1. Construct a Binary Search Tree (BST) for the following sequence of numbers-
    a. 12 15 3 35 21 42 14\
    b. 7 , 5 , 1 , 8 , 3 , 6 , 0 , 9 , 4 , 2.
    c. 30 , 20 , 10 , 15 , 25 , 23 , 39 , 35 , 42
    d. 50, 70, 60, 20, 90, 10, 40, 100
    e. 50, 15, 62, 5, 20, 58, 91, 3, 8, 37, 60, 24
    f. 11, 6, 8, 19, 4, 10, 5, 17, 43, 49, 31
    g. 98, 2, 48, 12, 56, 32, 4, 67, 23, 87, 23, 55,46
        a. Insert21, 39, 45, 54, and 63.
        b. Delete 23, 56, 2 and 45
    h. Create a Binary Search Tree using following sequence of numbers 98, 2, 48, 12, 56, 32, 4, 67, 23, 55, 46.
        a. Insert 21, 39, 45, 54, and 63 into the tree.
        b. Delete values 23, 56, 2, and 45 from the tree.
2. Construct Tree from given Inorder and Preorder traversals
    a. PreOrder - 8, 5, 9, 7, 1, 12, 2, 4, 11, 3
       InOrder - 9, 5, 1, 7, 2, 12, 8, 4, 3, 11
    b. Inorder sequence: D B E A F C
       Preorder sequence: A B D E C F
    c. Inorder - 4, 8, 2, 5, 1, 6, 3, 7
       Preorder - 8, 4, 5, 2, 6, 7, 3, 1
    d. Inorder – 4, 2,1, 7, 5, 8, 3, 6
       Preorder – 1, 2, 4, 3, 5, 7, 8, 6
    e. InOrder - 2,5,6,10,12,14,15 ;
       PreOrder = 10,5,2,6,14,12,15;
3. Construct Tree from given Inorder and Post traversals
    a. Inorder : 10 , 20 , 30 , 100 , 150 , 200 , 300
       PostOrder : 10 , 30 , 20 , 150 , 300 , 200 , 100

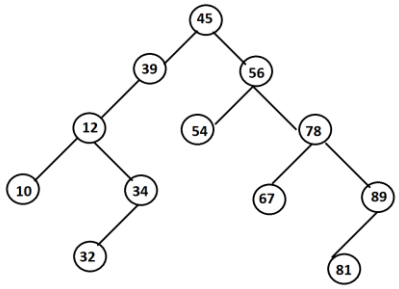
    b. Inorder : 4, 8, 2, 5, 1, 6, 3, 7
       Postorder: 8, 4, 5, 2, 6, 7, 3, 1

    c. Preorder : 1, 2, 4, 5, 3, 6, 8, 9, 7
       PostOrder : 4, 5, 2, 8, 9, 6, 7, 3, 1

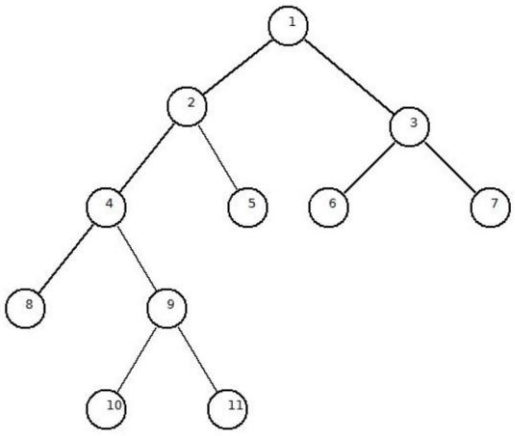
    d. Preorder: 50, 25, 12, 37, 30, 40, 75, 62, 60, 70, 87
       Postorder: 12, 30, 40, 37, 25, 60, 70, 62, 87, 75, 50

4. (i) Find the result of in-order, preorder, and post order traversals.

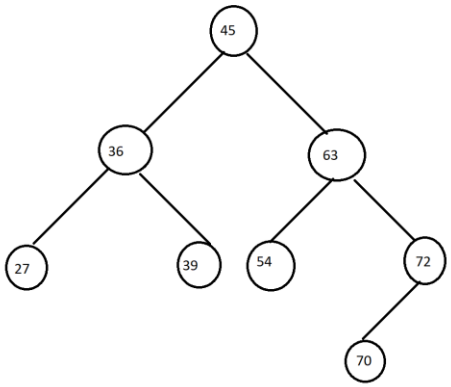
   (ii) Insert 11, 22, 33, 44, 55, 66, and 77 in the tree.



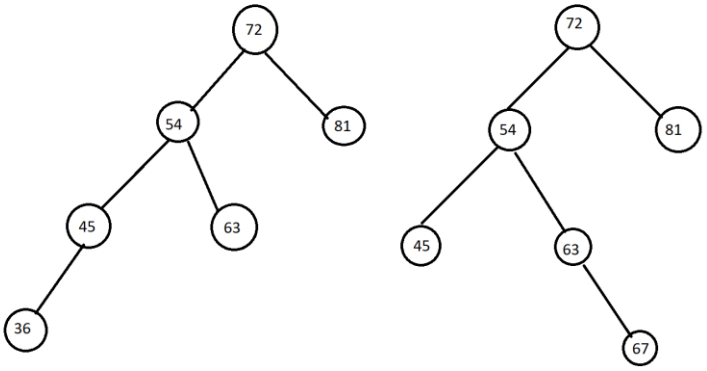
5. Find the result of in-order, preorder, and post order traversals.



6. Write a program to create a binary search tree of integers and do the following
    a. Find the maximum value
    b. Find the minimum value
    c. Find the sum of all the values of integers.
7. Merge two Binary Search Trees.
8. Insert 14, 17, 11, 7, 53, 4, 13 into an empty AVL tree
9. Construct AVL Tree for the following sequence of numbers-
   50 , 20 , 60 , 10 , 8 , 15 , 32 , 46 , 11 , 48
10. Consider the AVL three given below and insert 18, 81, 29, 15, 19, 25, 26, and 1 in it
    Delete 39, 63, 15, and 1 from the AVL tree formed after solving the above



11. Balance the AVL tree given below :



12. Create an ACL tree using the following sequence of data 16,27, 9, 11, 36, 54, 81, 63, 72.
13. Draw all possible BST of 7, 9, and 11.
14. Read all the algorithm of searching and sorting provided to you in Document, also go through the Time complesities.