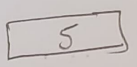
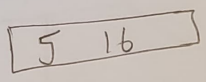
#1 is not 2-4 tree because in 2-4 tree all External node must have the same

#2 5, 16, 22, 45, 2, 10, 18, 30, 50, 12, 1, 25, 7

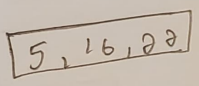
step 1 insert 5



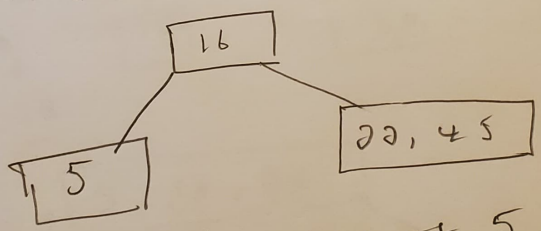
step 2 insert 16 so 16 > 5 it will be the right of 5



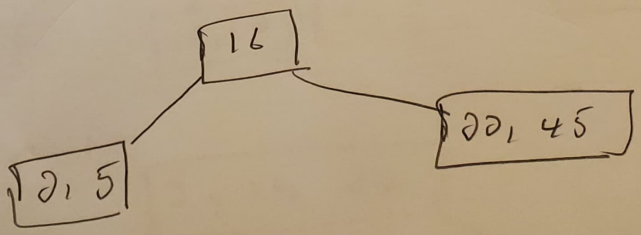
step 3 insert 22 22 > 16 it will be to the right of 16



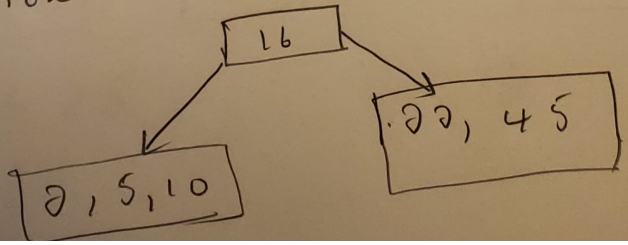
step 4 insert 45 overflow happen so 16 will be the root 5 is to the left (16) (22, 45) — to the right of 16



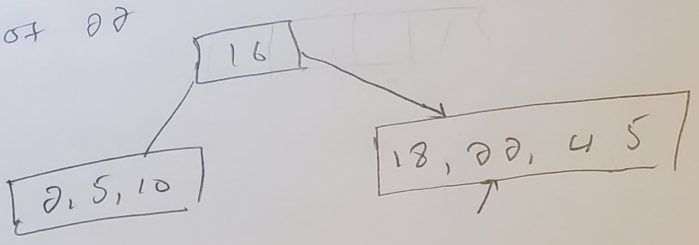
step 5 insert 2 2 < 5 left of 5 it will be



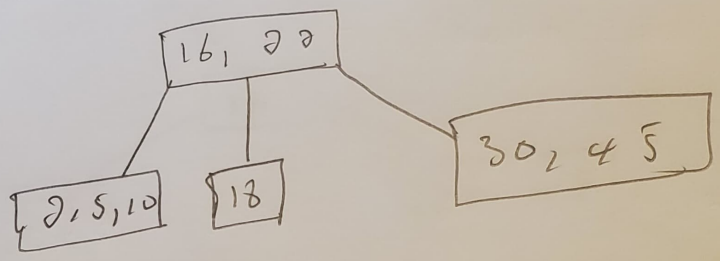
step 6 insert 10 10 > 5 & 10 < 16 so it will be to the right of 5



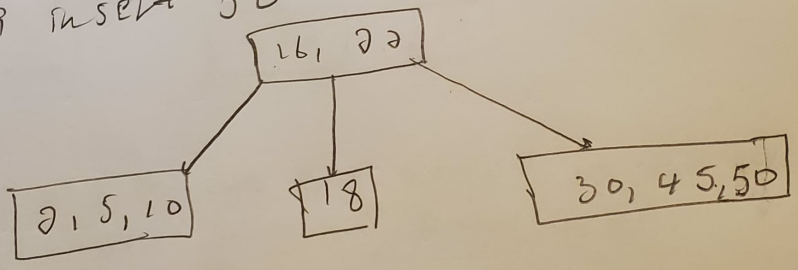
Step-7 insert 18 18>16 & 18<22 it will be left of 22



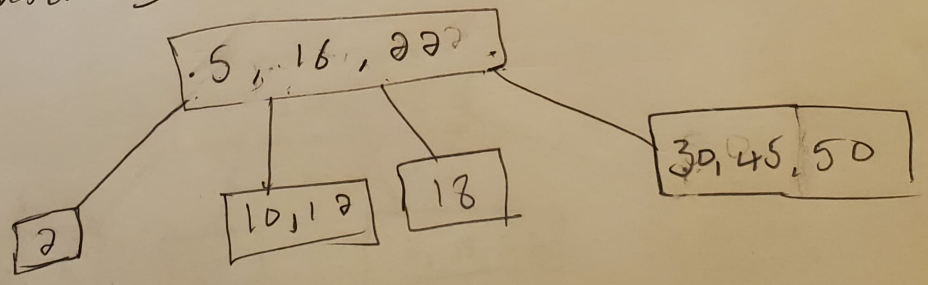
Step-8 insert 30



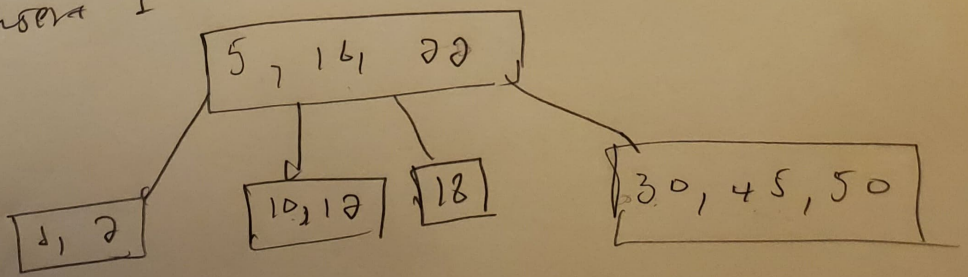
Step-9 insert 50



Step 10 - insert 12

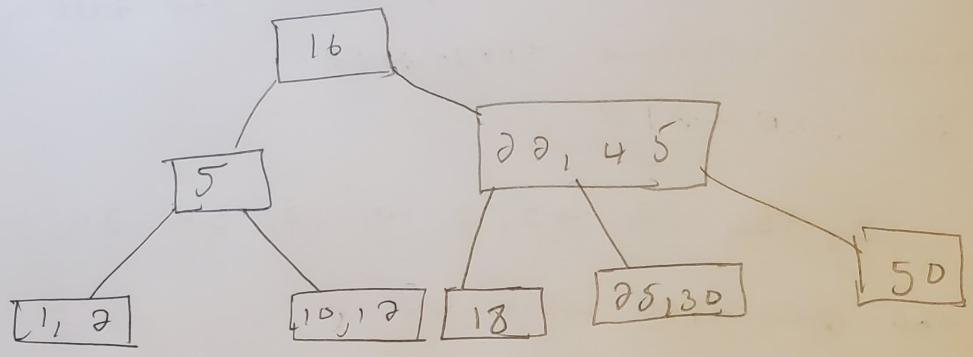


Step 11 insert 1

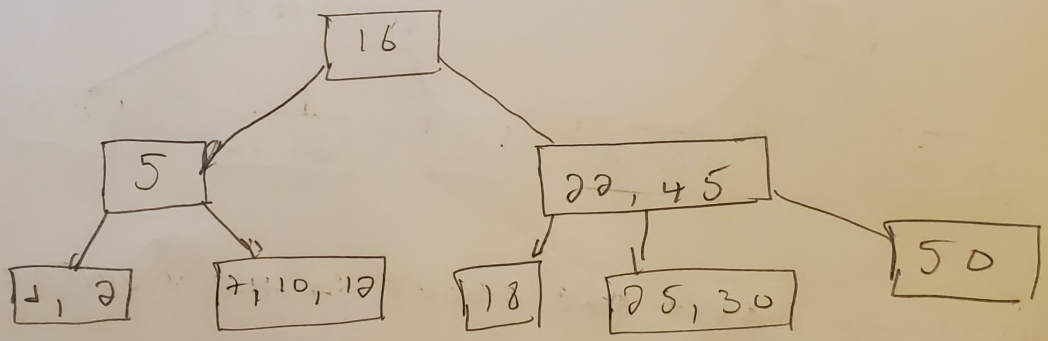


Step 12 insert 25

Step - 12 insert 25



Step - 13 insert 7

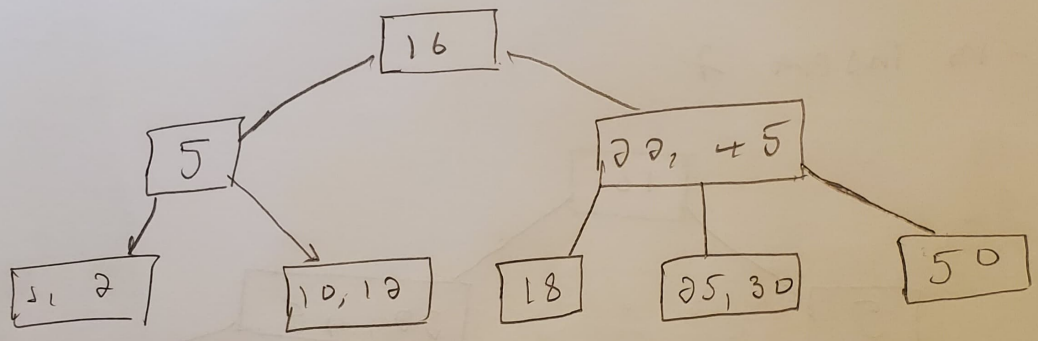


#3 if we insert in different the tree will have different structure.

for example

5, 16, 22, 45, 2, 10, 18, 30, 50, 12, 1, 25, 7

the B+4 tree will be



but if we insert the above in the reverse order we will get different structure

7, 25, 1, 12, 50, 30, 18, 10, 2, 45, 22, 16, 5