Agenda
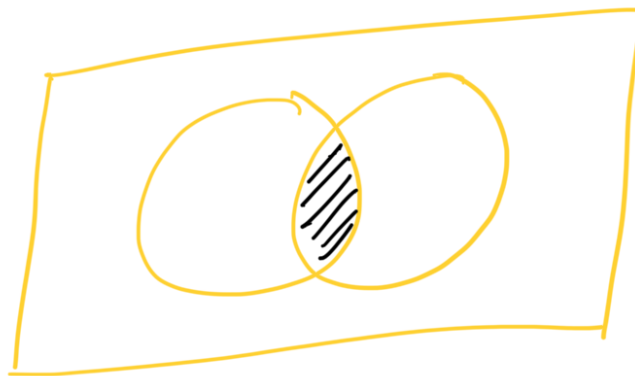
a. Inner Join

b. Left Join

c. Right Join

d. Problem Solving Session

a. Inner Join

$A \cap B$

Syntax:

A Inner join B
on A.w = B.y

Example

Table A

w	x
1	a
2	b
3	c
3	d

X +

Table B

y	z
2	k
3	M
3	n
4	P

⟹

w	x	y	z
2	b	2	k
3	c	3	m
3	c	3	n
3	d	3	m
3	d	3	n

→ 3

Solution :-

Select
e.eid,   d.dept_id
e.fN,   d.deptname
e.LN,   d.location_id

From employee e
→ Inner join department d
____id = d.dept_id

①

② ← on (e. ....
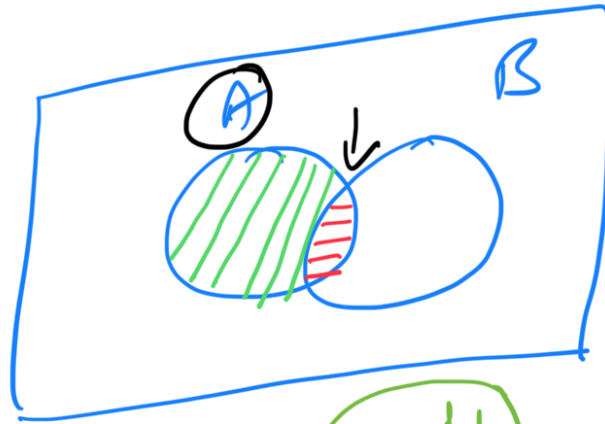
② Left Join

A - B

Syntax :- → A (Left) join B
on A.w = B.y

Table A   Table B   (Left)

w	x
1	a
2	b
3	c
3	d

y	z
2	K
3	M
3	^
4	P

w	x	X	z
1	a	null	null
2	b	2	K
3	c	3	m
3	c	3	^
3	d	3	m
3	d	3	n

100
105 ⇒ S

⇒ where to use left and inner join

⇒ .. .. join | Left outer

99%

all
each
every

⟹ Left J | join

⟹ Inner Join

employee

eid	nam	S	Sel
3	B	Null	4000
1	J	3	1000
2	D	B	2000
4	T	3	4000

bonus < 1000

order by bony

Bonus

empid	bonus
2	500
4	2000

encme	bonus
D	500
B	Null
J	Null

⟹ Left Join

employee   bonus

eid	name	Supervisor	Salary	eid-1	bonus
3	Brad	null	4000	null	Null
1	John	3	1000	null	Null
2	Dan	3	2000	2	500
4	Thong	3	4000	4	2000

Select

```
    c.name,
    b.bonus,
    From employee e
    left join Bonus b
    on  e.eid = b.eid
    where b.bonus < 1000 OR
              b.bonus is null
    order by b.bonus ;
```

Problem Solving Session

Select * from employee
where eid not in
(Select eid from job_history)
order by eid ;

①

② ⇒ Percentage & Queries Quality

(Round 2) ⓐ quality = Avg (QR / Position) ✓

ⓑ Poor Query % = % of all queries < 3

QN, Q, PQ%

C → order by query_name

QN	P	rating
D	1	5
D	2	5
D	200	1
C	5	1
C	3	3
C	7	4

Q1 ✓

Q2 ✓

Que

		33.33
Cat	0.66	
Dog	2.5	33.3

$$Cat = \left(\frac{2}{5} + \frac{3}{3} + \frac{4}{7}\right)/3$$

$$= 0.66$$

$$Dog = \left(\frac{5}{1} + \frac{5}{2} + \frac{1}{200}\right)/3 = 2.5$$

Select QN,
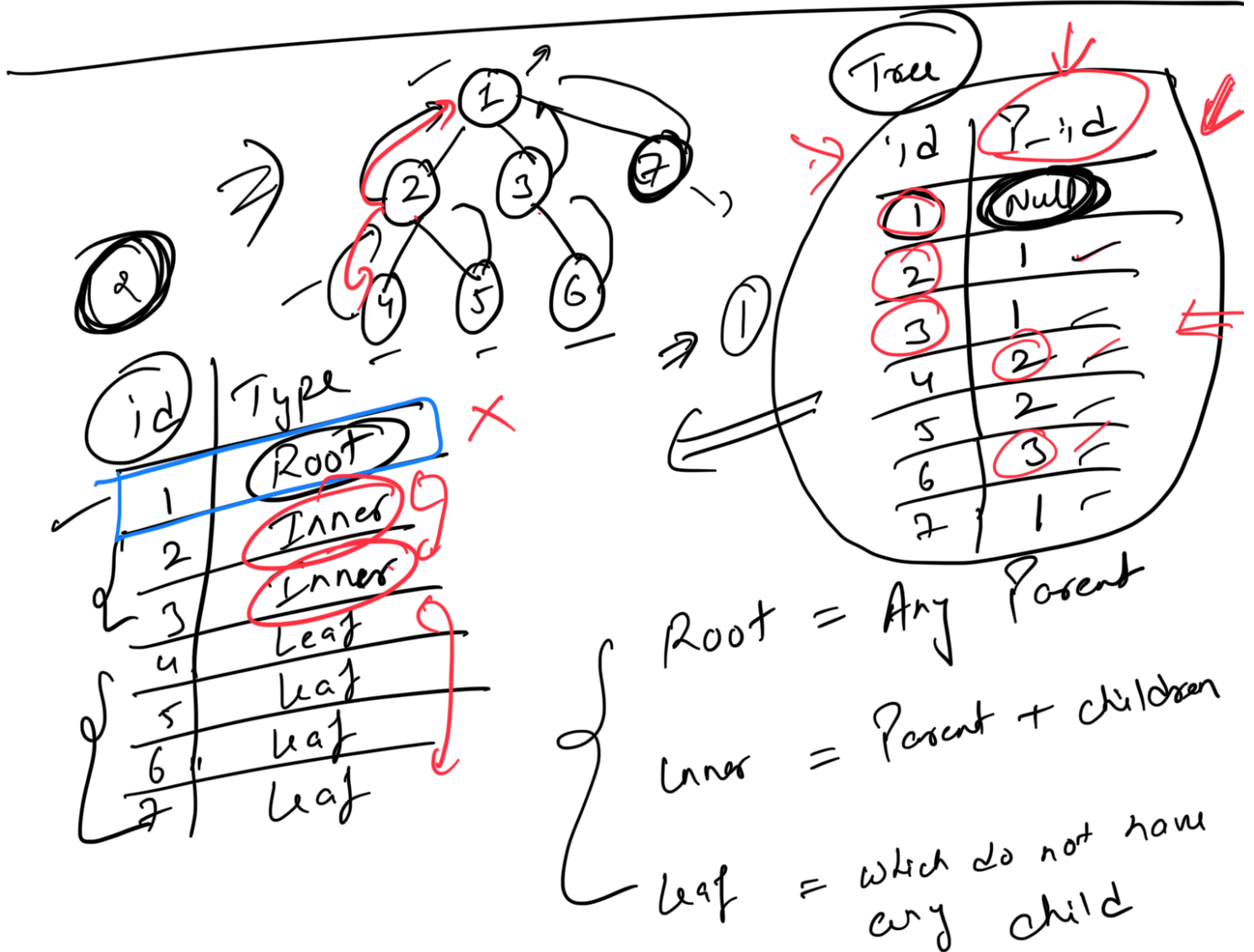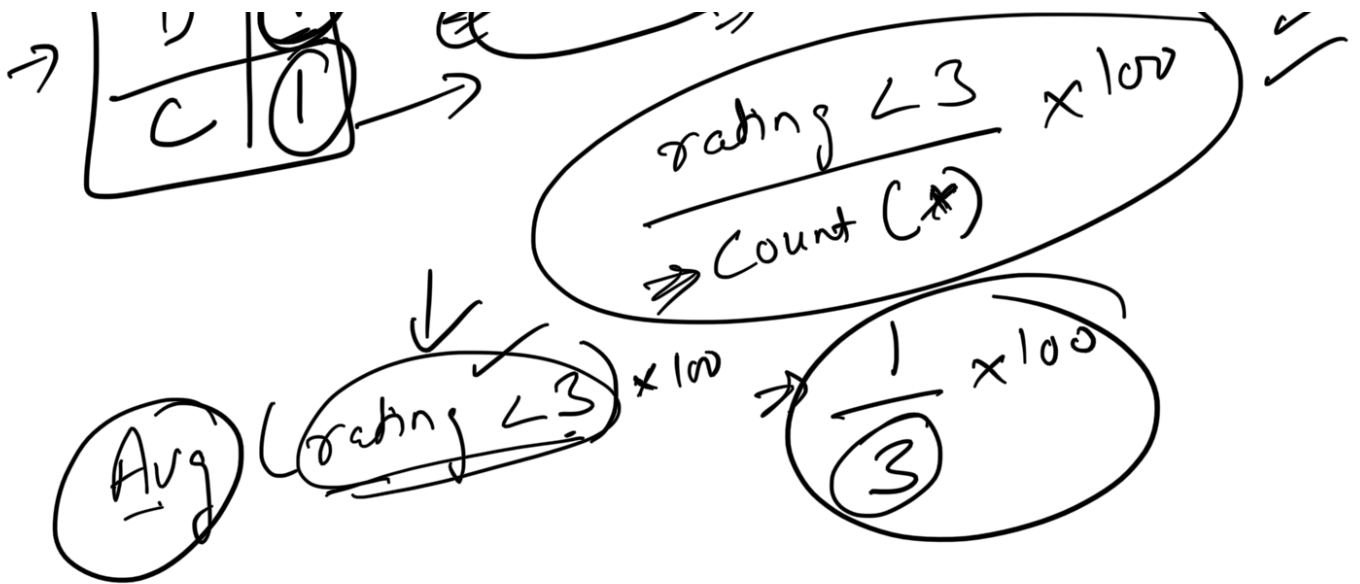Round(Avg (rating/Position),2) as quality
Round (Avg (rating <3) *100,2) as PQ %
From queries

group by QN

order by QW

$$PQ = (\text{rating} < 3)$$

quality

Dog	2.5	33.3
Cat	0.66	33.3

$1/3 \times 100$

$\rightarrow$ | C | 1 | $\rightarrow$

$$\dfrac{rating < 3 \quad \times 100}{Count(*)} \Rightarrow$$

$\downarrow$

(Avg) $\left(\dfrac{rating < 3}{} \right) \times 100$ $\rightarrow$ $\dfrac{1}{3} \times 100$

(Tree)

id	P-id
1	Null
2	1
3	1
4	2
5	2
6	3
7	1

id	Type
1	Root
2	Inner
3	Inner
4	Leaf
5	Leaf
6	Leaf
7	Leaf

$\begin{cases} \text{Root} = \text{Any Parent} \\ \\ \text{Inner} = \text{Parent + children} \\ \\ \text{Leaf} = \text{which do not have any child} \end{cases}$

$\downarrow$

Case
when (Id) IN (Select Id from tree where
(Root) P-id is (null))

when ⓘⅾ IN (Select p-id from tree) then 'inner'

else 'leaf'

id	P-id
1	Null
2	1
3	1
4	2
5	2
6	3
7	1

$\Rightarrow$

Root

inner   ① $\Rightarrow$ Null $\Rightarrow$ Root

inner   ②   ③ leaf   P·d

       ④   ⑤ leaf

    leaf

Mn.1 ✓ ⑧ ─ num   G1 = 2   Max

8

3
3

2= G2   X

l= G3   1
l= G4   4
l= G5   5
   G6   6
l= G6

1
4
5
6

⟹   6

1
4
5
6
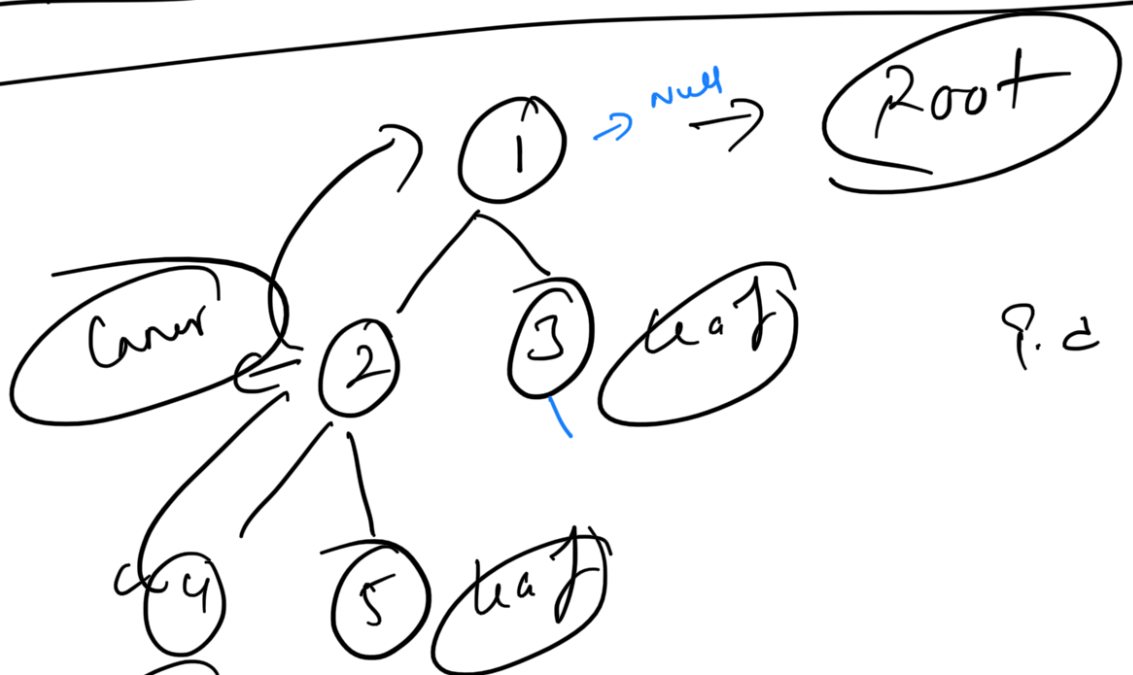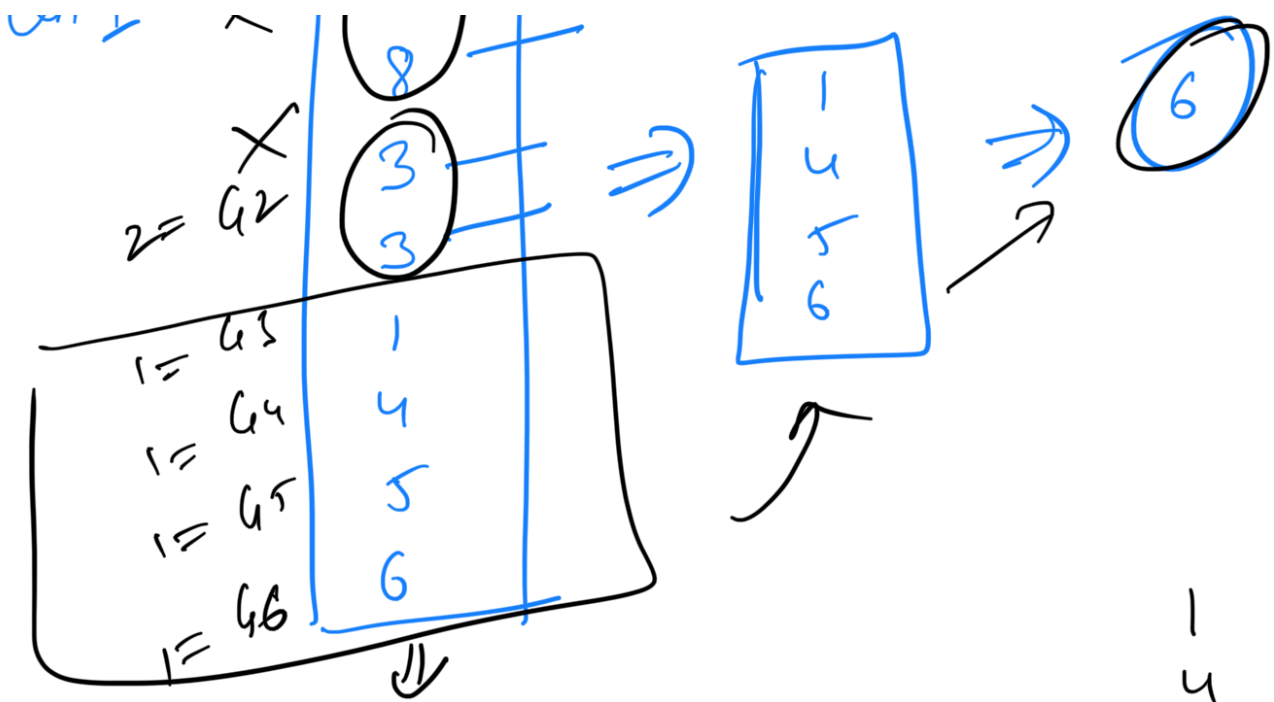
Select num
from table
group by num
having Count (num) = 1

1   — 5
2   — 6
3   — 5
3   — G
1   — 6

1   — 7

Count (A)

3 ⟹ 2

5
6