1st

```
package Day4;

public class Segregate {

	public static int[] segregateArr(int arr[])
	{
		int l=0,r=arr.length-1;
		int[] result=new int[arr.length];
		for(int i=0;i<arr.length;i++)
		{
			if(arr[i]<0)
				result[l++]=arr[i];
			else
				result[r--]=arr[i];
		}
		return result;
	}

	public static void sortArr(int arr[])
	{
		for(int i=0;i<arr.length-1;i++)
		{
			for(int j=i+1;j<arr.length;j++)
			{
```

```
                        if(arr[i]>arr[j])
                        {
                                int temp=arr[i];
                                arr[i]=arr[j];
                                arr[j]=temp;
                        }
                }
        }

    }
    public static void main(String[] args) {

        int []arr= {19,-13,15,-12,-18,-16,1,3};
        int[] segregated=segregateArr(arr);
        for(int i:segregated)
                System.out.print(i+" ");
        System.out.println();
        sortArr(segregated);
        for(int i:segregated)System.out.print(i+" ");
    }
}
```

2nd

```
package Day4;
```

```
import java.util.*;

public class CheckNum {

	public static void checkNumExist(int k,int[] a)
	{
		int s=0,e=a.length-1,mid=0;
		boolean found=false;
		while(s<=e)
		{
			mid=(s+e)/2;
			if(a[mid]==k)
			{
				found=true;
				break;
			}
			else if(a[mid]<k)
				s=mid+1;
			else
				e=mid-1;
		}
		if(found)
			System.out.println("Number found at index "+mid);
		else
			System.out.println("Number not found");
	}
```

```
	public static void main(String[] args) {
		Scanner sc=new Scanner(System.in);
		System.out.println("Enter the size of array");
		int s=sc.nextInt();
		int []arr=new int[s];
		System.out.println("Now Enter the Value of arr");
		for(int i=0;i<s;i++)
		{
			System.out.print("value at index "+i+" ");
			arr[i]=sc.nextInt();
			System.out.println();
		}
		System.out.println("Enter NUmber u want to search");
		int value=sc.nextInt();
		checkNumExist(value,arr);
	}
}
```