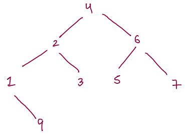


(pst , pet , ist, iet)

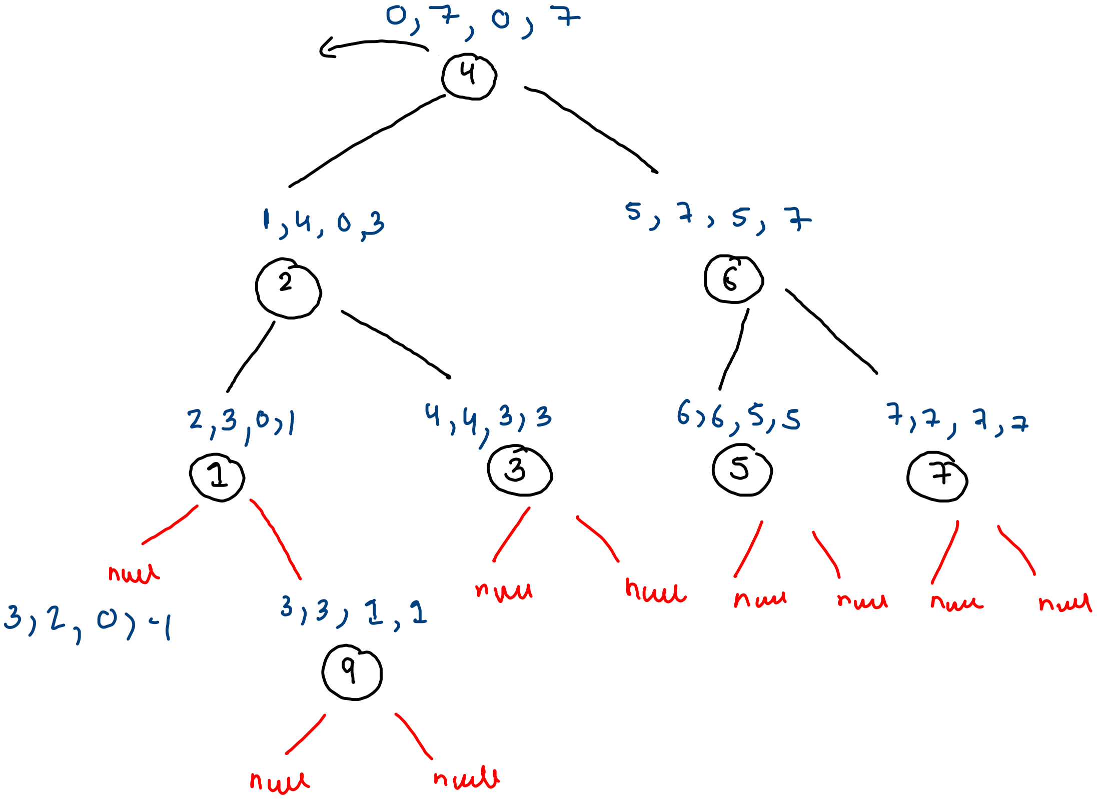
pst　　　　　　　　　　　　　pet

pre : [4, 2, 1, 9, 3, 6, 5, 7]

0　1　2　3　4　5　6　7

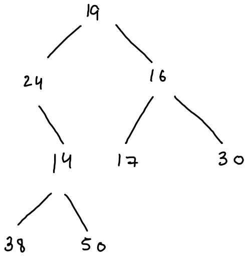
in : [1, 9, 2, 3, 4, 5, 6, 7]

ist　　　　　　idx　　　　iet

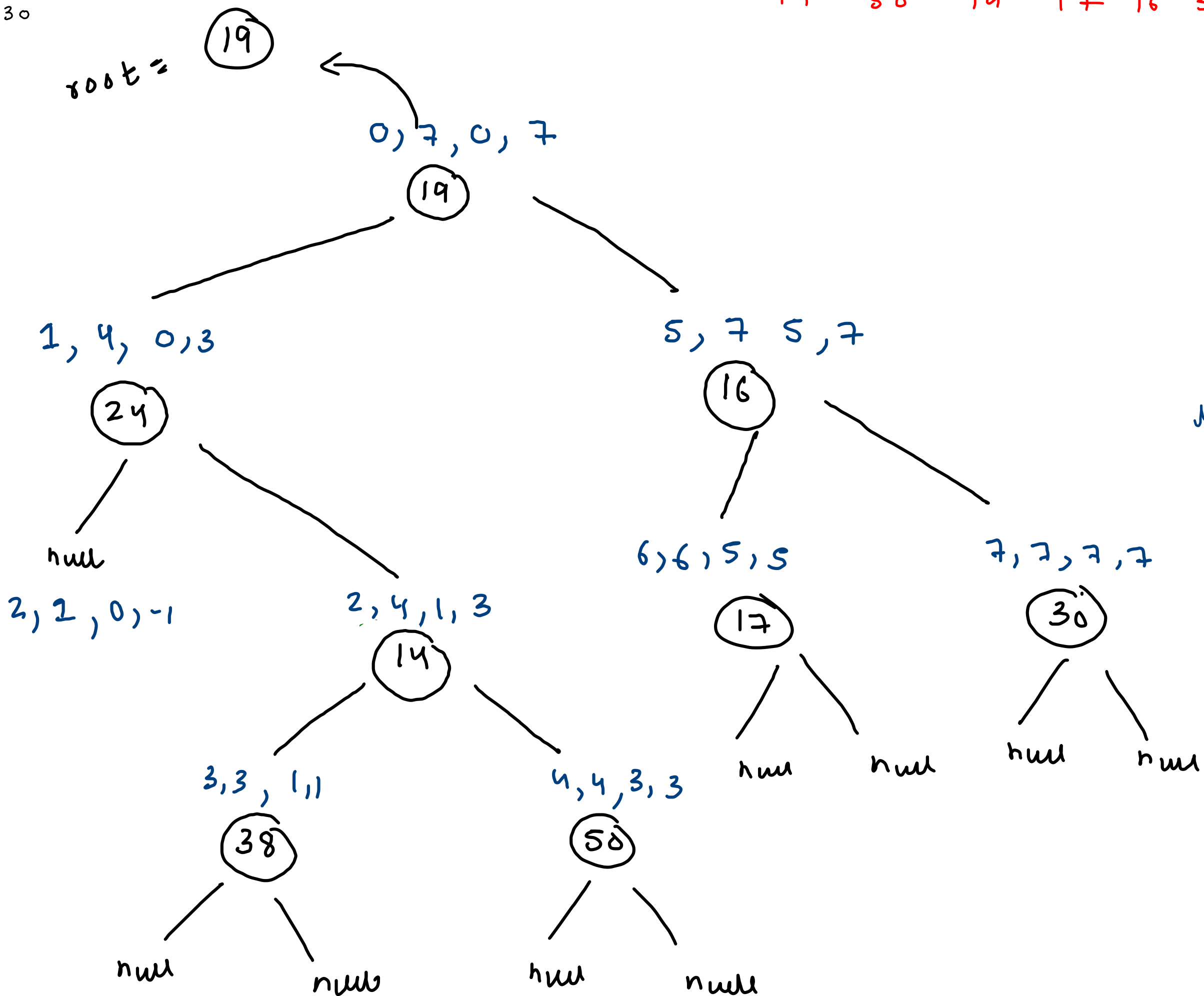


	pre	in
left	pst + 1, pst + colse	ist, idx - 1
right	pst + colse + 1, pet	idx + 1, iet

colse = idx - ist

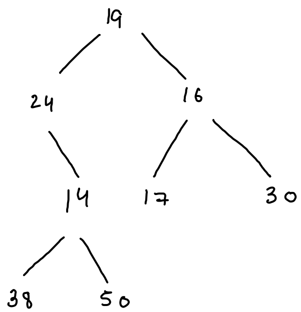


Pre :	19	24	14	38	50	16	17	30
	0	1	2	3	4	5	6	7
In :	24	38	14	50	19	17	16	30



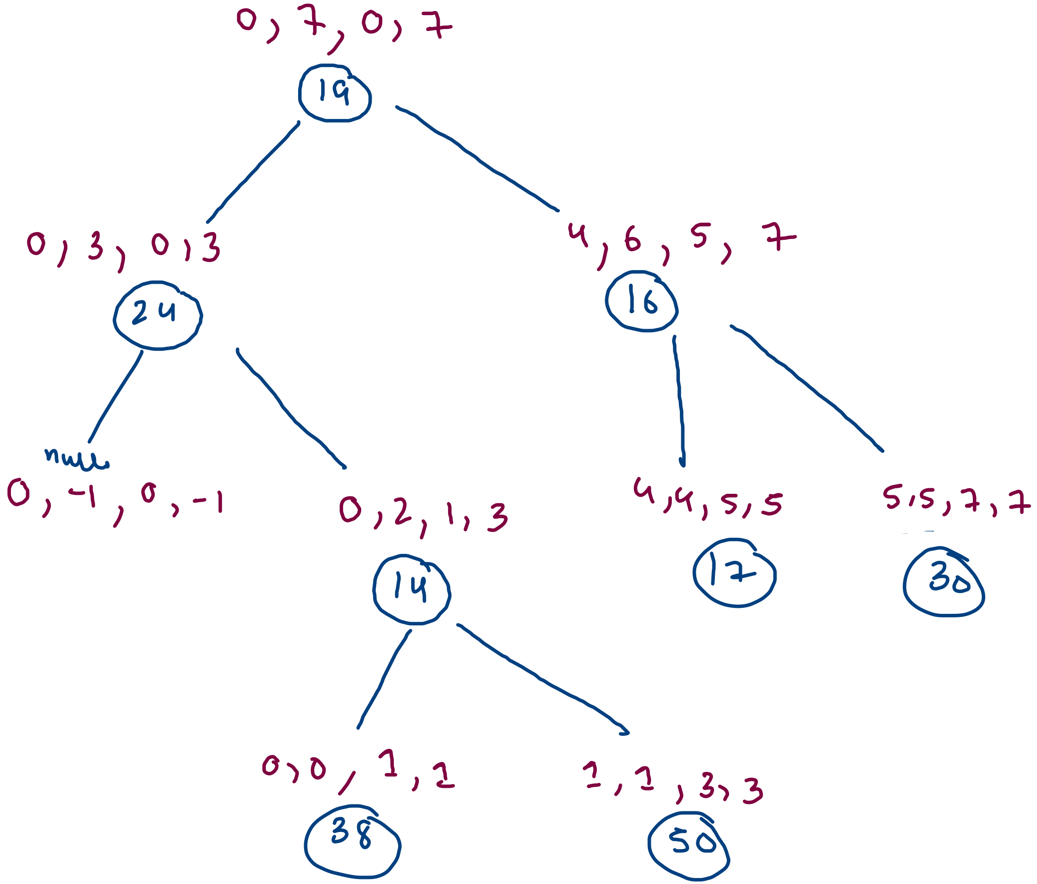
	Pre	In
left	pst + 1, pst + colse	ist, idx - 1
right	pst + colse + 1, pet	idx + 1, iet

colse = idx - ist



Post :	38	50	14	24	17	30	16	19
	0	1	2	3	4	5	6	7
In :	24	38	14	50	19	17	16	30

idx = 4 , colse = 4



	Post	In
left :	pos , pos + colse-1	is , idx-1
right :	pos+colse, poe-1	idx+1, ie

colse = idx - ist

pre :	19	24	14	38	50	16	17	30
	0	1	2	3	4	5	6	7
post :	38	50	14	24	17	30	16	19

	Pre	Post
left :	prs+1, prs+colse	pos, idx
right :	prs+colse+1, pre	idx+1, poe-1

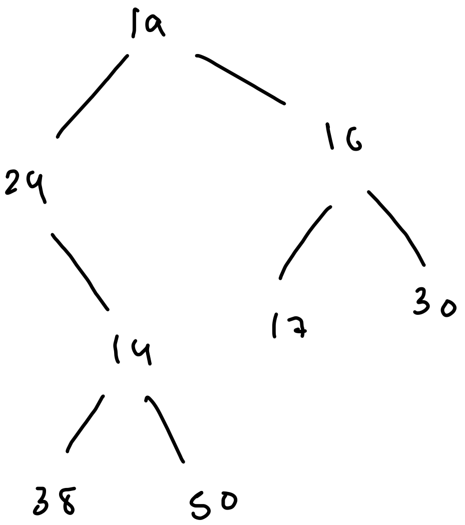
node = pre [prs]

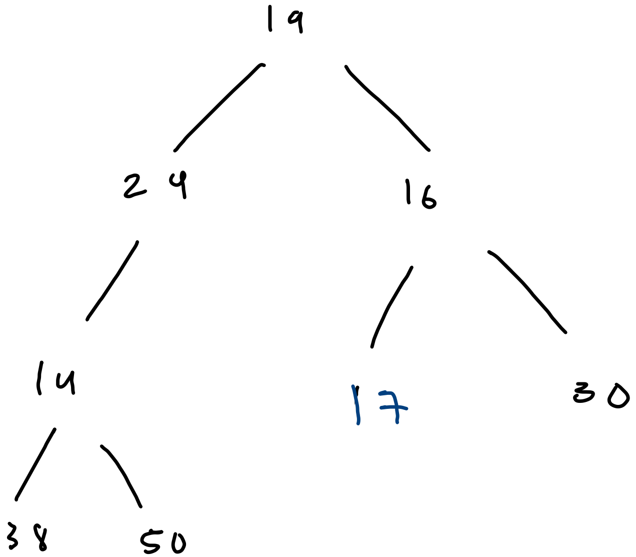
ele = pre [prs+1)

scan 'ele' in post

idx

colse = idx - pos+1





In , pre/ Post → same tree

Pre, post → same tree is not possible

pre :	19	24	14	38	50	16	17	30
	0	1	2	3	4	5	6	7
post :	38	50	14	24	17	30	16	19

node = pre [prs]

ele = pre [prs+1]

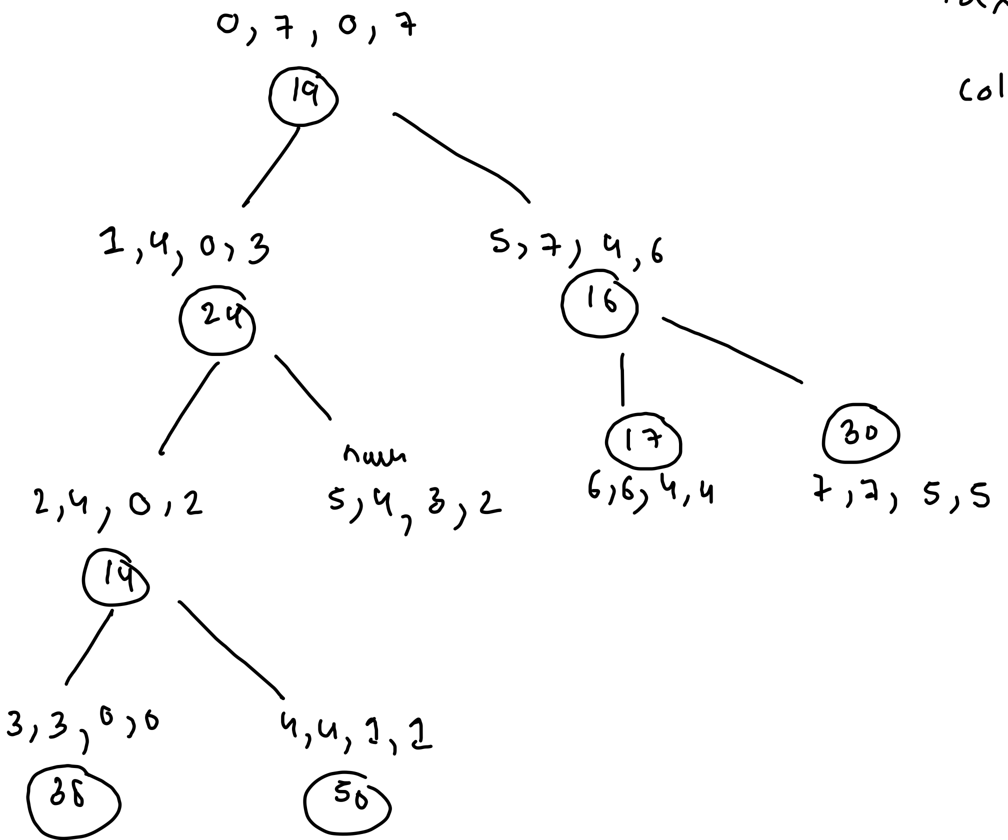
scan 'ele' in post

idx

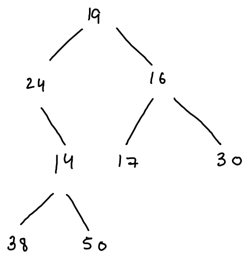
colse = idx - pos+1

idx = 4

colsc = 1

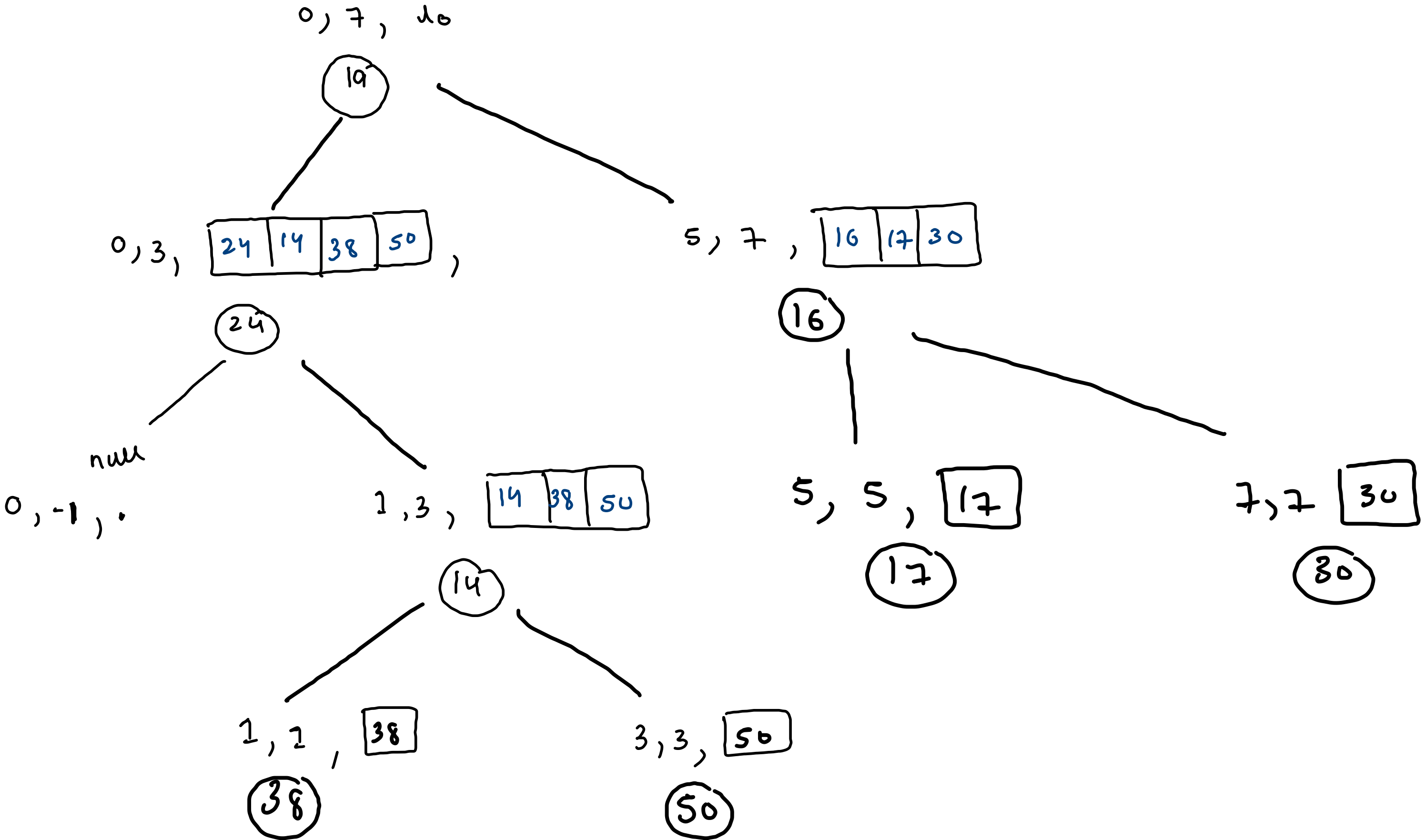


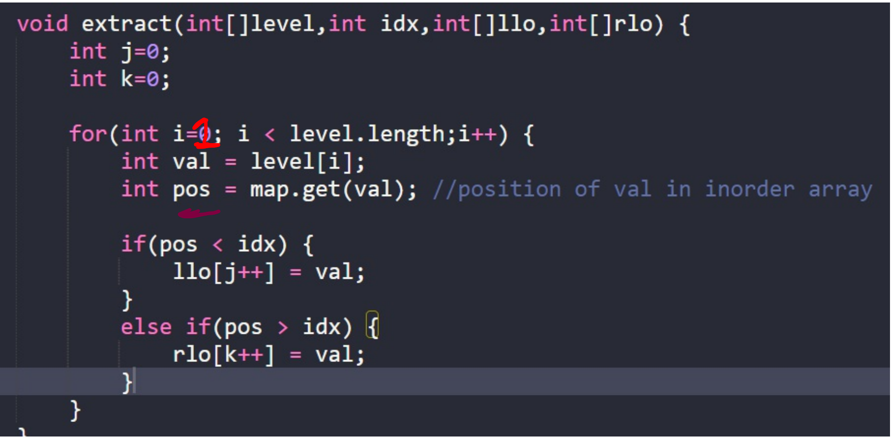
	Pre	Post
left :	prs+1, prs+colse	pos, idx
right :	prs+colse+1, pre	idx+1, poe-1



in :	24	38	14	50	19	17	16	30
	0	1	2	3	4	5	6	7
lo :	19	24	16	14	17	30	38	50

24	0
38	1
14	2
50	3
19	4
17	5
16	6
30	7





```
void extract(int[]level,int idx,int[]llo,int[]rlo) {
    int j=0;
    int k=0;

    for(int i=0; i < level.length;i++) {
        int val = level[i];
        int pos = map.get(val); //position of val in inorder array

        if(pos < idx) {
            llo[j++] = val;
        }
        else if(pos > idx) {
            rlo[k++] = val;
        }
    }
}
```

in :	24	38	14	50	19	17	16	30
	0	1	2	3	4	5	6	7
lo :	19	24	16	14	17	30	38	50

0 , 7 19

idx = 4

colse = 4

corse = 3

llo =

24	14	38	50

j

rlo =

16	17	30

k