DRAWING A BINARY TREE USING TRAVERSAL ORDER
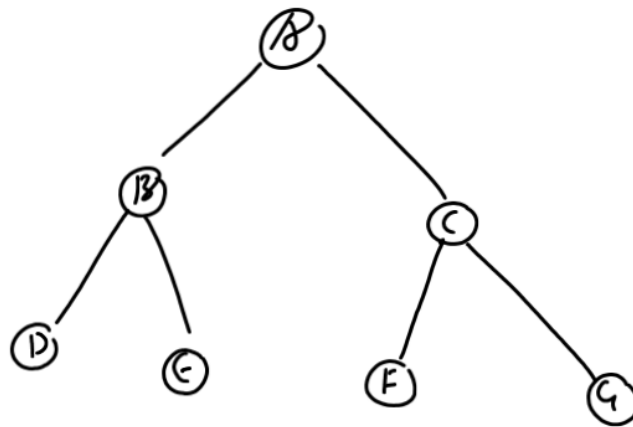
$$Pre: \quad \underline{A}, \; B, \; D, \; E, \; C, \; F, \; G \qquad (\text{Root, Left, Right})$$
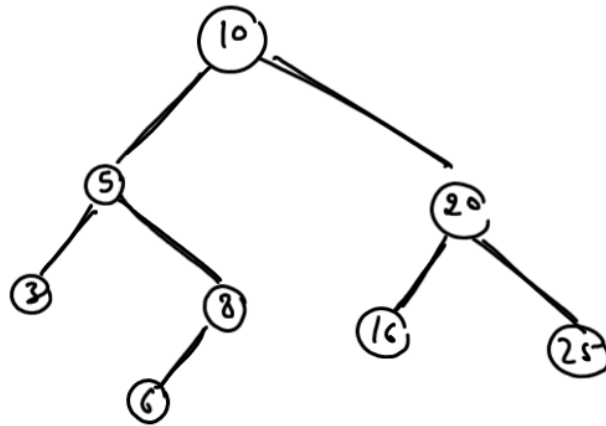
$$In: \quad D, \; B, \; E, \; A, \; F, \; C, \; G \qquad (\text{Left, Root, Right})$$

LC, RC, RC
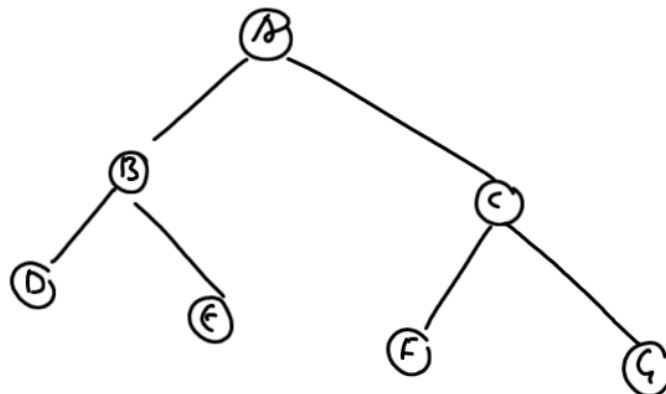
PREORDER: 10, 5 , 3 , 8 , 6, 20, 16, 25   (Root, left, Right)
INORDER: 3, 5, 6, 8, 10, 16, 20, 25   (left, Root, Right)
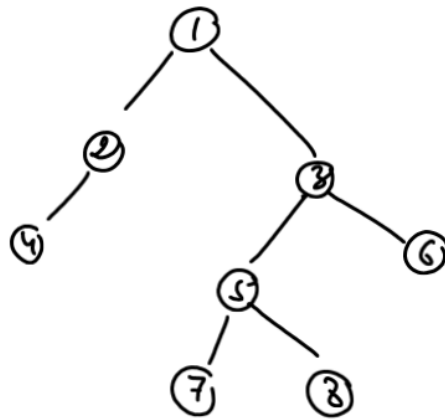

PREORDER: A, B, G, H, I, C, D, E, F
INORDER: G, I, H, B, A, D, F, E, C
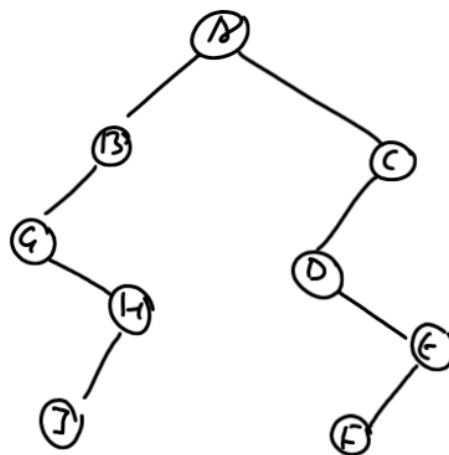
POSTORDER: 4, 2, 7, 8, 5, 6, 3, 1   (Lft, Right, Root)

INORDER: 4, 2 , 1 , 7, 5, 8, 3, 6   (Lft, Root, Right)

POSTORDER: 4, 5, 2, 6, 7, 3, 1

INORDER: 4, 2, 5, 1, 6, 3, 7

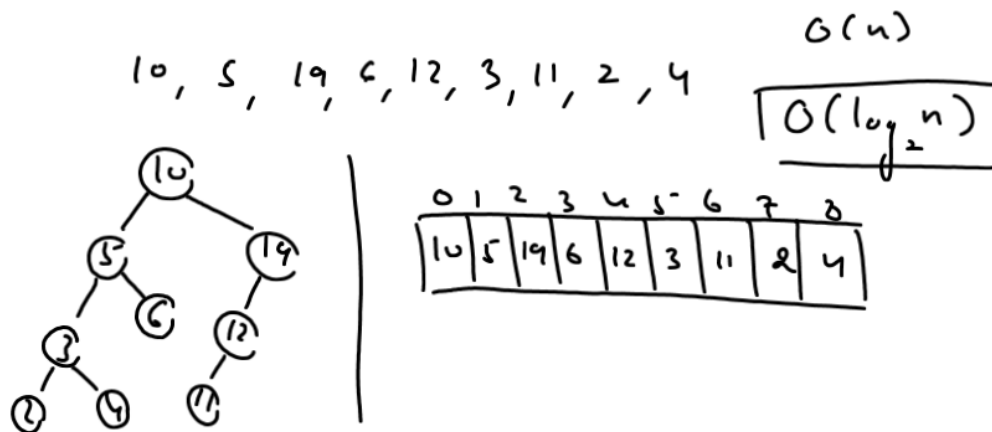PREORDER: A, L , G, O, R, I, T, H, M,S

INORDER: G,L,R,O,I,A,H,T,M,S

PREORDER: P,A,S,T,Q,E,D,X,M,R,C,F

INORDER: T,S,Q,A,E,D,P,M,X,C,R,F

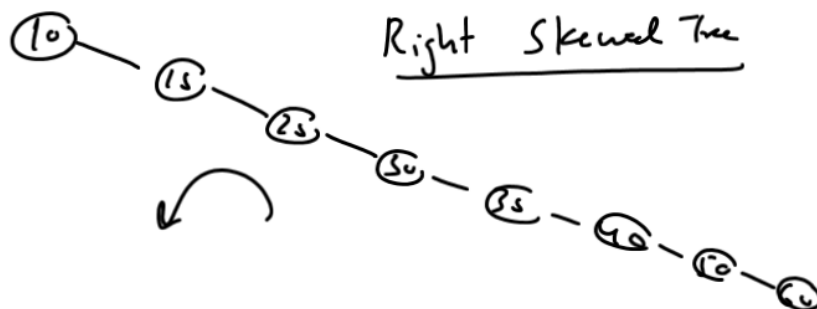PREORDER: 16,14,8,2,4,7,1,10,9,3

INORDER: 2,8,4,14,1,7,16,9,10,3

AVL TREE (Height Balanced Tree)
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Qn, What is the benefit of a BST over an ARRAY ?

10, 5, 19, 6, 12, 3, 11, 2, 4

$$O(n)$$

$$\boxed{O(\log_2 n)}$$

0	1	2	3	4	5	6	7	8
10	5	19	6	12	3	11	2	4

10, 15, 25, 30, 35, 40, 50, 60

Right Skewed Tree

$$\underline{\underline{BF}}$$

$$-1, \ 0, \ +1$$