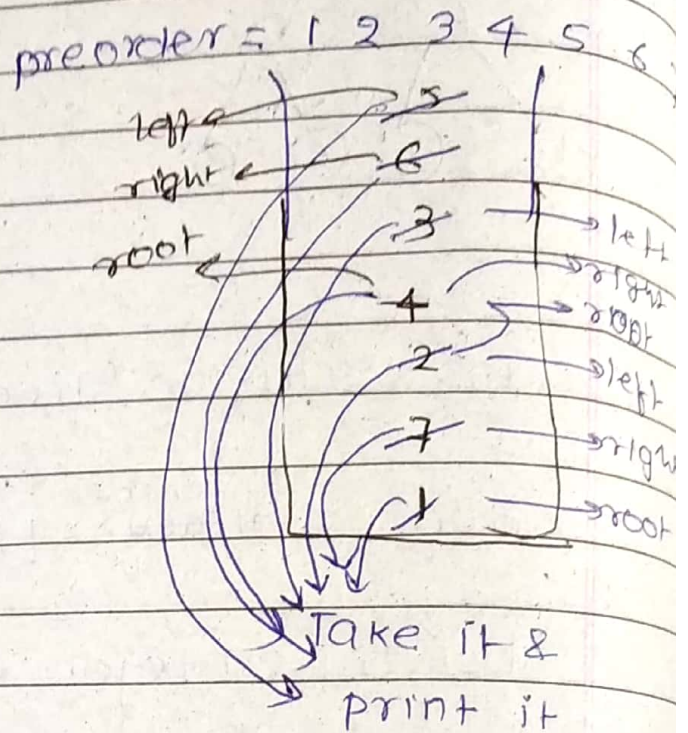
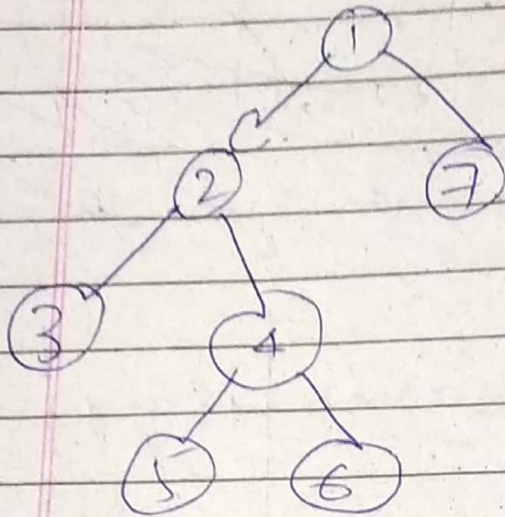


#

preorder using iteration
(NLR)

class solution {

```

public List<Integer> preOrderTraverse
(TreeNode root)

```

```

{

```

```

    Stack<TreeNode> st = new Stack<>();

```

```

    ArrayList<Integer> al = new ArrayList<>();

```

```

    if (root == null) return al;

```

```

    st.push(root);

```

```

    while (!st.isEmpty())

```

```

    {
        root = st.pop();

```

```

        al.add(root.val);

```

```

        if (root.right != null)

```

```

            st.push(root.right);

```

```

        if (root.left != null)

```

```

            st.push(root.left);

```

```

        }

```

```

    return al;
}

```