Daily Practice Work Date: 18/8/2023

Program: Intersection Of Two Arrays

```
package com.ishwarchavan;

public class IntersectionOfTwoArrays {          //class is created

      public static void main(String[] args) {  //main program started

            int myArray1[] = {23,36,96,78,55};        //two array is created
            int myArray2[] = {78,45,19,73,52};
            System.out.println("Intersection of the two arrays ::");  //printed
statement

            for(int i = 0; i<myArray1.length; i++) {        //first loop is created
                        for(int j = 0;j<myArray2.length; j++) {

                              if(myArray1[i]== myArray2[j]) {           //if true this
condition then executed below stament
                                    System.out.println(myArray2[j]);
                        }
                    }
                }
              }
         }
```

Program: Serialize and Deserialize In BST

```
package com.ishwarchavan;
import java.util.*;

class TreeNode {        //Binary tree Node
      int val;
      TreeNode left;                  //pointer left
      TreeNode right;                       //pointer right
      TreeNode(int x) { val = x; }
}

class BinaryTree {
      TreeNode root;

      public static String serialize(TreeNode root)         // function is created for
serialize tree
      {
            if (root == null) {           //if true then return null
                  return null;
            }
            Stack<TreeNode> s = new Stack<>();        //s object is created
            s.push(root);

            List<String> l = new ArrayList<>();       //l object is created
            while (!s.isEmpty()) {
                  TreeNode t = s.pop();

                  if (t == null) {        // If current node is NULL,
                        l.add("#");
                  }
                  else {                  //otherwise execute below
                        l.add("" + t.val);
                        s.push(t.right);
                        s.push(t.left);
                  }
            }
            return String.join(",", l);
      }

      static int t;

      public static TreeNode deserialize(String data)       //deserialize function is
created
      {
            if (data == null)             //if true then return null
                  return null;
            t = 0;
            String[] arr = data.split(",");
            return helper(arr);
      }

      public static TreeNode helper(String[] arr)           //helper function is
created with string parameter
      {
            if (arr[t].equals("#"))
                  return null;

            TreeNode root
                  = new TreeNode(Integer.parseInt(arr[t])); //convrting into interger
            t++;
            root.left = helper(arr);
            t++;
            root.right = helper(arr);
            return root;
      }
      static void inorder(TreeNode root)        //inorder function is created
      {
            if (root != null) {                       //if true then execute below
statement
                  inorder(root.left);
                  System.out.print(root.val + " ");
                  inorder(root.right);
            }
      }
      public static void main(String args[])          //main program is started
      {

            BinaryTree tree = new BinaryTree();       //constructing the binary tree
            tree.root = new TreeNode(20);
            tree.root.left = new TreeNode(8);
            tree.root.right = new TreeNode(22);

            String serialized = serialize(tree.root);
            System.out.println("Serialized view of the tree:");
            System.out.println(serialized);
            System.out.println();
            TreeNode t = deserialize(serialized);

            System.out.println(
                        "Derialized view of the tree:");
            inorder(t);
      }
}
```