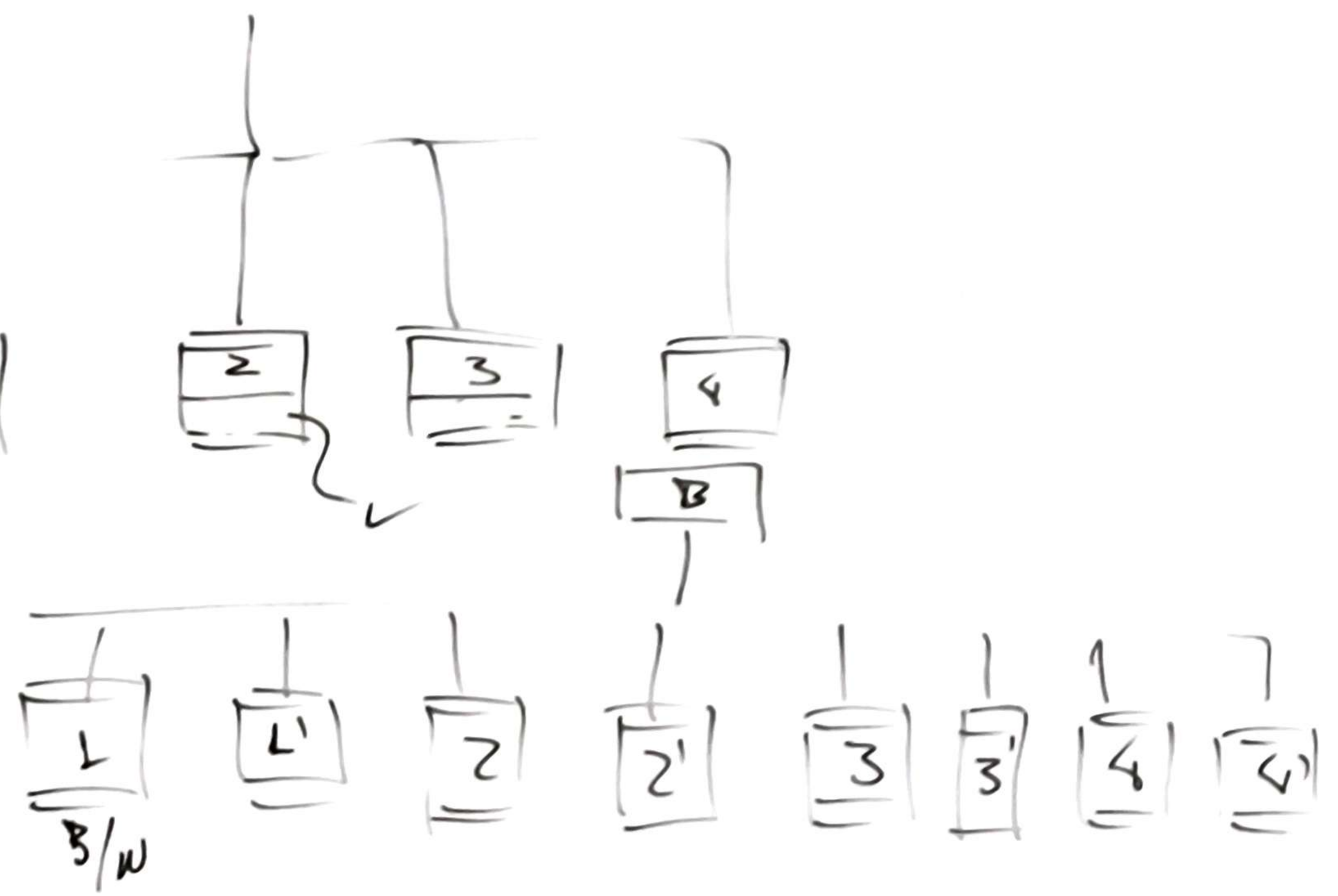


RAID  
 ↳ conjunto.  
 redundância

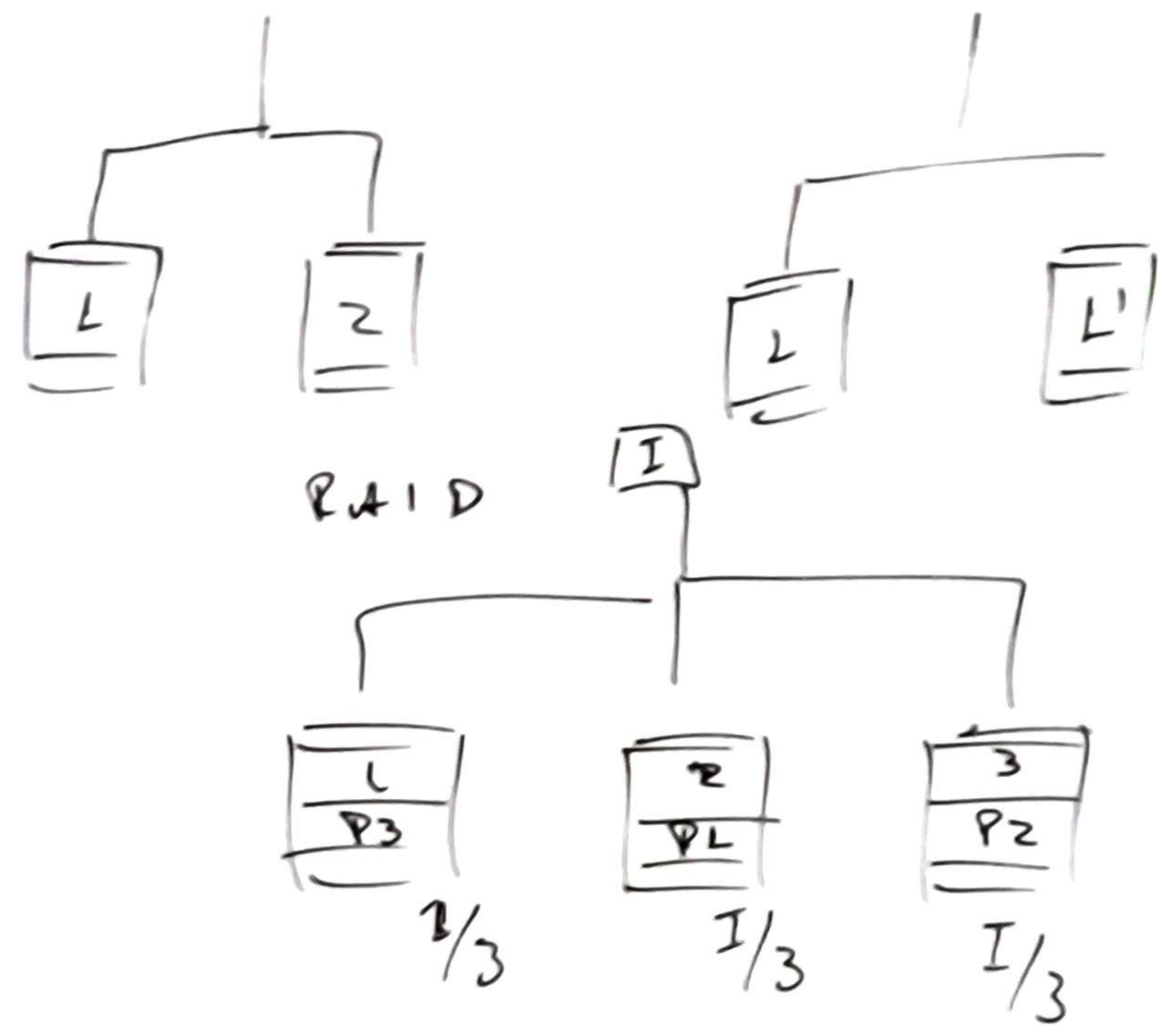
$T_{MF} = 100\text{ms}$   
 $\downarrow$   
 $T_{MPD}$   
 $= T_{MF} / N$



$= T_{MPD} =$   
 $T_{MF} / N / 2 = 2 \times T_{MF} / N$

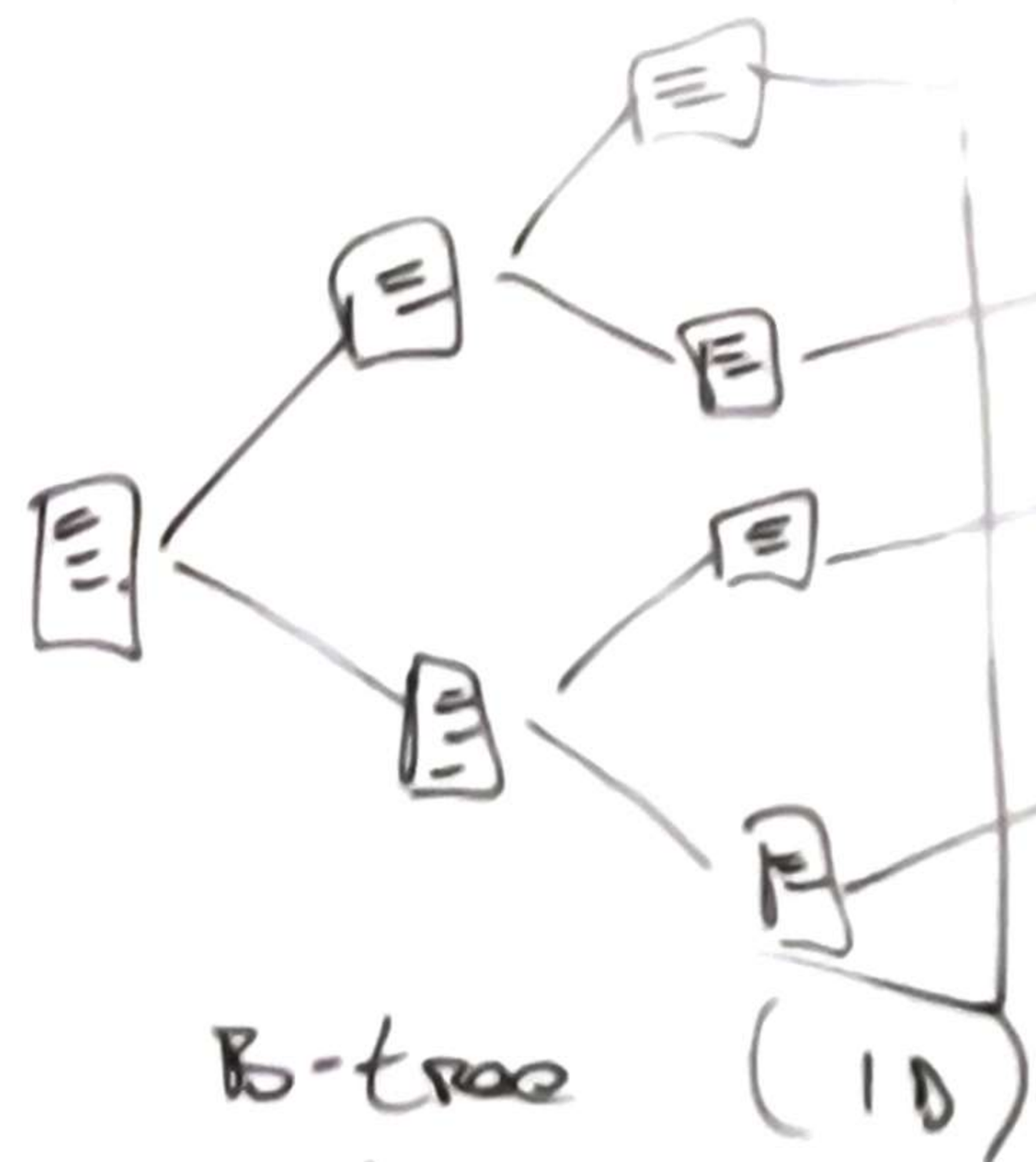
RAID 0

RAID 1





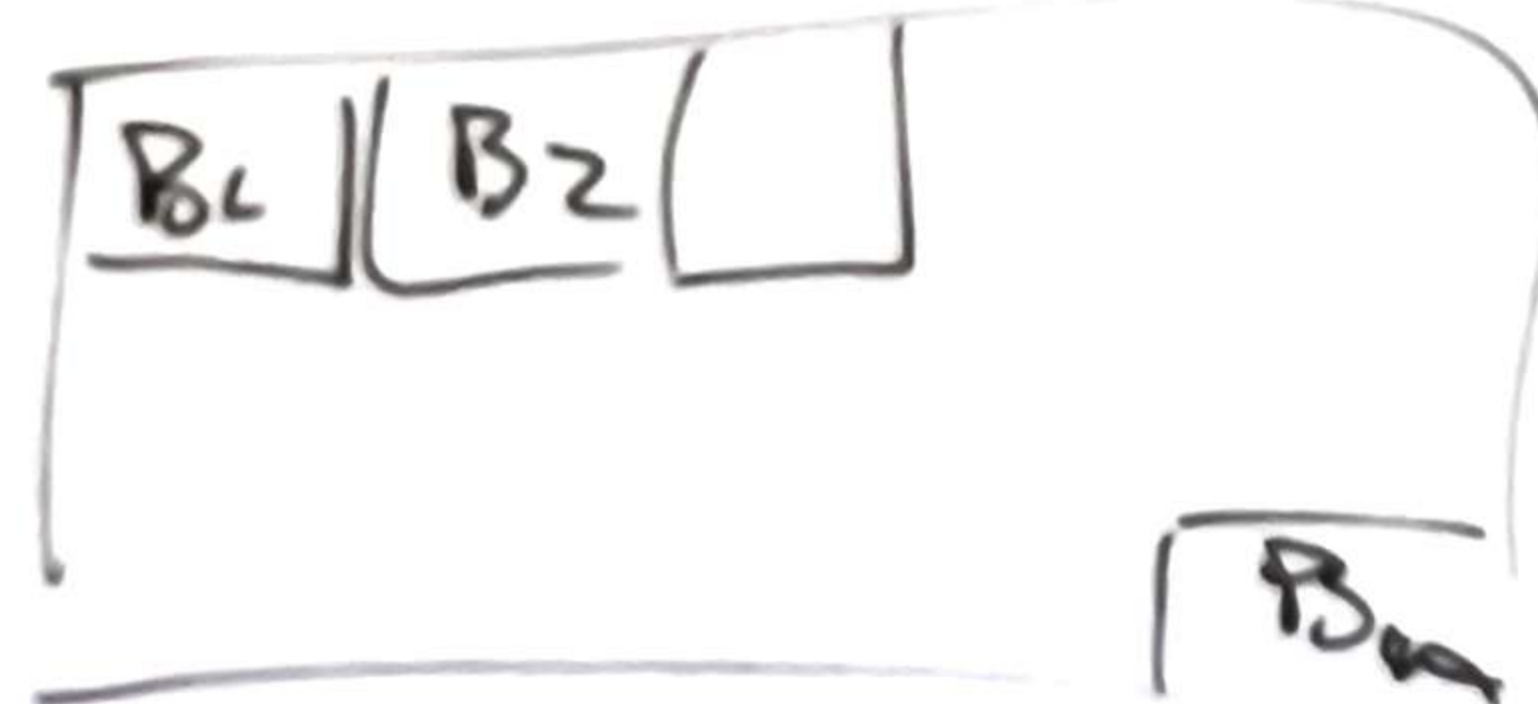
Arbol B+ nodes



B-tree  
↓  
Indice ordenado

cliente

ID	Nombre	Categoría	Unidad demandada	Cod. Fabrica
1	A	Motor	Car A	A25
2	B	Min	Car B	B36
3	C	Quilad	Car A	F15
4	D	Motor	Car B	A01
5	E	Min	Car C	D85



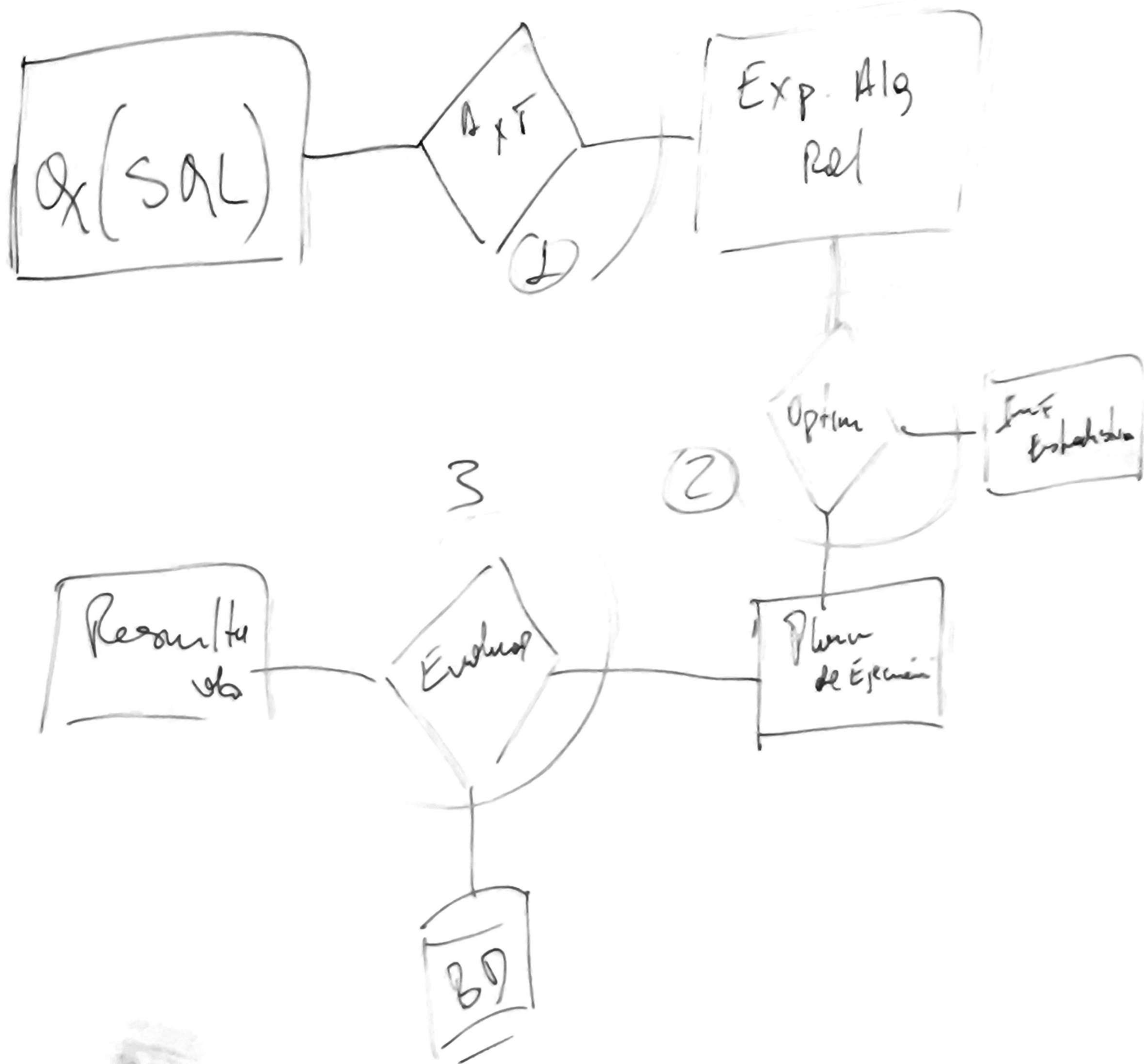
Archivos



Asociativo

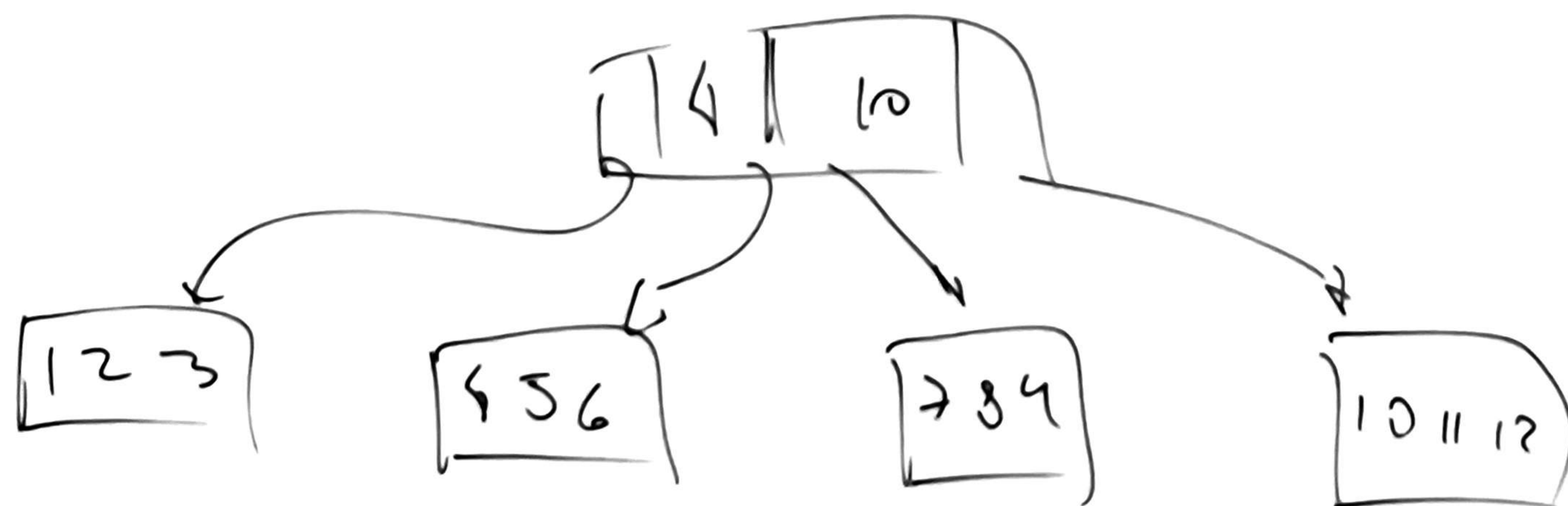
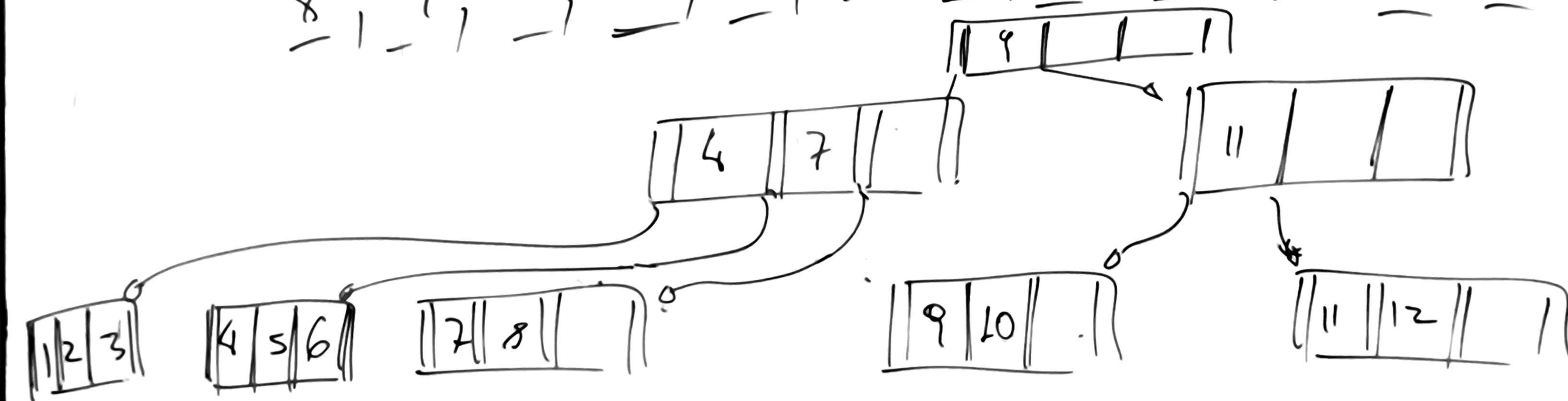
Archivos ordenados



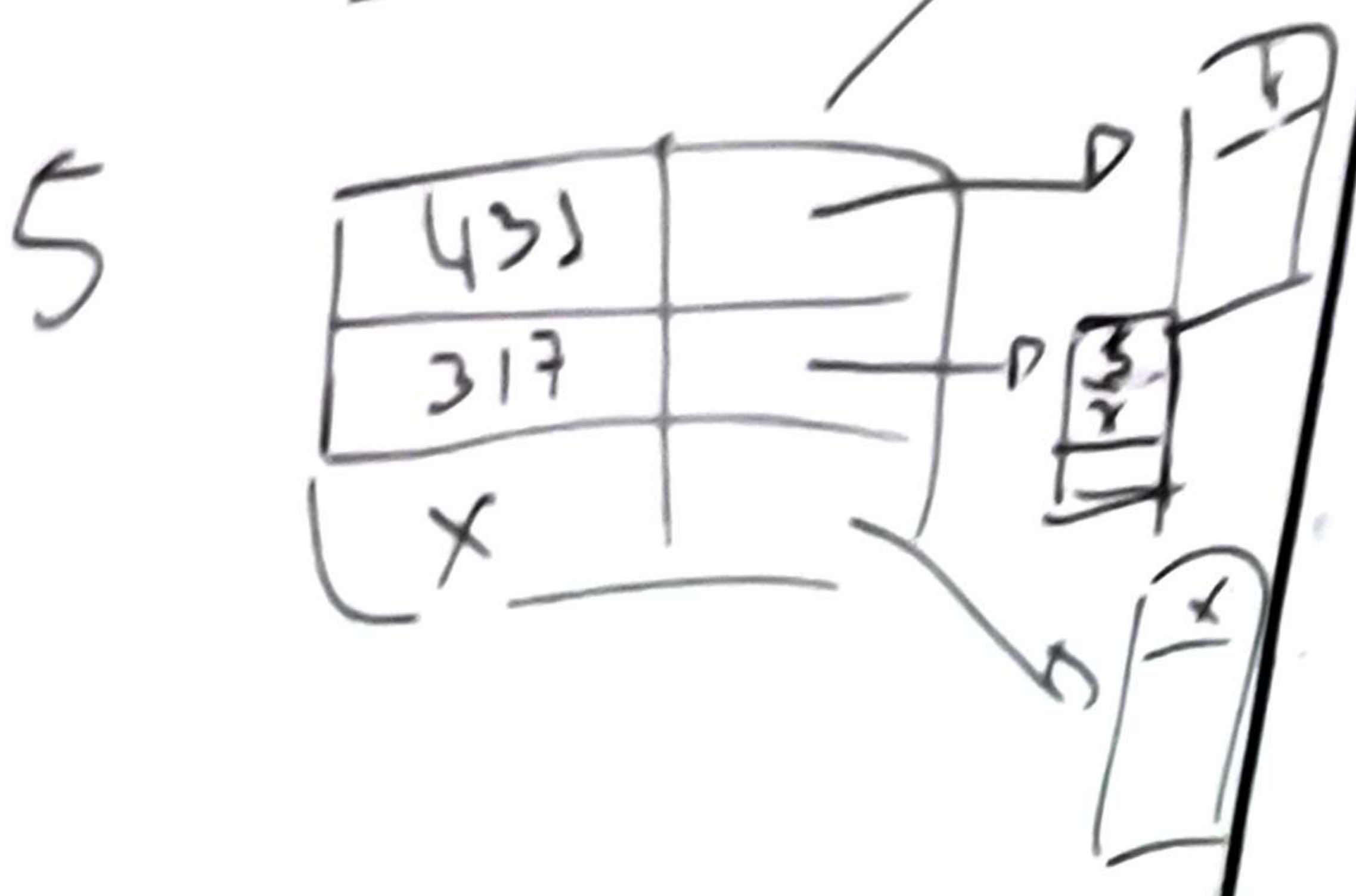
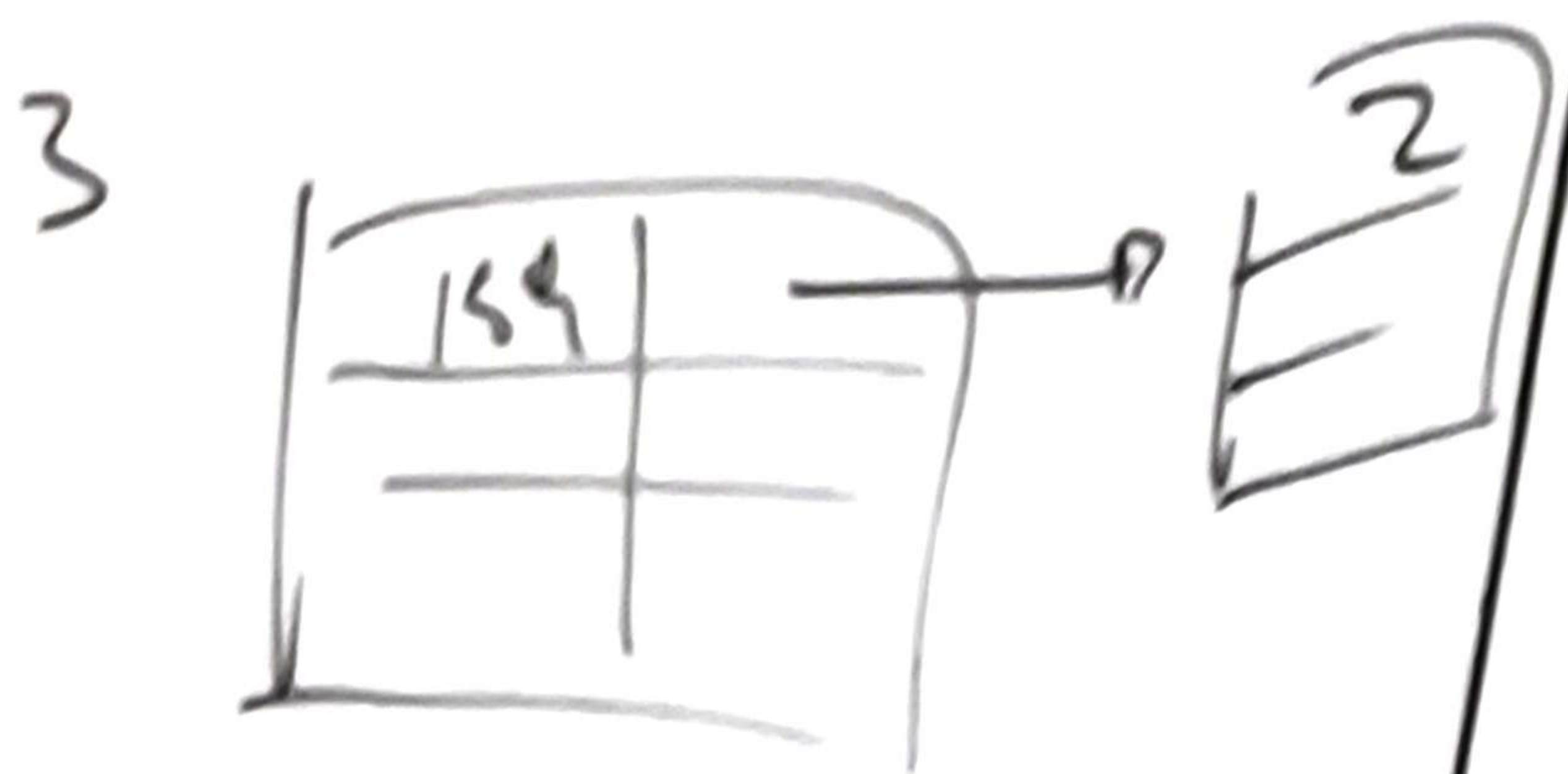
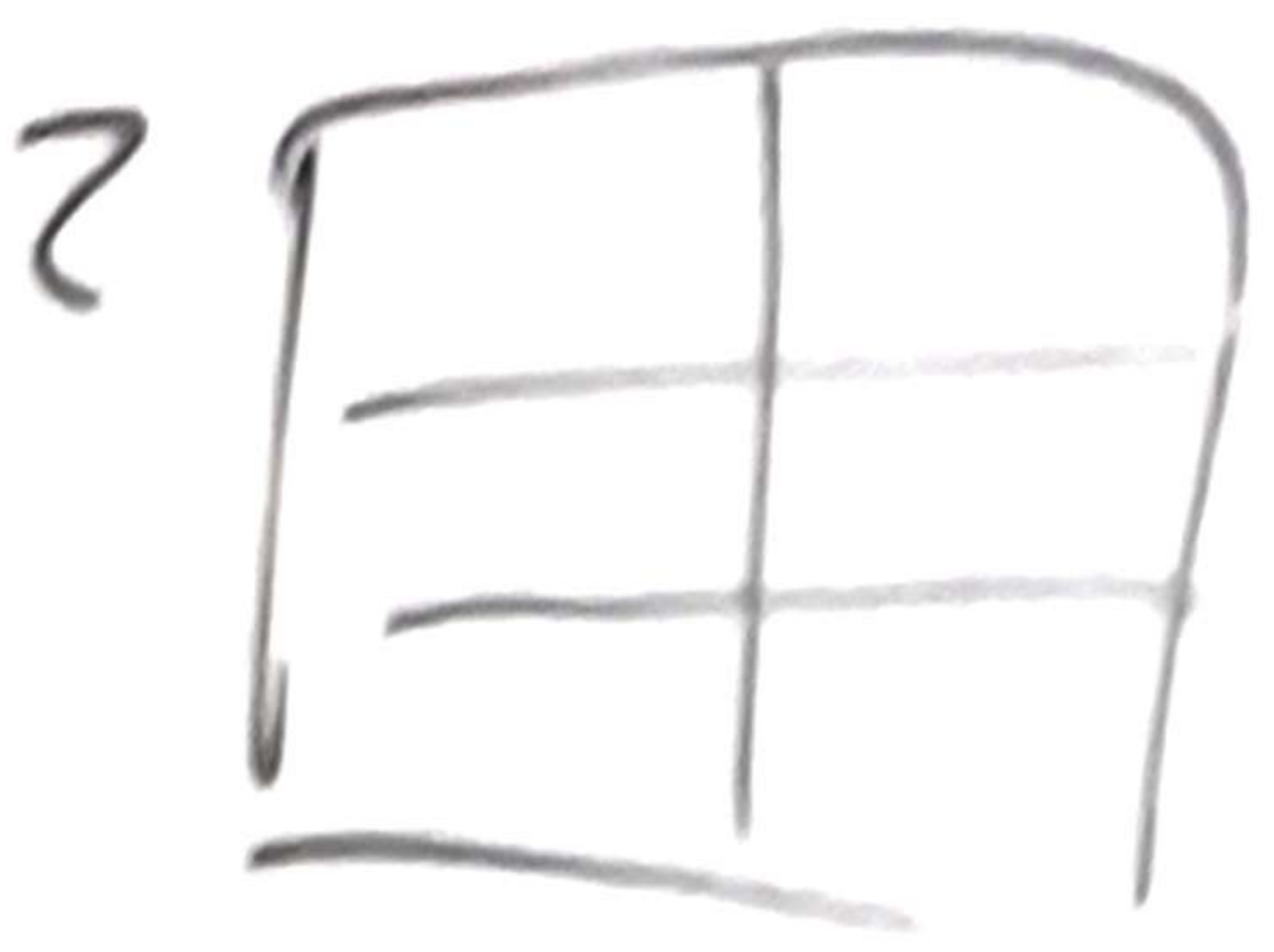
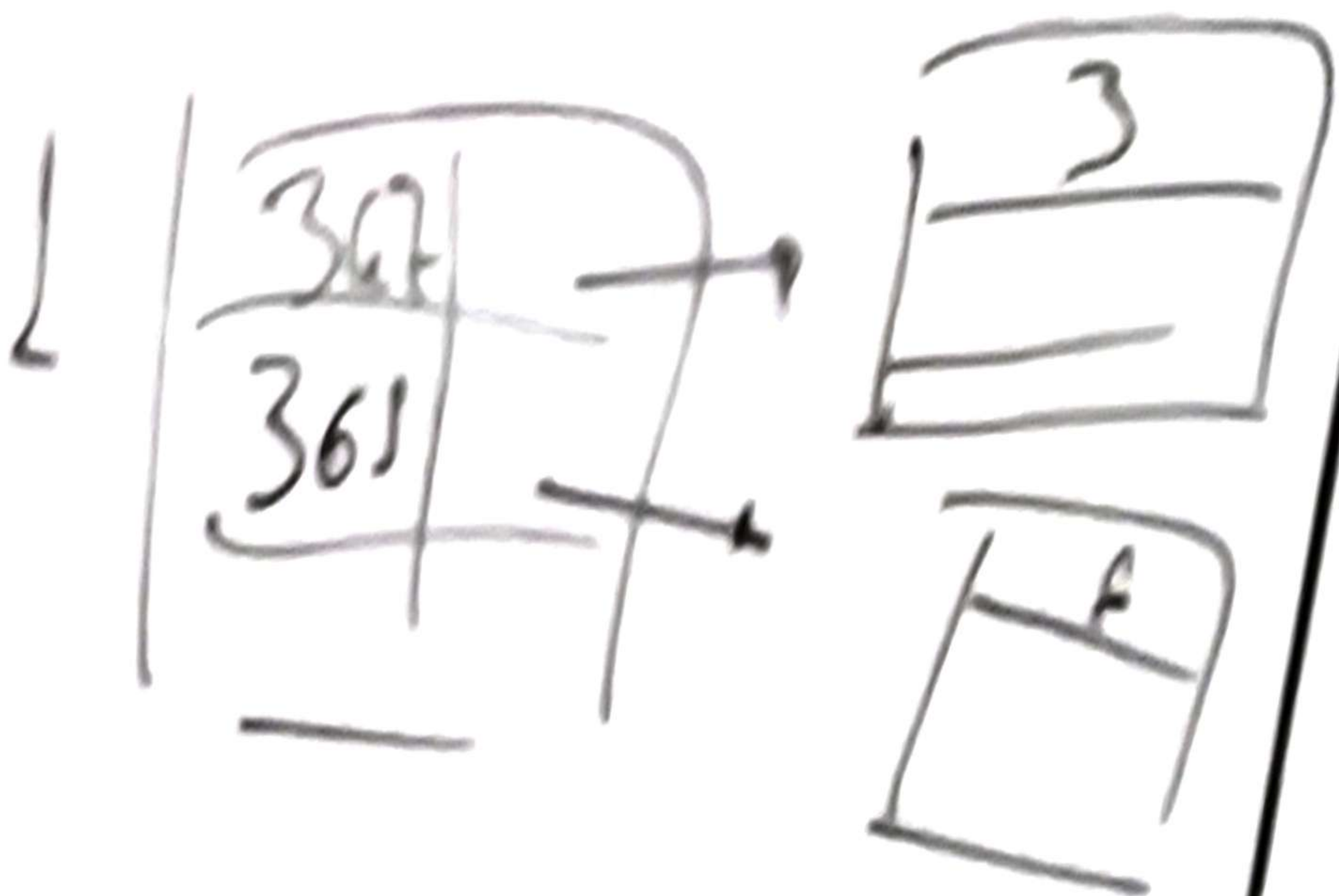
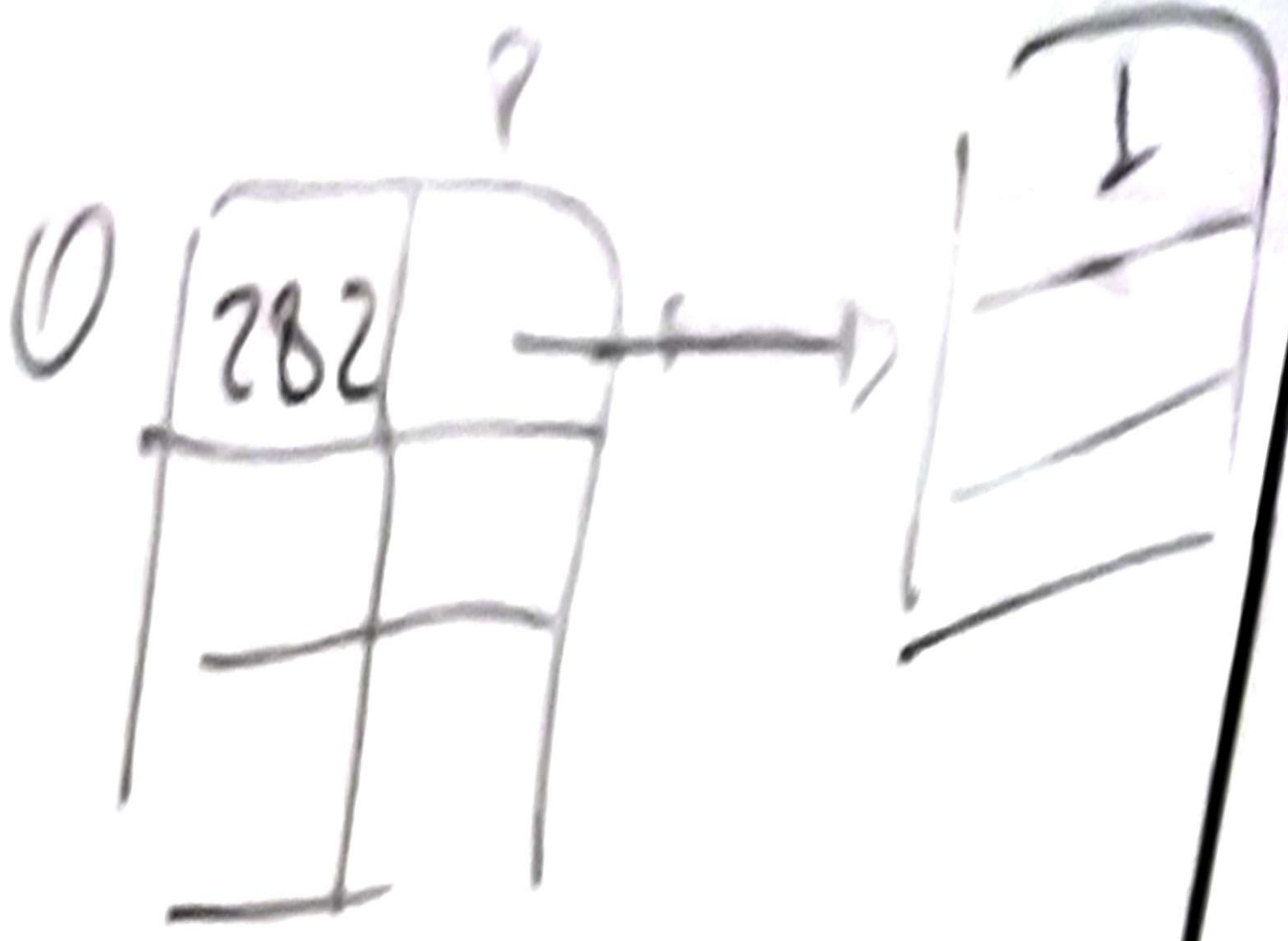




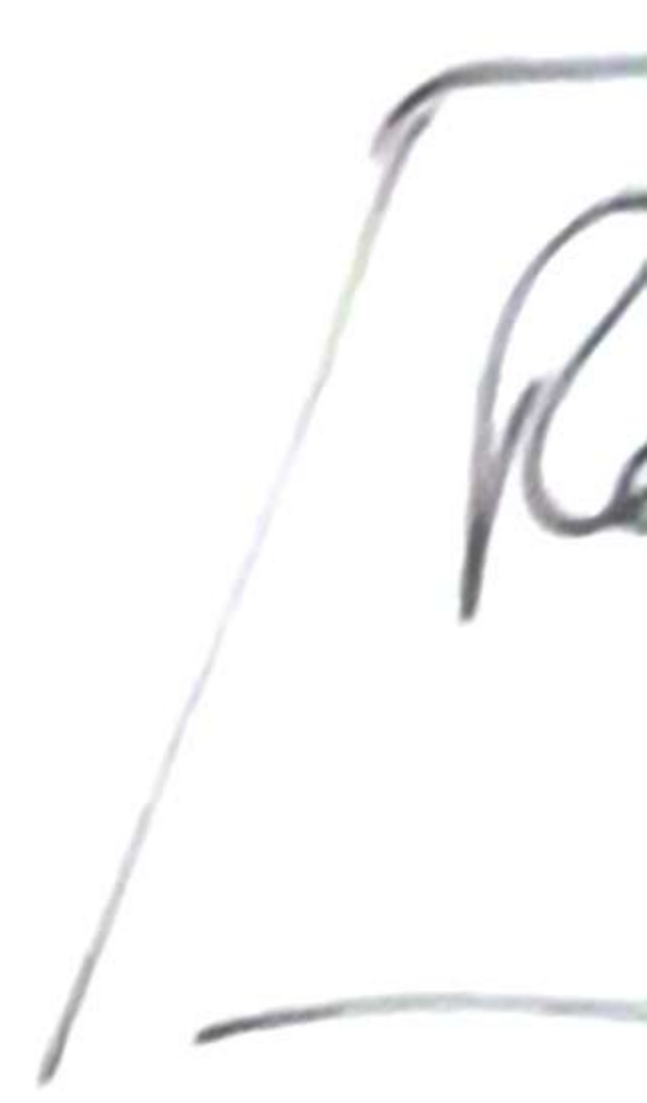
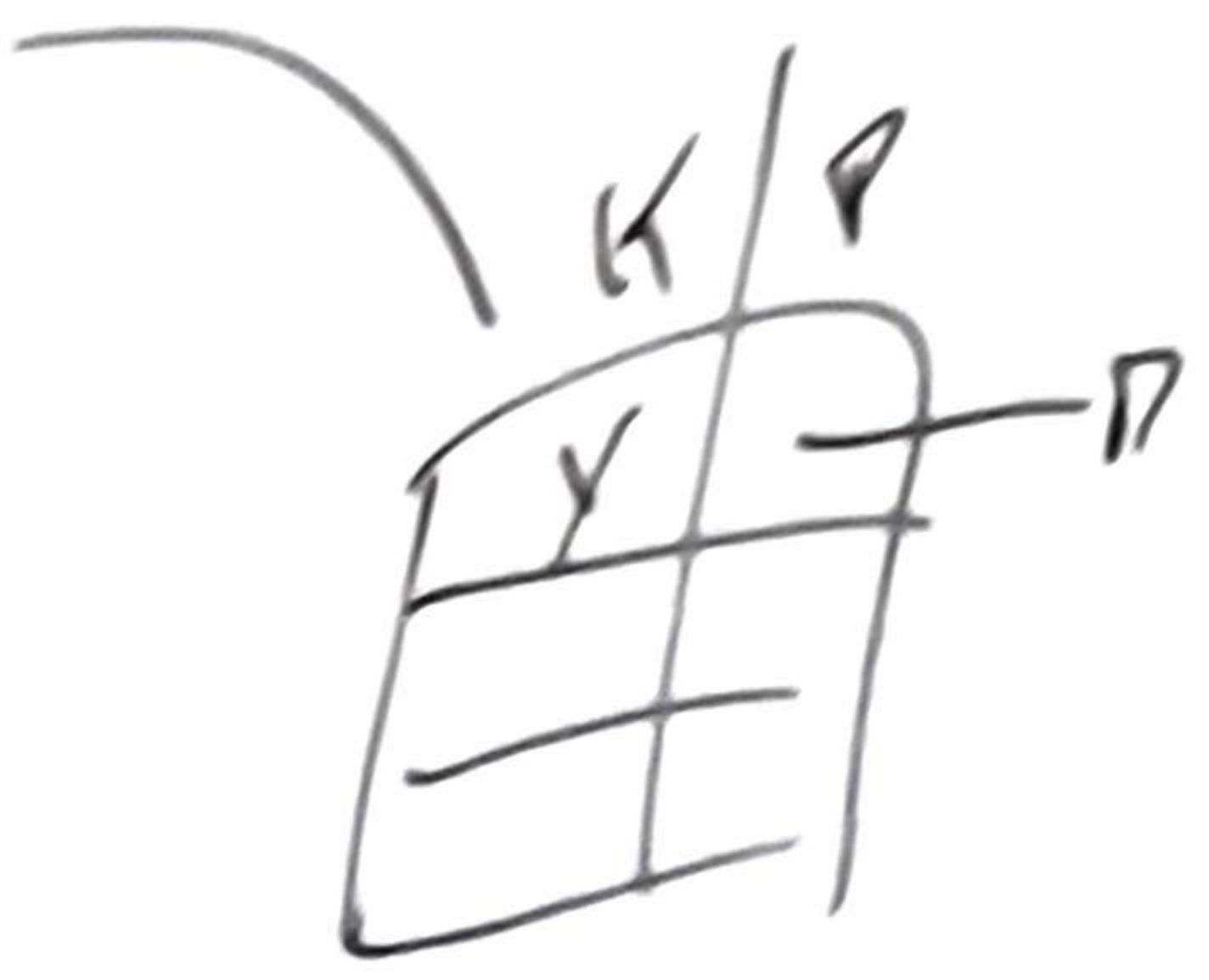
8, 9, 2, 11, 7, 10, 4, 5, 12, 1, 3, 6







control





R1 → 20000 Files → 100 Filas/Bloque → 200 Bloques

R2 → 60000 Files → 30 file/Bloque → 2000 Bloques

$$\begin{aligned} 40^0 &= 1 \\ 40^1 &= 40 \\ 40^2 &= 1600 \\ 40^3 &= 64000 \\ 40^4 &= \dots \end{aligned}$$

A) R.B.A.I. s/ Índice Btree en R2 con Modos de 80 punteros

1.) Búche Anilado

$$C = n_{R1} \times B_{R2} + B_{R1} = 2000 \times 2000 + 200 = 4000000 + 200 = 4000000.200 \checkmark$$

2.) Búche Anilado s/ Bloques

$$C = B_{R1} \times B_{R2} + B_{R1} = 200 \times 2000 + 200 = 40000 + 200 = 40.200 \checkmark$$

3.) Merge Join + Ord (R1, M=3)

$$C = B_{R1} + B_{R2} + \text{Ord}(R1, M=3) =$$

$$\begin{aligned} &= B_{R1} + B_{R2} + B_{R1} \times \left\lceil R \log_{M-1} (B_{R1}/M) \right\rceil + 1 \\ &= 200 + 2000 + 200 \times \left\lceil 2 \log_2 (66,6) \right\rceil + 1 \end{aligned}$$

$$\begin{aligned} C &= B_{R1} + n_{R1} \times C_i \\ C &= 200 + 2000 \times \left\lceil \log_{80/2} (60000) \right\rceil \\ &= 60900 \checkmark \end{aligned}$$

⇒ Remover s/ Hash con M=15

$$3 \times (B_{R1} + B_{R2}) =$$

$$3 \times (200 + 2000) = 6600 \sim$$

= 5200