B+ Trees:

→ It is a balanced Tree

→ Key indexes stored in internal node & records stored in leaf Node.

→ root & leaf node have same length

→ leaf Nods are linked to each other to Provide sequential access.

→ searching is very efficient / quicker.

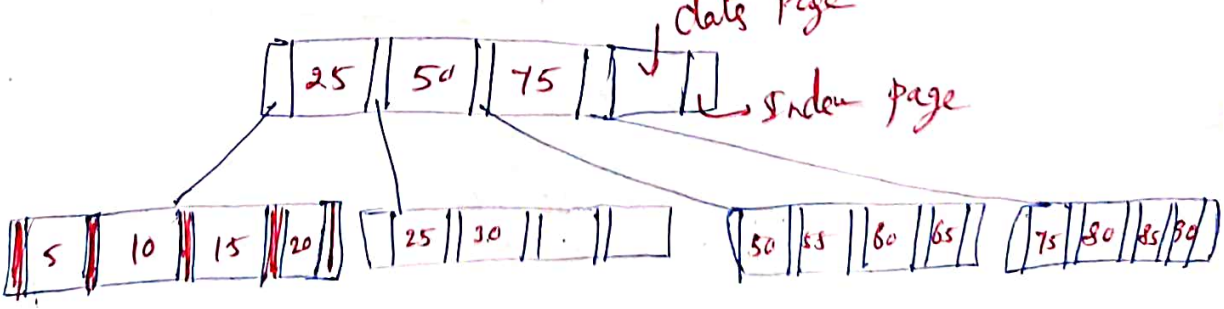
→ Leaf nodes connected each other through pointer.

→ Root (Non-leaf node) tree contains atleast n/2 to n children, where is m fixed in some cases.

→ It Contain Index Page and data Pages.

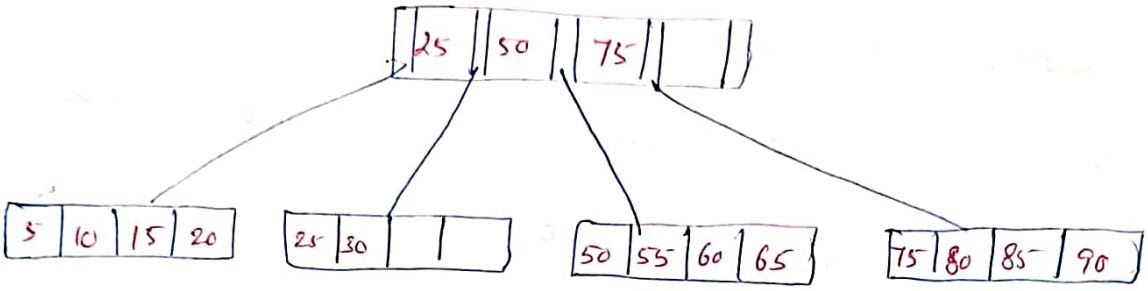
→ If n=4, key will be 2 to 4.

→ Index Page will be 4+1 = 5 (m=4 keys)

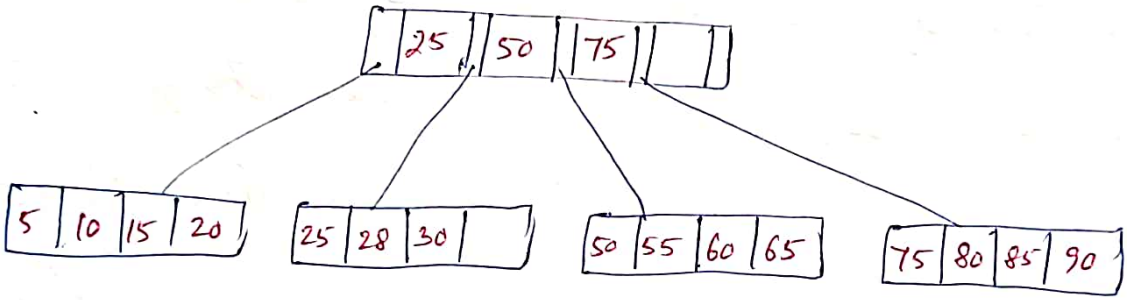


Insertion

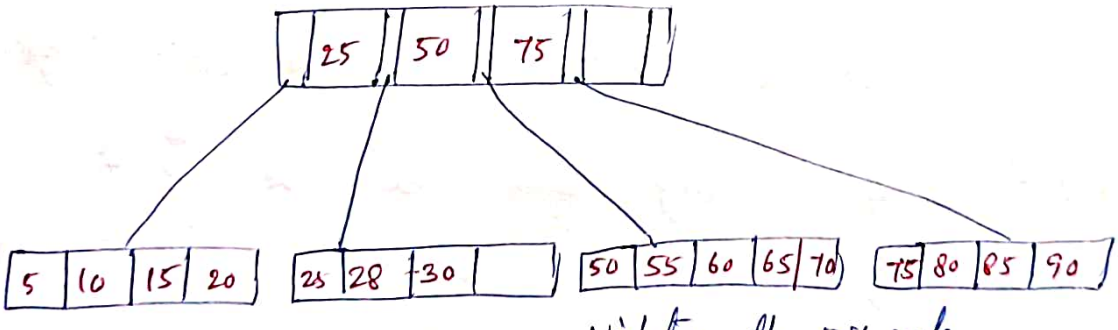
→ Insert a value into a B-Tree may cause the tree unbalanced, so rearrange the tree if needed.



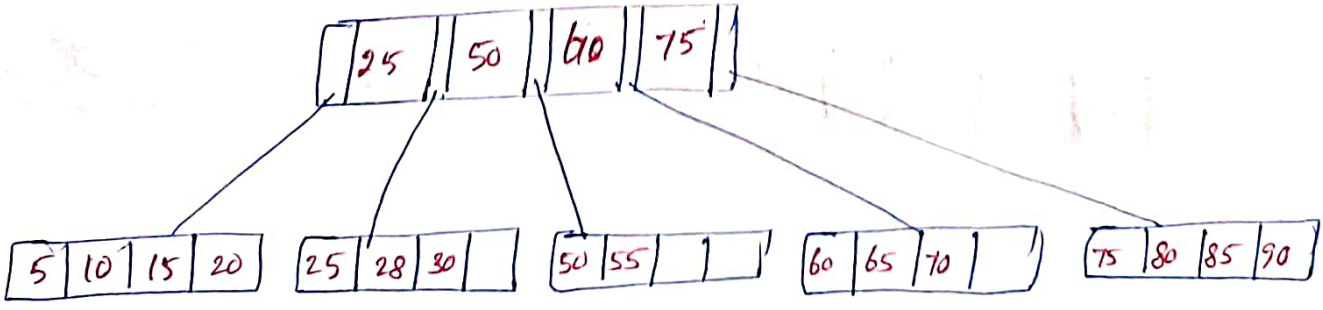
① Insert '28'



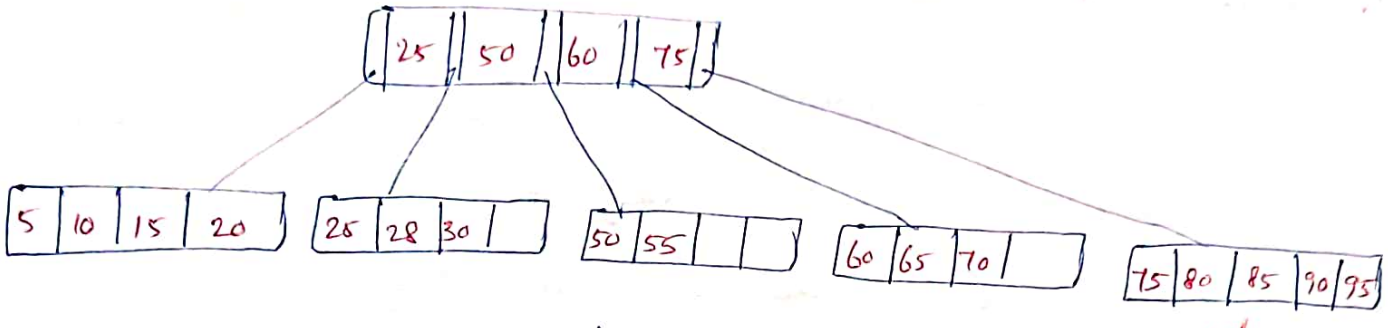
② Insert '70'



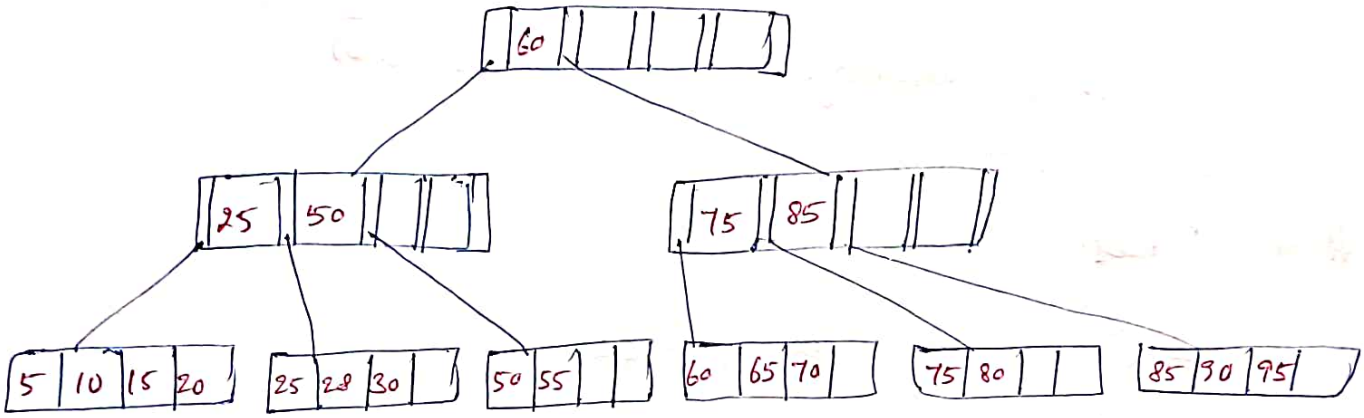
violates the 50% rule



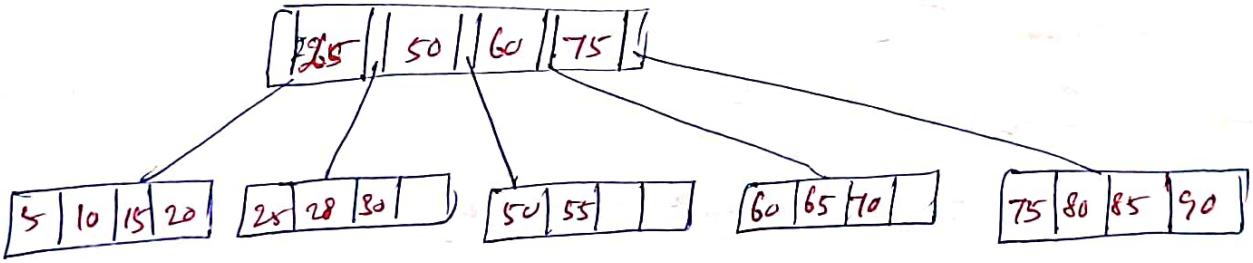
Insert '95'



Violates Property



Deletion:



Delete '60'