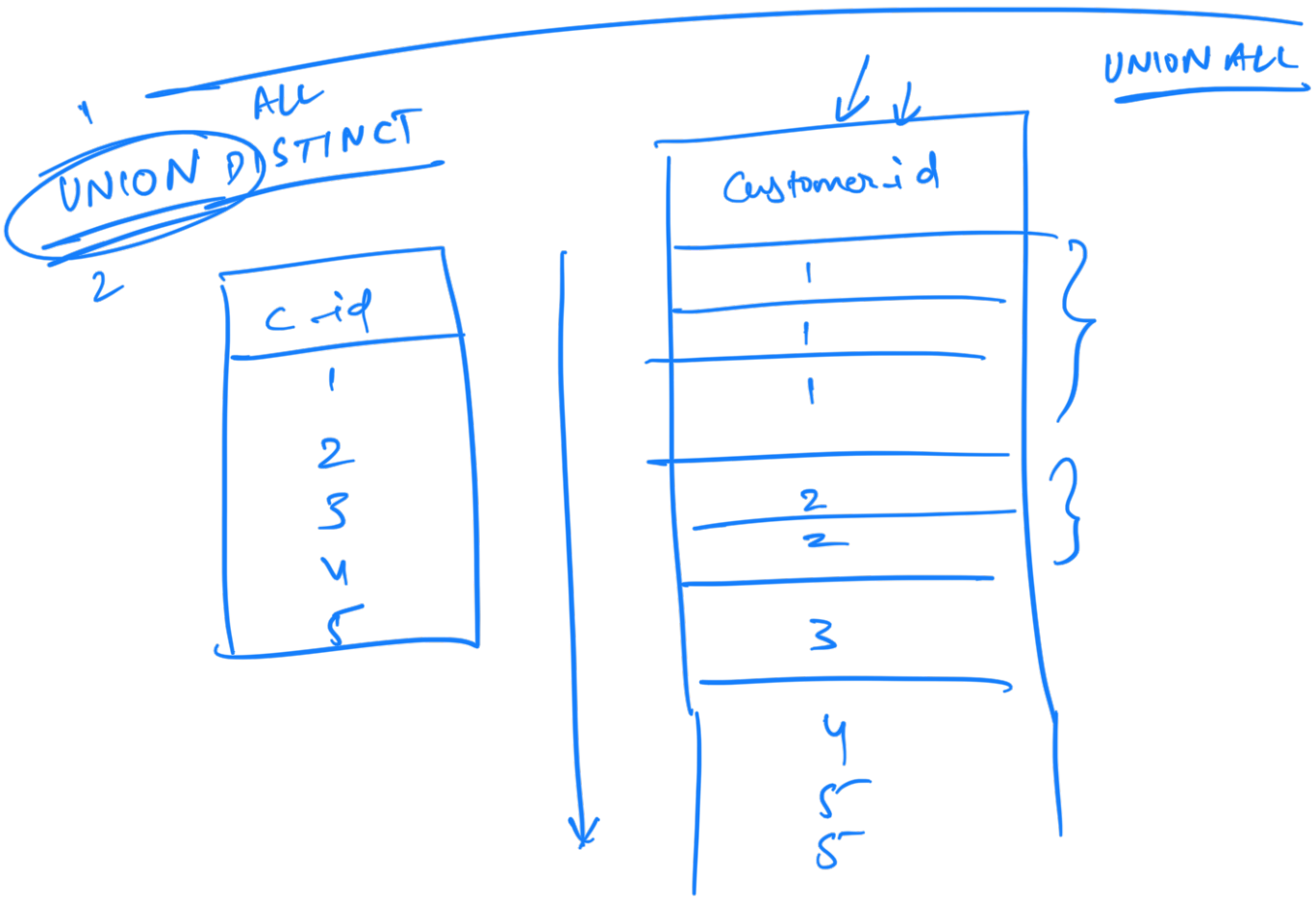
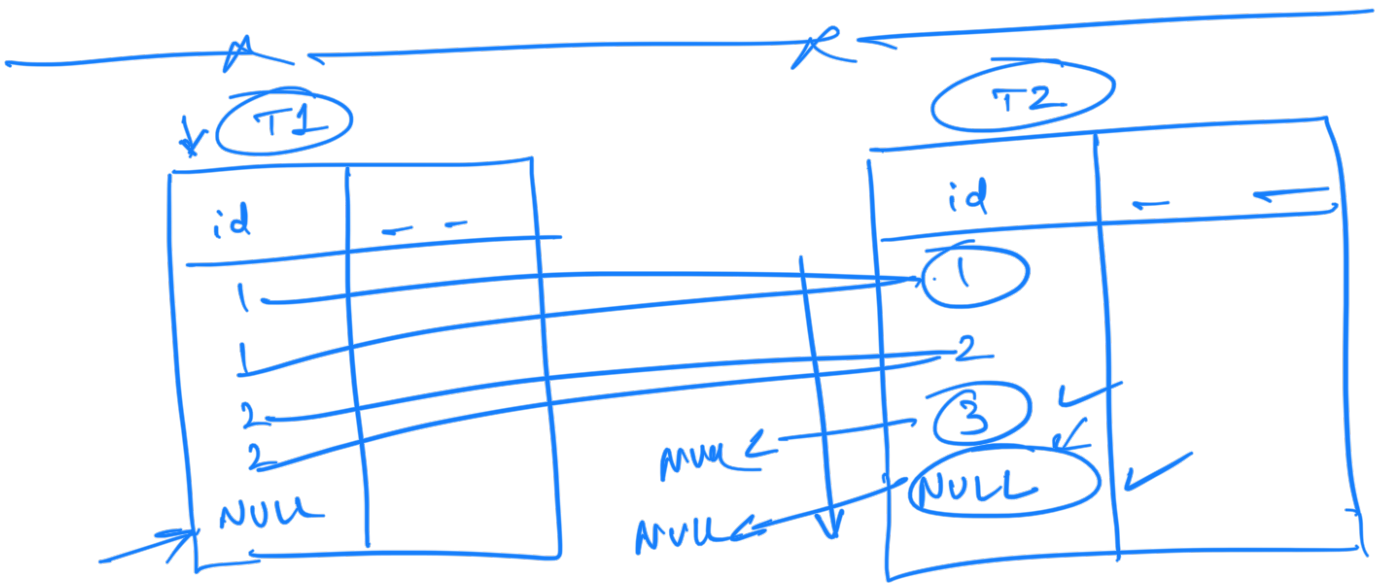
UNION in MySQL = UNION DISTINCT in BQ

UNION ALL " = UNION ALL in BQ





Inner

t1.id	t2.id
1	1
1	1
2	2
2	2

Left

t1.id	t2.id
1	1
1	1
2	2
2	2
NULL	NULL

Right

t1.id	t2.id
1	1
1	1
2	2
2	2
NULL	3
NULL	NULL

Outer

t1.id	t2.id
1	1
1	1
2	2
2	2
NULL	3
NULL	NULL
NULL	NULL

1st Join → All the booths

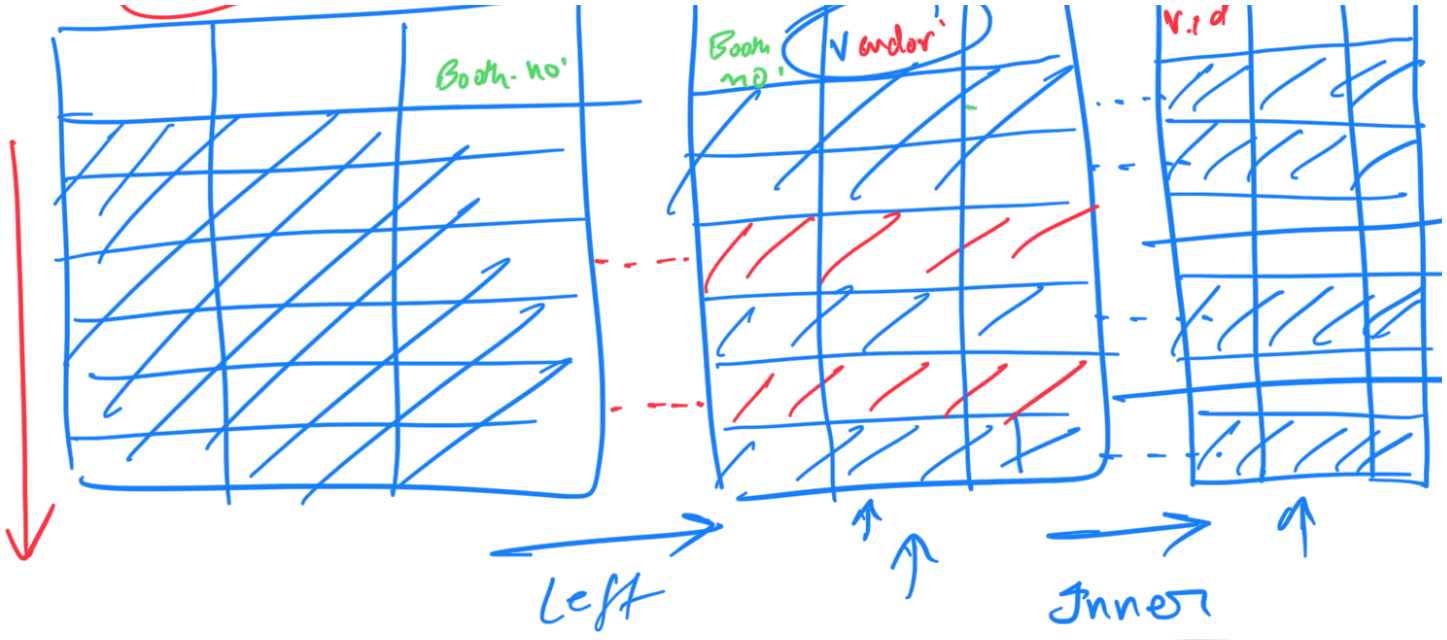
LEFT JOIN

2nd Join → INNER

booth

VBA

vendor

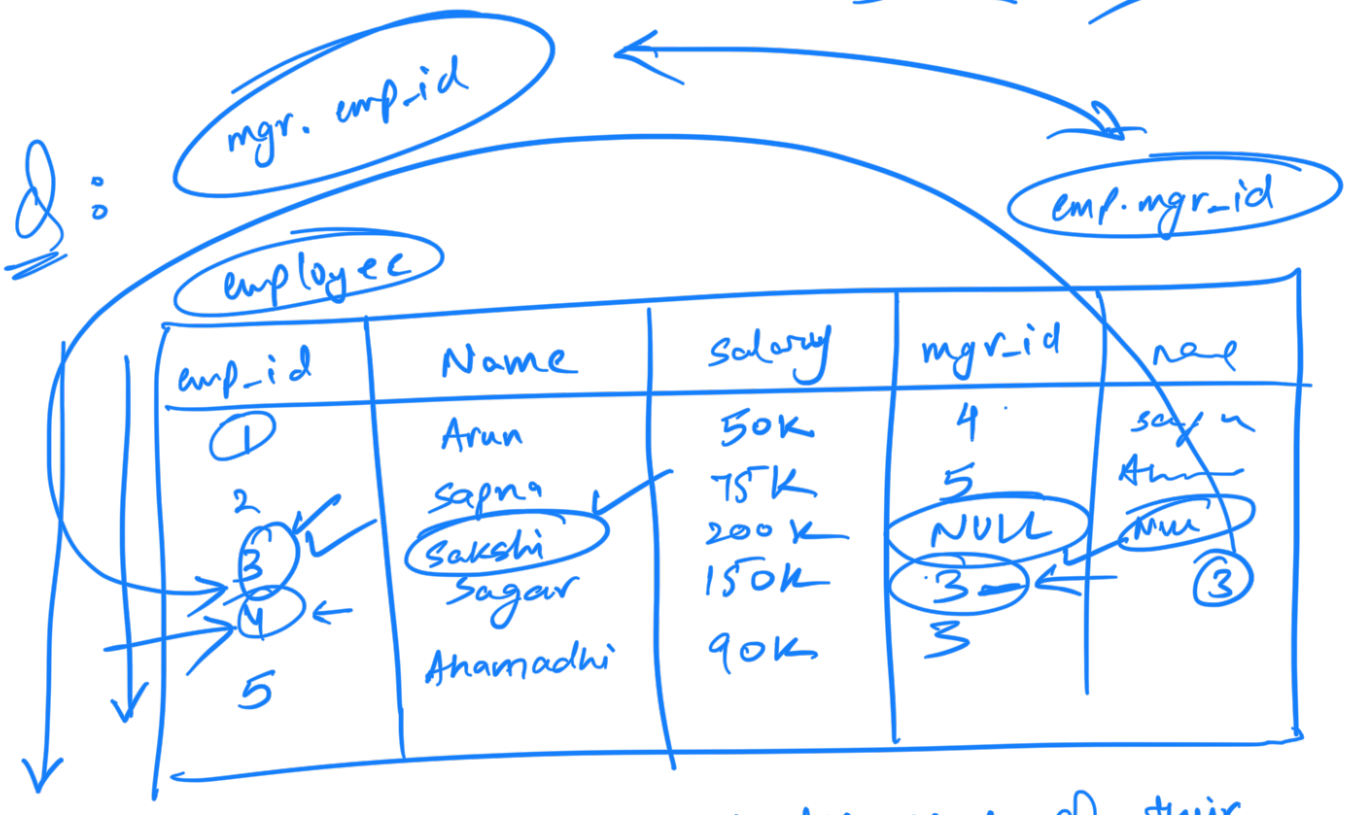


1 →

2 →

3 →

Q:



→ For each employee, find out the name of their manager from the employee table.

SELF JOIN

```
SELECT
    emp.emp_id,
    mgr.emp_id,
    mgr.name
FROM   employees AS emp      e1.
JOIN   employees AS mgr      e2.
ON emp.mgr_id = mgr.emp_id
```

Q:

cars

id	car_model
1	Camry
2	Corolla
3	Santro

3 X 4 = 12

R1 X R2

colors

id	color_name
1	Black
2	red
3	blue
4	silver

CROSS JOIN

car_model	color_name
Camry	Black
Camry	Red
Camry	Blue
Camry	Silver
Corolla	
...	
3x	

Syntax:

```
SELECT
    c. car_model
```

c2. color_name

FROM car c AS c1

CROSS JOIN colors AS c2

ON c1. = c2.

Another Syntax:

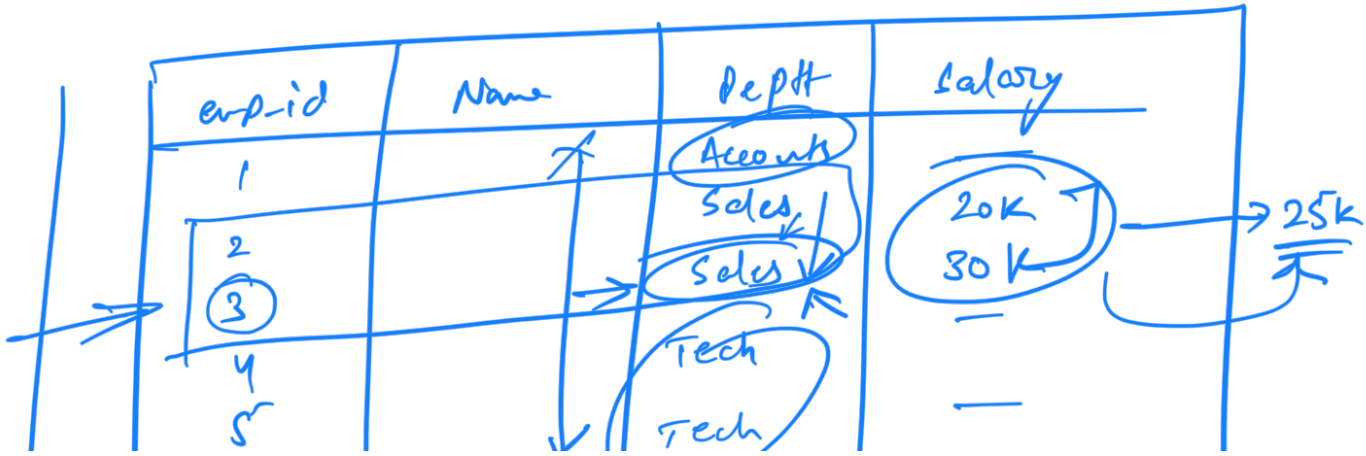
SELECT

FROM car_models AS c1, colors AS c2

WHERE c1. = c2.

Cross Join

Q: Extract all the employees who are earning more than their average departmental salary.



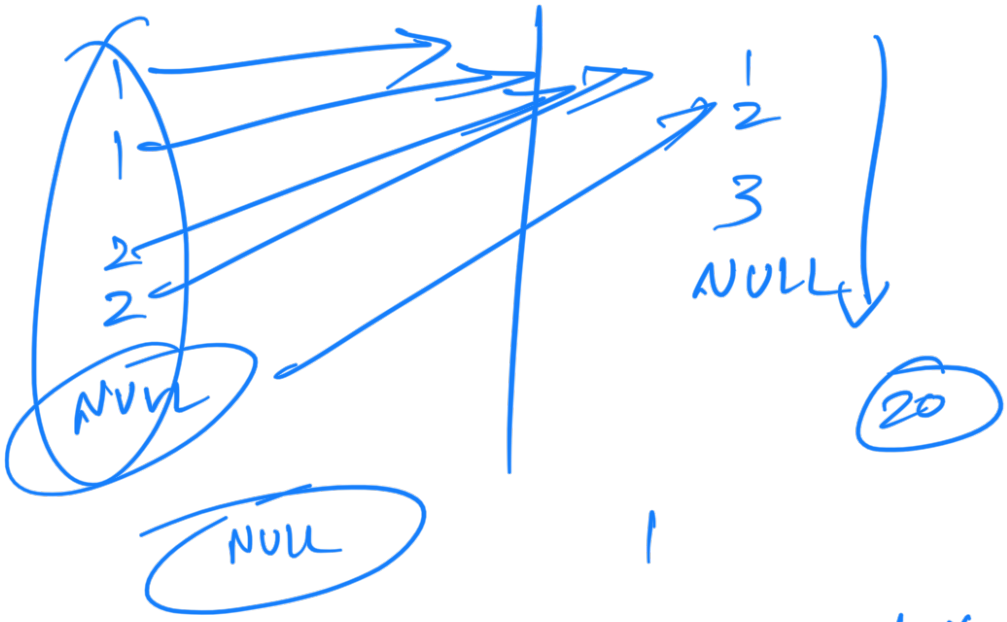
30K > 25K

SUM
AVG (salary) → by salary

Correlated Subqueries

```
SELECT
    fname,
    lname,
    salary
FROM employees AS e1
WHERE e1.salary > (SELECT avg(salary)
                   FROM employees AS e2
                   WHERE e1.dept =
                         e2.dept.)
```

dept



NULL

2
2
1
1

1
1
1
1
1
2
2
2
2
2
3
3
3
3
3
NULL

qty × cost

AVG( )