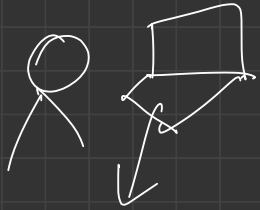



Lec-14



SQL
= Select
Where.

DBMS

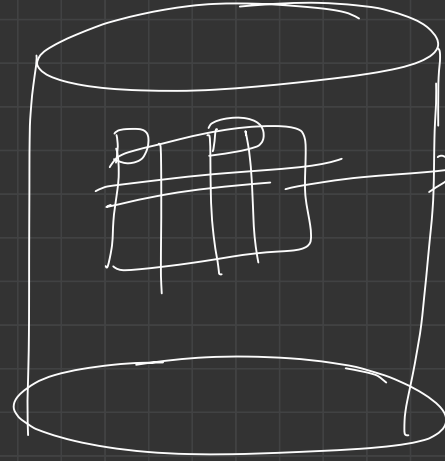


Table
= student

Disk
=

Data structure

INDEX

INDEX file.

Roll no.	BP
1	B ₁
11	B ₂
21	B ₃
⋮	⋮
9991	B ₁₀₀₀

eg. 843 student

Data file in Disk. (10,000 records)

1	
2	
⋮	
10	

B₁

11	
⋮	
20	
21	

B₂

⋮	
9991	
10000	

B₁₀₀₀

each Block has 10 records → Total Blocks 1000

Types of Indexing

① Primary index

① Based on key attribute (ordering datafile based on key attribute)

→ P.K / C.K

↳ indexing → Sparse indexing

② Based on non-key attribute

↳ Clustering Indexing

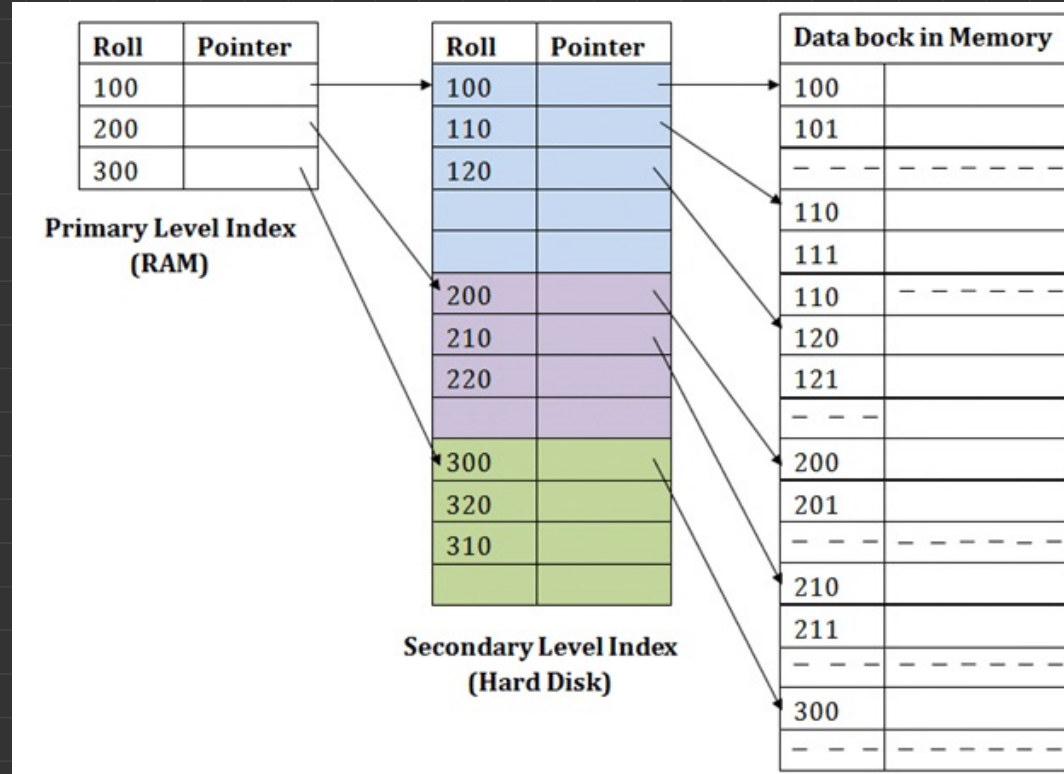
2) INDEX

NK	BP
1	B ₁
2	B ₁
3	B ₁
4	B ₂
5	B ₃
⋮	⋮

→ Dense Indexing

NK	
1	B ₁
2	
3	
4	B ₂
5	
6	
7	
8	B ₃
9	
10	⋮

Multi Level INDEXING



Secondary Indexing

- Datafile unsorted

- S.K \rightarrow Key or Non Key

S.K	BP
1	
2	
3	

Search Key

S.K	
1	→ B ₁
19	
23	
92	→ B ₂
89	
2	
.	
.	
.	
8	
12	
100	

- Dense Indexing

s.k	BF
1	$B_1 \rightarrow B_{19}$
2	$B_2 \rightarrow B_3$
⋮	⋮
⋮	⋮
⋮	⋮

index.

