Joins-2
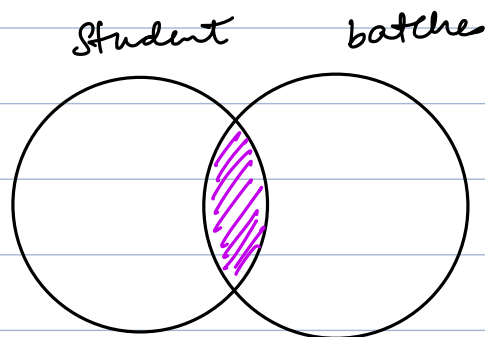
- Left Join, Right Join
- cross join
- using
- natural
- where in join

Type of Joins

Students

s_id	s_name	b_id
1	A	1
2	B	1
3	C	NULL ✗
4	D	NULL ✗
5	E	2

INNER JOIN

batches

b_id	b_name
1	X
2	Y
3	Z

```
select *
from students s
join batches b
on s.b_id = b.b_id
```
→ 3 rows

or   s.b_id = NULL ;

Student   batches

INNER JOIN

Left Join

Q. Find students with their batch names.
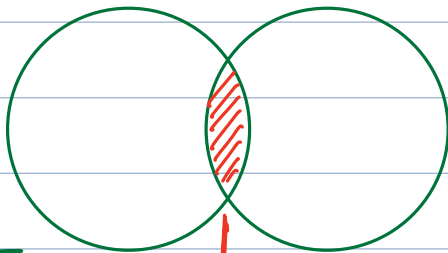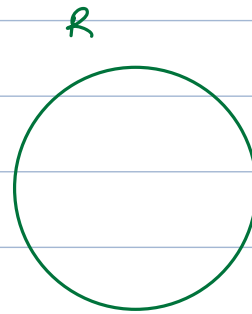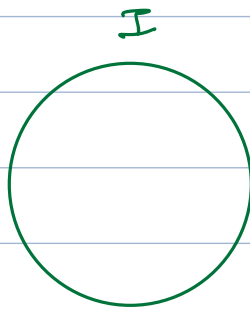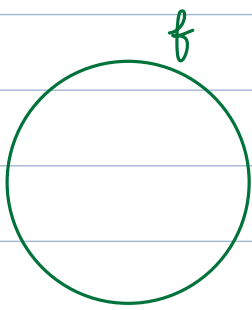give the student details even if the
batch has not been allocated yet.

Student   batches
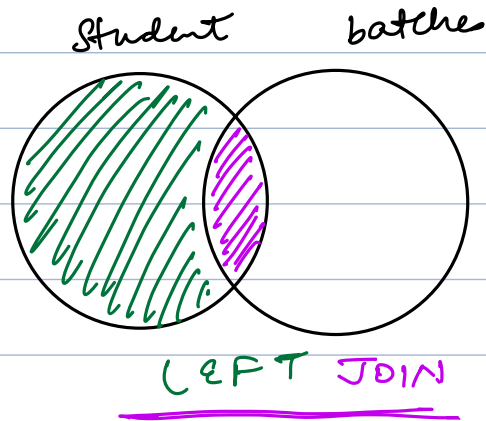
LEFT JOIN

```
select *                    → left
from  students s
left join  batches b   on  _____ ;
```

s_id	s_name	b_id	b_id	b_name
1	A	1	1	X
2	B	1	1	X
3	C	NULL	NULL	NULL
4	D	NULL	NULL	NULL
5	E	2	2	Y

f   I   R

Kuch kuch hota hai   DVD ✓   rented ✓   ✓
Kabhi KKG   DVD ✓   ✗   ✗
OSO   ✗   ✗   ✗

F *left*   I   F *left*   I

left

Inner Join R
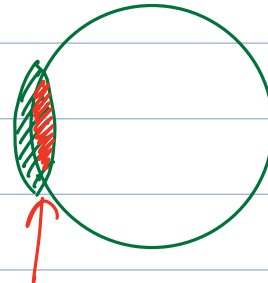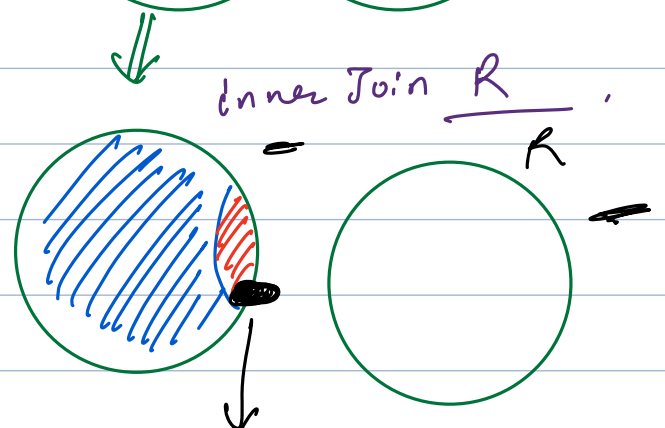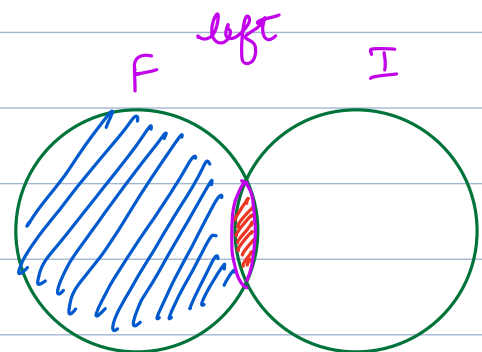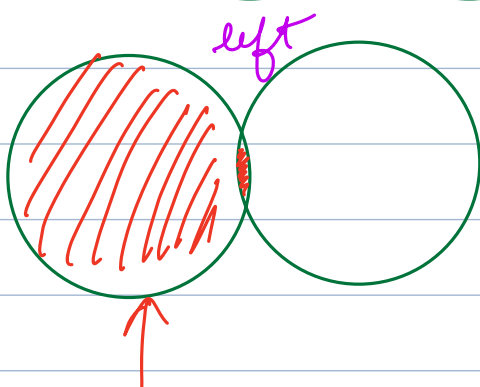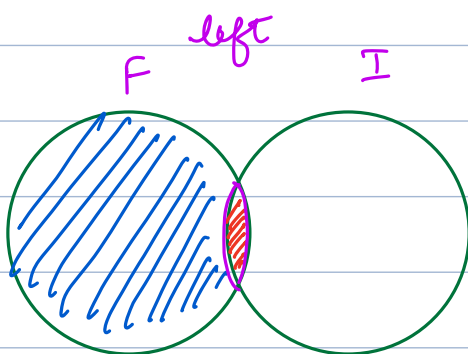
where rental is NULL?

left x   RIGHT JOIN

Students   **batches**

S_id	s-name	b_id
1	A	1
2	B	1
3	C	NULL
4	D	NULL
5	E	2

b_id	b-name
1	X
2	Y
3	z

null null null   3   2

cross join

select * from
students
join batches;

↓

every row of one table is
joined with every row
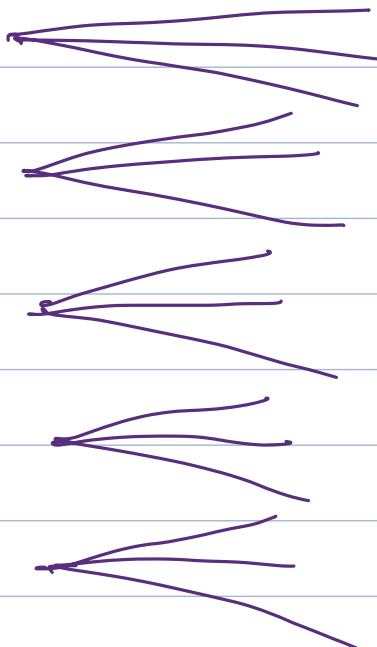of other table.
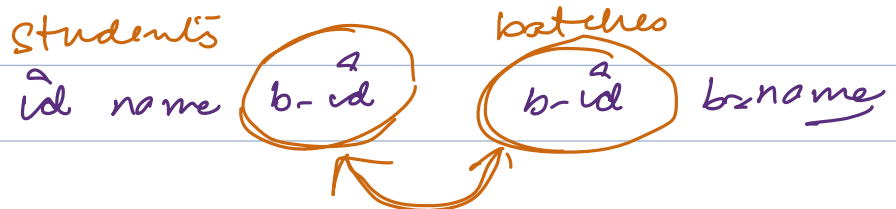
Material   color

A   B
↓   ↓
5   3

Material		Color	
1	Silk	1	Red
2	Cotton	2	Blue
3	Polyster		

1	silk	1	red
1	silk	2	Blue
2	cotton	1	red
2	cotton	2	Blue
3	polyste	1	red
3	polyste	2	Blue

$$n \qquad m$$
$$A \qquad B$$

cross join # of rows : ? $\boxed{n \times m}$

Natural Join

students
id name (b-id)   batches (b-id) b-name

```
Select *
from students
(natural) join batches;
```

Students   batches

s_id   name   b_id   b_id   name

s.b_id = b.b_id

and   s.name = b.name.