	SNAME	FNAME	HOBBIES
1	1	PRIYA		CHESS
2	2	JOHN		CRICKET
3	3	SACHIN		CARROM
4	4	ISHA		BOOKS
5	5	SUNIL		CARROM

```
Select t1.sname ||' LIKES '|| t2.sname
   "kids and their hobbies"
   FROM kids  t1 ,  kids  t2
  WHERE
t1.father_no = t2.kid_no
     AND t1.sname LIKE 'PRIYA';
```

kids and their hobbies

PRIYA likes CHESS

Oracle more Example for SELF JOIN

```
select e1.name
   ||' works for '||
e2.name
FROM employees e1,
employees e2
   WHERE
e1.manager_id = e2.employee_id
      AND e1.last_name = 'SENTHIL';
```

NEXT

NO:3

NON EQUI JOIN

Join even if there is no matching column

HOW

Create one table --- PLAYERS

Columns –Wait for the next slide
NO need of indexes
NO need of constraints
NO need of sequences
NO need of views

PNO	PNAME	SAL
7839	VIRU	5000
7698	KAPIL	2850
7782	PATEL	2450
7566	ZAKIR	2975
7654	SHARMA	1250
7499	AZAR	1600
7844	DRAVID	1500
7900	GAMBIR	950

Create one more table --- SALGRADE
This will have only 5 records
Columns –Wait for the next slide
NO need of indexes
NO need of constraints
NO need of sequences
NO need of views

GRADE	LOWSAL	HIGHSAL
1	700	1200
2	1201	1400
3	1401	2000
4	2001	3000
5	3001	9999

PLAYERS

PNO

PNAME

SALC

SALGRADE

GRADE

LOWSAL

HIGHSAL

There is no matching column . But I still I want you join these two tables ….

HOW

NON EQUI JOIN with >= ,<= operator

```
Select pname, grade
From players, salgrade
Where
players.sal >= salgrade.lowsal
and
emp.sal <= salgrade.highsal ;
```

Example for NON EQUI JOIN

Is COMPLETED

OUTER JOIN

NO:4

OUTER JOIN

ORACLE Example for SELF JOIN

CID	CNAME
10	INDIA
20	ENGLAND
40	SOUTHAFRICA

PNO	CID	PNAME
101	10	SACHIN
102	20	KEVINPIETERSEN
103	30	SHANE WARNE

Select cname, pname
from country ,players
Where
Country.cid (+) = players.cid

CNAME	PNAME
INDIA	SACHIN
ENGLAND	KEVINPIETERSEN
	SHANEWARNE

Example for OUTER JOIN

Is COMPLETED

```
Select cname, pname
from   country ,players
Where
Country.cid = players.cid   (+)
```

Example for OUTER JOIN

Is COMPLETED