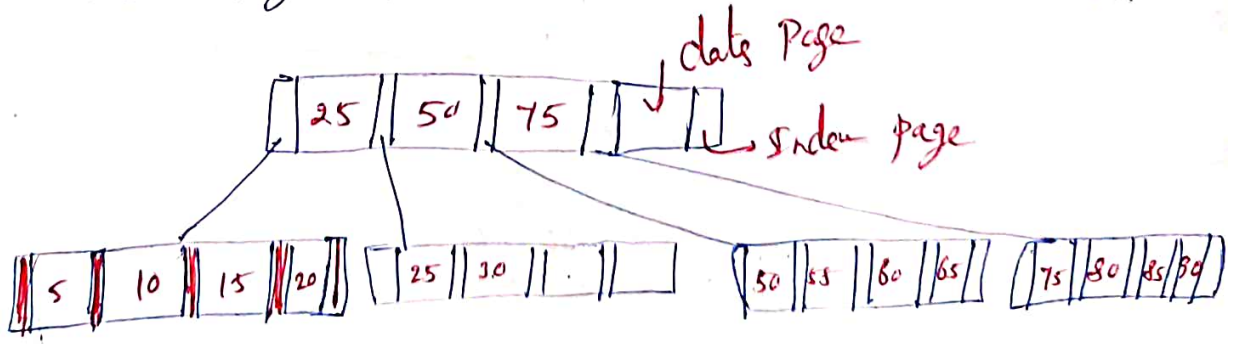


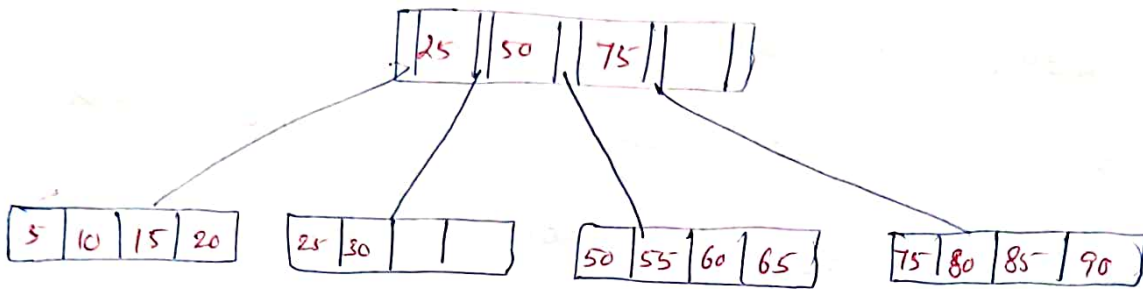
B+ Trees:

- It is a balanced Tree
- key indexes stored in internal node & records stored in leaf node.
- root & leaf node have same length
- leaf nodes 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 n is fixed in some cases.
- It contains Index Page and data Pages.
- If $n=4$, key will be 2 to 4.
- Index Page will be $4+1=5$ ($m=4$ keys)

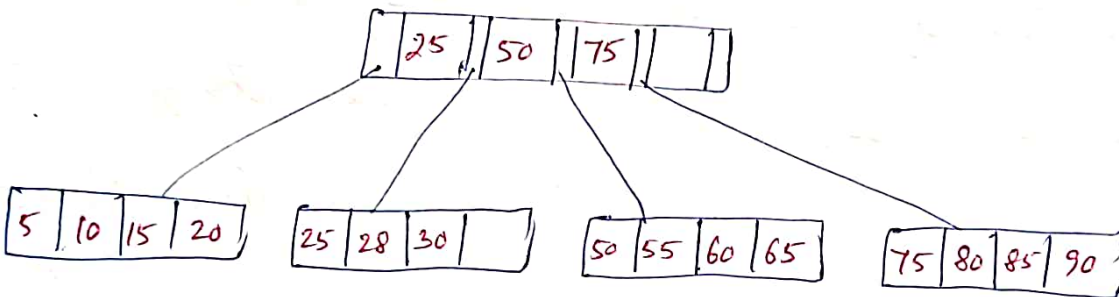


Insertion

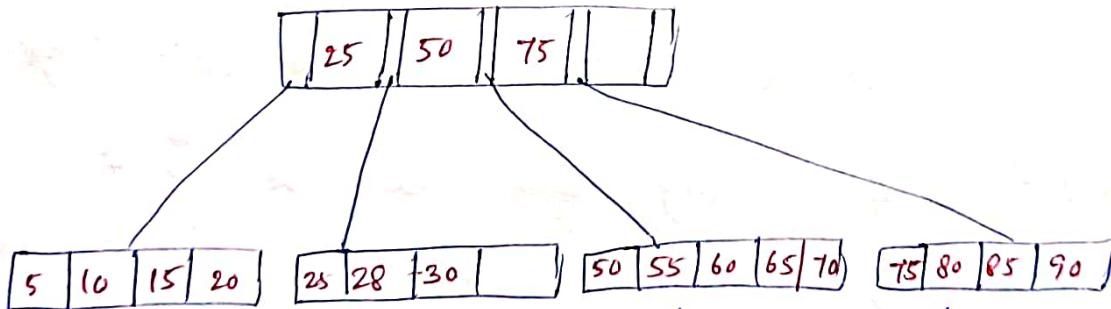
→ insert a value into a B+Tree may cause the tree unbalanced, so rearrange the tree if needed.



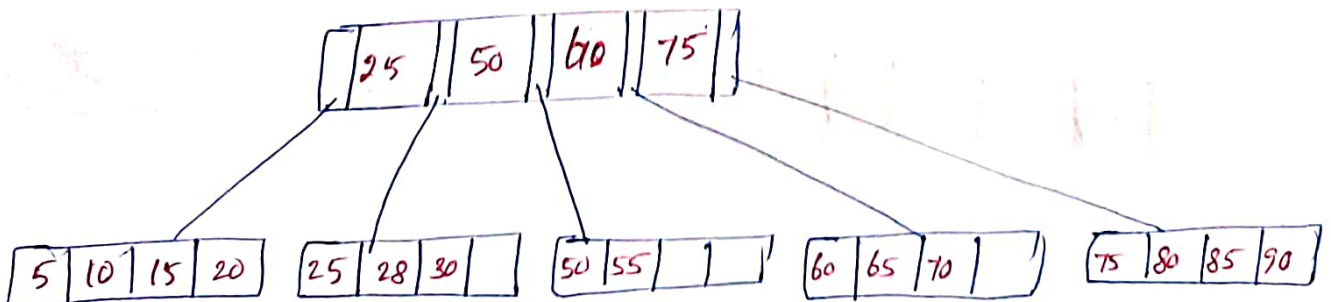
① Insert '28'



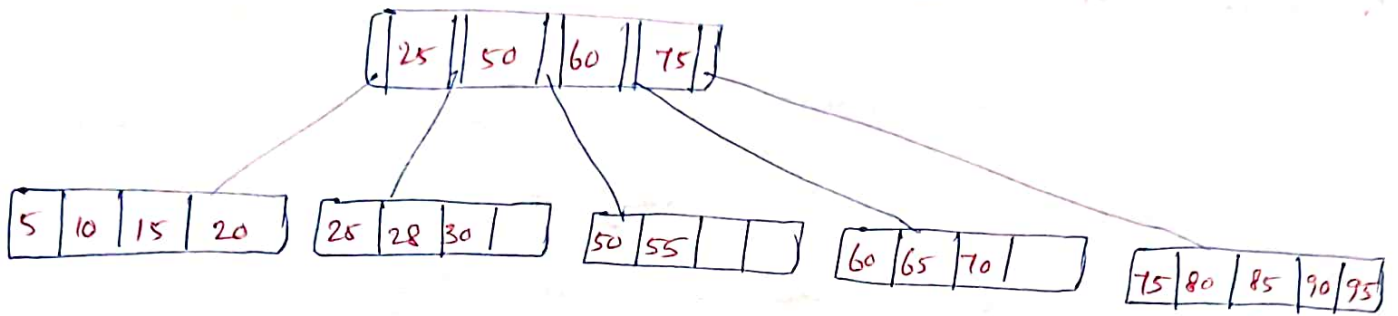
② Insert '70'



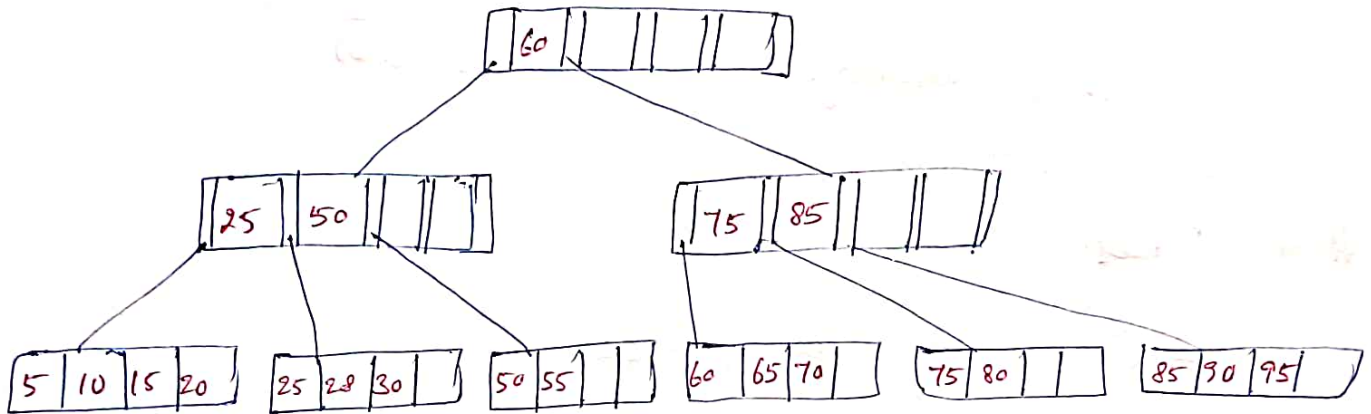
violates the 50% rule



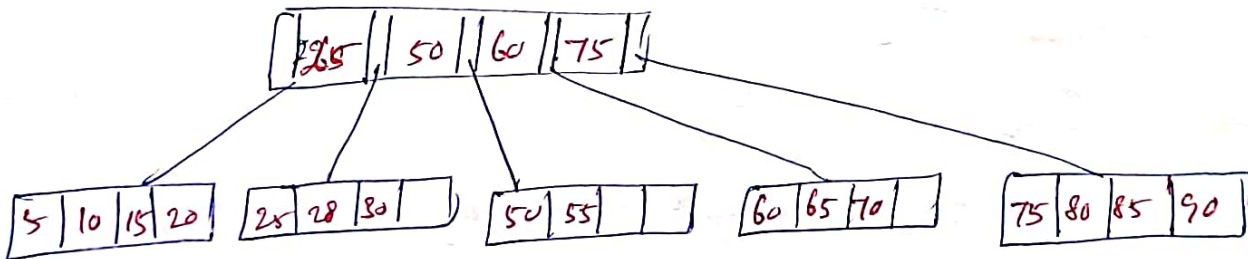
insert '95'



Violates Property



Deletion:



Delete '60'

