B-Tree (YT)

Tuesday, July 7, 2020 22:02

B-tree of degree m

key name pos

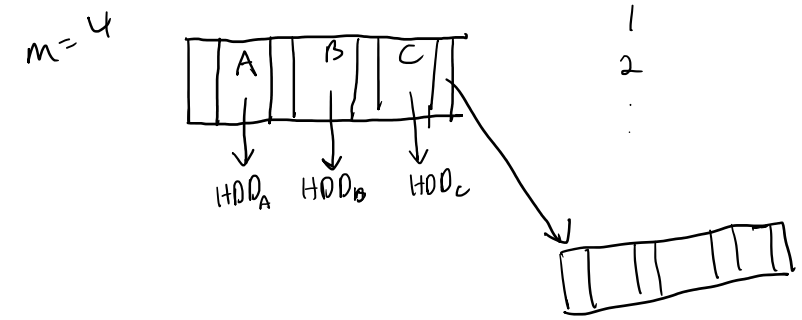
0

1

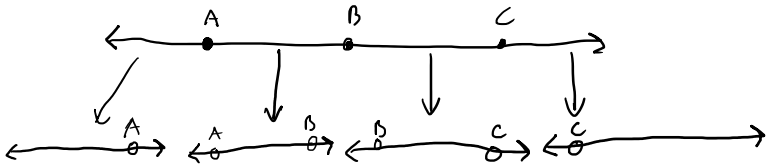
2

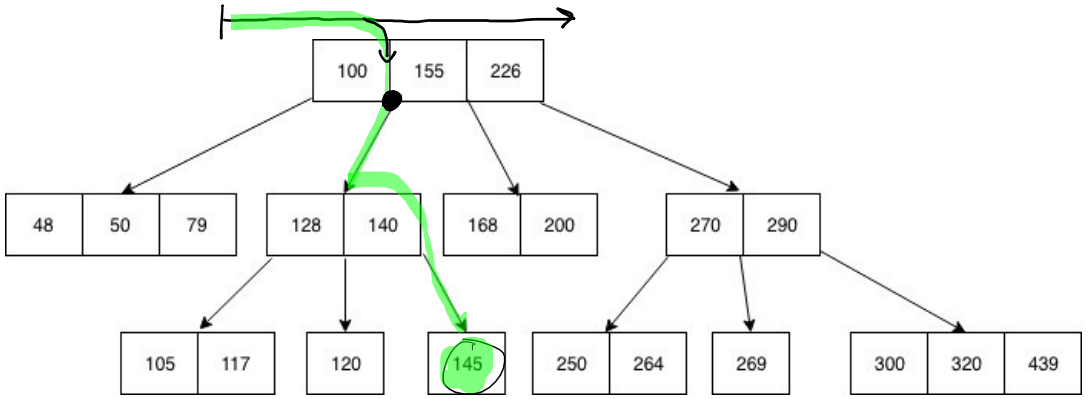
.

.




- node has max m children
  m-1 keys
- node has n children, then it has n-1 keys
- node has min of $\lceil \frac{m}{2} \rceil - 1$ keys
  ↳ root has min of 1 key




48 name48

50 name50

.

.

439 name439

M=4

+10

10

+80

10, 80

+30

10, 30, 80

+90

10, 30, 80, 90

30

10 80, 90

+85

30

10 80, 85, 90

+40

30

10 40, 80, 85, 90

30, 80

10 40 85, 90

+50

30, 80

0 40, 50 85, 90

+60

30, 80

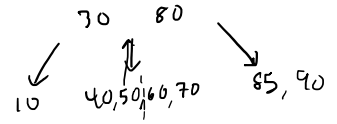
10 40, 50, 60 85, 90

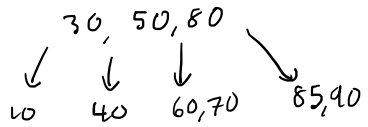
+70

30 80

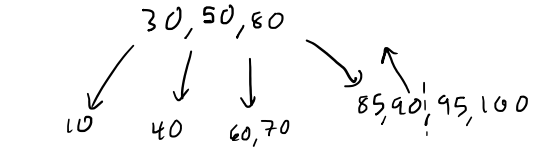
30, 50, 80

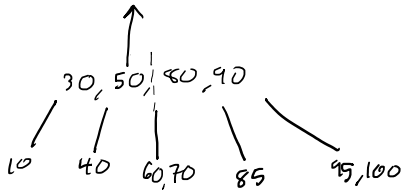
+70

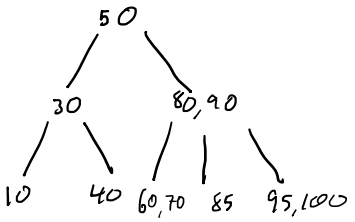


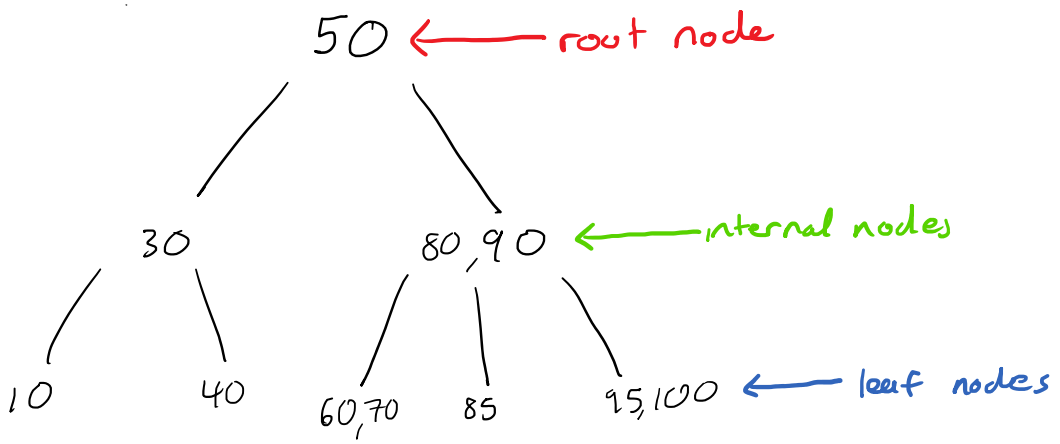




+95,100




m = 4

$\lceil \frac{m}{2} \rceil = 2^{nd}$