Code : 1  
package Topic\_08\_RecursionUsingArrays;

import java.util.Scanner;

public class A\_DisplayArray {

public static void main(String[] args) throws Exception {

// write your code here

Scanner s = new Scanner(System.in);

int n = s.nextInt();

int a[] = new int[n];

for (int i = 0; i < n; i++) {

a[i] = s.nextInt();

}

displayArr(a, a.length-1);

}

public static void displayArr(int[] arr, int idx) {

if (idx == -1) {

return;

}

System.out.println(arr[idx]);//To Print Straight

displayArr(arr, idx - 1);

System.out.println(arr[idx]);//To Print In reverse

}

}

Code : 2  
package Topic\_08\_RecursionUsingArrays;

import java.util.Scanner;

public class B\_FindMaxInArray {

public static void main(String[] args) throws Exception {

// write your code here

Scanner s = new Scanner(System.in);

int n = s.nextInt();

int a[] = new int[n];

for (int i = 0; i < n; i++) {

a[i] = s.nextInt();

}

int max = maxOfArray(a, a.length - 1);

System.out.println(max);

}

public static int maxOfArray(int[] a, int idx) {

if (idx == 0) {

return a[idx];

}

int max = maxOfArray(a, idx - 1);

if (a[idx] > max) {

max = a[idx];

}

return max;

}

}

Code : 3  
package Topic\_08\_RecursionUsingArrays;

import java.util.Scanner;

public class C\_FirstIndex {

public static void main(String[] args) throws Exception {

Scanner s = new Scanner(System.in);

int n = s.nextInt();

int a[] = new int[n];

for (int i = 0; i < n; i++) {

a[i] = s.nextInt();

}

int x = s.nextInt();

int firstIndex = firstIndex(a, 0, x);

System.out.println(firstIndex);

}

public static int firstIndex(int[] arr, int idx, int x) {

if (idx == arr.length) {

return -1;

}

if (arr[idx] == x) {

return idx;

}

int fi = firstIndex(arr, idx + 1, x);

return fi;

}

}

Code : 4  
package Topic\_08\_RecursionUsingArrays;

import java.util.Scanner;

public class D\_LastIndex {

public static void main(String[] args) throws Exception {

Scanner s = new Scanner(System.in);

int n = s.nextInt();

int a[] = new int[n];

for (int i = 0; i < n; i++) {

a[i] = s.nextInt();

}

int x = s.nextInt();

int lastIndex = lastIndex(a, a.length - 1, x);

System.out.println(lastIndex);

}

public static int lastIndex(int[] arr, int idx, int x) {

if (idx == -1) {

return -1;

}

int li = lastIndex(arr, idx - 1, x);

if (arr[idx] == x) {

return idx;

}

return li;

}

}

Code : 5  
package Topic\_08\_RecursionUsingArrays;

import java.util.Iterator;

import java.util.Scanner;

public class E\_AllIndicesOfArray {

public static void main(String[] args) throws Exception {

Scanner s = new Scanner(System.in);

int n = s.nextInt();

int a[] = new int[n];

for (int i = 0; i < n; i++) {

a[i] = s.nextInt();

}

int x = s.nextInt();

int arr[] = allIndices(a, x, 0, 0);

for (int i : arr) {

System.out.println(i);

}

}

public static int[] allIndices(int[] arr, int x, int idx, int count) {

if (arr.length == idx) {

return new int[count];

}

if (arr[idx] == x) {

count++;

}

int[] a = allIndices(arr, x, idx + 1, count);

if (arr[idx] == x) {

a[count - 1] = idx;

}

return a;

}

}