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# Lec-18

⇒ Data → store → DBMS

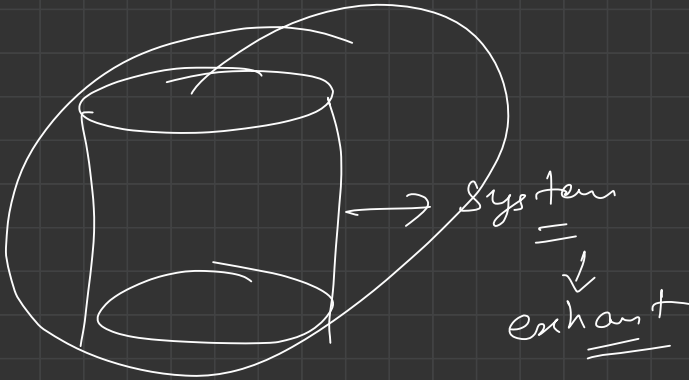
↓  
Bhot zadd  
huge data



Manses.

↓  
www hosted

↓  
Facebook  
myb  
Amazon



① Data huge (Manageability)

② <sup>no.</sup><sub>of</sub> Request are large.



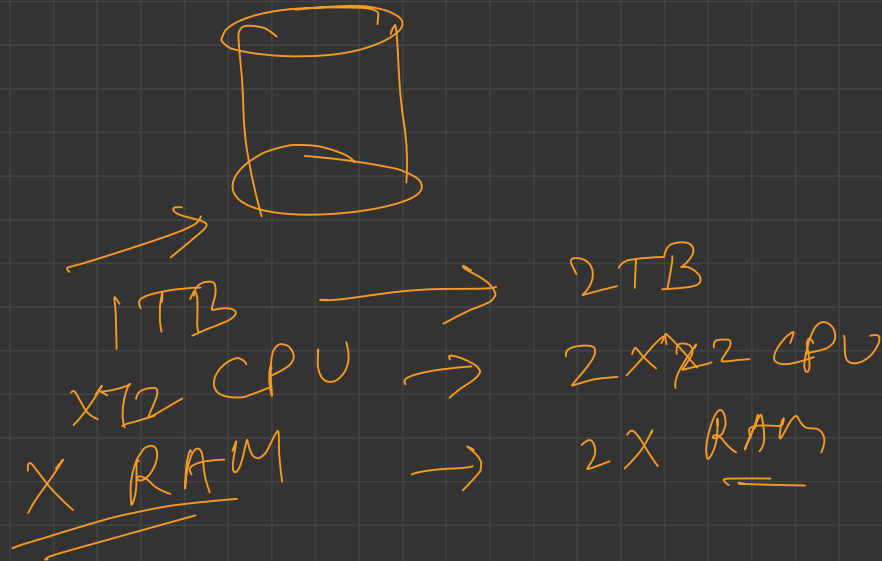
Data distribute



Distributed database

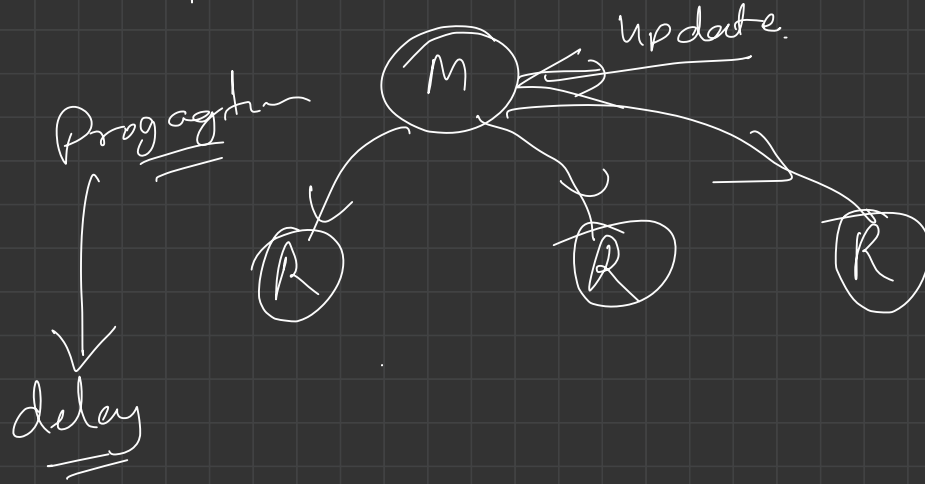
# ⇒ Database Optimization

① Scale-up (Hardware) ↑



— expensive Bel

## ② Add Replica-set (Clustering)



## ③ Partitioning

→ Partitioning

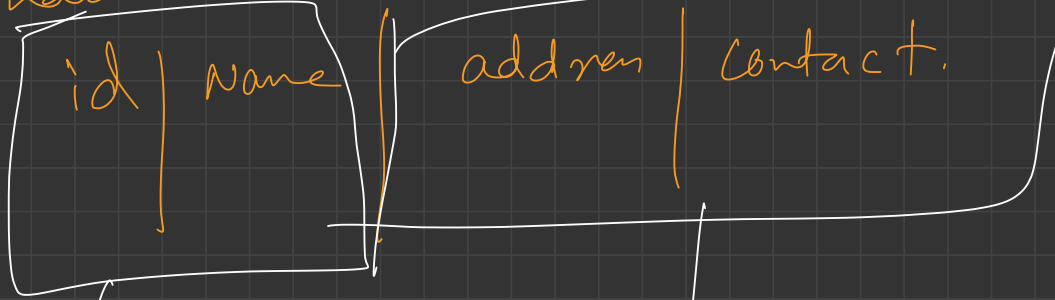
→ Scale-out (Horizontal scaling)

→ New nodes are added.

Student Table.

id	Name	Class	address	phone
x				
x				
x				

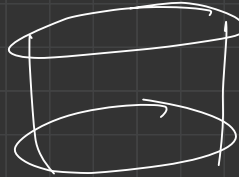
Student



S1



S2



Roll no.

id

→ 25k.

S1

25001 → 100k

semen

S2

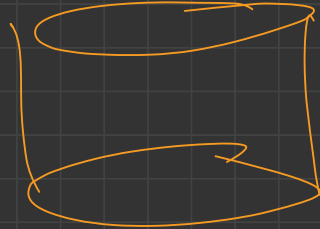
# \* Sharding

→ Horizontal partitioning → apply  
technique

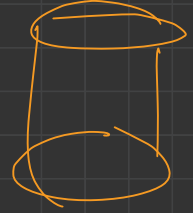
student  
1 → 10K

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

10001 → 100K



↓



↓

Independent



Routing layer.

