

Class will start at 9:05 PM

### Agenda

- Joins
- Self Join
- Pseudo code

↓ batches

id	name
1	Dec 22
2	Nov 22

Students ↓

id	name	b_id
1	A	1
2	B	2
3	C	2
4	D	1

Q2

Student name	Batch name
A	Dec 22
B	Nov 22
C	Nov 22
D	Dec 22

JOIN  $\Rightarrow$  combining 2 tables on the basis of a condition.

S_id	S_name	L_id	L_name

Join condition  $\Rightarrow$  is the way or condition on the basis of which we decide if rows from 2 tables must be combined or not.

```

select students.name, batches.name
from students
join batches
on students.b_id = batches.id;

```

↓ batches

id	name
1	Dec_22
2	Nov_22

Students ↓

id	name	b_id
1	A	1
2	B	2
3	C	2
4	D	1

b_id	b.name	s.id	s.name	s.b_id
1	Dec_22	1	A	1
2	Nov_22	2	B	2
2	Nov_22	3	C	2
1	Dec_22	4	D	1

```

select Students s.name, batches b.name
from Students
join batches
on Students.b_id = batches_id

```

employee

id	name	dept_id
1	A	1
2	B	1
3	C	1
4	D	2

department

id	name
1	Engineering
2	HR
3	Finance

```

select e.name, d.name
from employee as e
join department as d
on e.dept_id = d.id

```

## Students

id	name	buddy-id
1	Naman	2
2	Ishan	<del>1</del>
3	Rishi	5
4	Suman	5
5	Rohit.	3

Q) Give me name of all students with the name of their buddy:  $\Rightarrow$

student name	buddy-name

buddy

id	name

```

select      s.name as student_name,
            b.name as buddy_name
from        student as s
join        buddy as b
on          s.buddy_id = b.id;

```

```
select s.name as stud-name, b.name as buddy-name  
from students as s  
join students as b  
on s.buddy-id = b.id
```

Note whenever doing a self join aliases are mandatory.

employee

id	name	dept_id
1	A	1
2	B	1
3	C	1
4	D	2

department

id	name
1	Engineer
2	HR
3	Finance

```

select e.name, d.name
from employee as e
join department as d
on e.dept_id = d.id

```

Pseudo code

ans = []

for row1 in employee

for row in department

if row1.dept\_id = row2.id

ans.add(row1 + row2);



```

for row in ans: →
    print (row.employee.name,
           row.department.name)

```

Joins are expensive!

Patients

Patient_id	P_name	Condition
		ACNE - DIAB 100
		DIAB 100 - MYOP

% DIAB %

ACNE DIAB	MYOP
-----------	------

DIAB%

or

DIAB%.

OR %\_DIAB%

DIAB%.

OR

%DIAB%

table

	id	height	wt
	1	50	70
→	2	70	90
	3	45	71
→	4	70	60

select \* from table  
order by height, wt.

id	ht	wt
<del>1</del> 3	45	71
<u>1</u>	50	70
4	70	60

2	70	90
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