Program for Single Number

```
public class SingleNumber {


public static int findSingleNumber(int[] nums){


    for(int i=0;i<nums.length;i++) {
        int count=0;
        for(int j=0;j<nums.length;j++){
            if(nums[i]==nums[j]){
                count++;
            }
        }
        if(count==1){
        return nums[i];
        }
    }
    return 0;
}

    public static void main(String[] args) {


        int[]nums={1, 4,2, 1, 2};
        int result=findSingleNumber(nums);
        System.out.println("Result : " + result);


    }
}
```

OUTPUT

Result : 4

Program for Permutation Sequence

```
package DsProgramTree;
import java.util.ArrayList;
import java.util.List;

public class PermutationSequence {

        public static String getPermutation(int n, int k) {
            int fact = 1;
            List<Integer> numbers = new ArrayList<>();

            // Initialize the list of numbers and calculate the factorial
            for (int i = 1; i < n; i++) {
                fact = fact * i;
                numbers.add(i);
            }
            numbers.add(n);

            String ans = "";
            k = k - 1; // Adjust k because counting index starts from 0 to k-1

            // Generate the permutation
            while (true) {
                ans = ans + numbers.get(k / fact); // Add the selected number to the
result
                numbers.remove(k / fact); // Remove the selected number from the list

                // Check if all numbers have been used
                if (numbers.size() == 0) {
                    break;
                }

                k = k % fact;
                fact = fact / numbers.size(); // Update the factorial
            }

            return ans;
        }

        public static void main(String[] args) {

            int n = 3;
            int k = 3;
            String permutation = getPermutation(n, k);
            System.out.println(" Numbers is : " + permutation);
        }
    }
```

OUTPUT

Numbers is : 213