DAY – 5 JAVA TRAINING

1)

import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt(); // number of passengers

if (n <= 0) {

System.out.println("Invalid Input");

return;

}

int[] ages = new int[n];

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

ages[i] = sc.nextInt();

if (ages[i] < 0) { // check invalid age

System.out.println("Invalid Input");

return;

}

}

int youngest = ages[0];

int oldest = ages[0];

for (int i = 1; i < n; i++) {

if (ages[i] < youngest) {

youngest = ages[i];

}

if (ages[i] > oldest) {

oldest = ages[i];

}

}

System.out.println("Youngest=" + youngest);

System.out.println("Oldest=" + oldest);

}

}

2)

import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt(); // number of buildings

int[] doors = new int[n];

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

doors[i] = sc.nextInt();

}

int target = sc.nextInt(); // friend's home address

int index = -1;

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

if (doors[i] == target) {

index = i;

break;

}

}

if (index == -1) {

System.out.println("-1");

} else {

System.out.printf("Door Number is %03d-DN%n", index);

}

}

}

3)

import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String s = sc.next(); // input string of '\*' and '#'

int countStar = 0, countHash = 0;

for (char c : s.toCharArray()) {

if (c == '\*') countStar++;

else if (c == '#') countHash++;

}

int diff = countStar - countHash;

if (diff == 0) {

System.out.println(0);

return;

}

int absDiff = Math.abs(diff);

int width = (absDiff % 2 == 0) ? 2 : 3; // even -> 2 digits, odd -> 3 digits

String padded = String.format("%0" + width + "d", absDiff);

if (diff < 0) padded = "-" + padded;

System.out.println("The Difference of the character in the given string: " + padded);

}

}

4)

import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int positive = 0, negative = 0;

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

int val = sc.nextInt();

if (val > 0) {

positive++;

} else if (val < 0) {

negative++;

}

}

System.out.printf("Count of Positive Integer is %.2f%n", (double) positive);

System.out.printf("Count of Negative Integer is %.2f%n", (double) negative);

}

}

5)

import java.util.Scanner;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

double sum = 0;

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

int num = sc.nextInt();

sum += num;

}

double mean = sum / n;

System.out.printf("Array Mean Value is %.2f\n", mean);

sc.close();

}

}

6)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s=new Scanner(System.in);

int a =s.nextInt();

int []b=new int[a];

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

b[i]=s.nextInt();

}

int t=s.nextInt();

boolean g=false;

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

if(b[i]==t){

g=true;

}

}

if(g){

System.out.println(t+" is presented in an array.");

}else{

System.out.println(t+" is not presented in an array.");

}

}

}

7) import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String str = s.next();

char [] ch = str.toCharArray();

String rev="";

for(int i=ch.length-1;i>=0;i--){

rev += ch[i];

}

System.out.print(rev);

}

}

8)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

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 count=0;

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

boolean b=false;

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

if(a[i]==a[j]){

b=true;

}

}

if(!b){

count++;

}

}

if(count>1){

System.out.println("There are " + count +" distinct elements in the array.");

}else{

System.out.println("There are " + count +" distinct element in the array.");

}

}

}

9)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s=new Scanner(System.in);

int a=s.nextInt();

int []b=new int[a];

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

b[i]=s.nextInt();

}

int g=s.nextInt();

Arrays.sort(b);

System.out.print("The elements are in the order: ");

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

System.out.print(b[i]+" ");

}

System.out.println();

System.out.print("The Kth value is "+g+" and Largest elements are ");

for(int i=a-1;i>=a-g;i--){

System.out.print(b[i]+" ");

}

}

}

10)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String str = s.nextLine();

String r = str.replace(" ","");

System.out.println(r);

/\* Enter your code here. Read inputfrom STDIN. Print output to STDOUT. Your class should be named Solution. \*/

}

}

11)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s=new Scanner(System.in);

int a=s.nextInt();

int []b=new int[a];

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

b[i]=s.nextInt();

}

int sum=0;

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

if(b[i]>0){

sum+=(b[i]\*b[i]);

}

}

System.out.println(sum);

}

}

12)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

int length = s.nextInt();

int[] arr = new int[length];

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

arr[i] = s.nextInt();

}

List<Integer> evenPos = new ArrayList<>();

List<Integer> oddPos = new ArrayList<>();

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

if (i % 2 == 0) {

evenPos.add(arr[i]);

} else {

oddPos.add(arr[i]);

}

}

Collections.sort(evenPos);

Collections.sort(oddPos);

int secondLargestEven = evenPos.size() >= 2 ? evenPos.get(evenPos.size() - 2) : 0;

int secondSmallestOdd = oddPos.size() >= 2 ? oddPos.get(1) : 0;

int result = secondLargestEven + secondSmallestOdd;

System.out.println("Sum=" + result);

}

}

13)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int m = sc.nextInt();

int n = sc.nextInt();

int[][] accounts = new int[m][n];

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

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

accounts[i][j] = sc.nextInt();

}

}

int maxWealth = 0;

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

int currentWealth = 0;

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

currentWealth += accounts[i][j];

}

if (currentWealth > maxWealth) {

maxWealth = currentWealth;

}

}

System.out.println("Richest Customer Wealth is " + maxWealth);

}

}

14)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int[][] matrix = new int[n][n];

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

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

matrix[i][j] = sc.nextInt();

}

}

System.out.println("Array elements are:");

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

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

System.out.print(matrix[i][j] + " ");

}

System.out.println();

}

System.out.println("Transpose matrix is:");

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

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

System.out.print(matrix[i][j] + " ");

}

System.out.println();

}

}

}

15)

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int m = sc.nextInt();

int n = sc.nextInt();

int[][] matrix = new int[m][n];

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

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

matrix[i][j] = sc.nextInt();

}

}

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

int maxVal = matrix[0][col];

for (int row = 1; row < m; row++) {

if (matrix[row][col] > maxVal) {

maxVal = matrix[row][col];

}

}

System.out.println("Maximum value in column " + (col + 1) + " is " + maxVal);

}

}

}

16)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String str = s.nextLine();

String d = str.replaceAll("[aeiouAEIOU]","");

System.out.print(d);

/\* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. \*/

}

}

17)

import java.io.\*;

import java.util.\*;

public class Solution {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

String s1 = s.next();

String s2 = s.next();

String s3 = s1 + s2;

System.out.print(s3);

/\* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. \*/

}

}