1. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

long num = sc.nextLong();

if (num >= 1 && num <= 10000000) {

int count = String.valueOf(num).length();

System.out.println("The count of the given integer is: " + count);

} else {

System.out.println("Enter a Valid Input");

}

}

}

2. import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

if (n < 0 || n > 9) {

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

} else {

char ch = 'A';

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

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

System.out.print(ch + " ");

ch++;

}

System.out.println();

}

}

}

}

3.import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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

for (int s = n - i; s > 0; s--) {

System.out.print(" ");

}

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

System.out.print((char)(64 + j) + " ");

}

System.out.println();

}

for (int i = n - 1; i >= 1; i--) {

for (int s = n - i; s > 0; s--) {

System.out.print(" ");

}

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

System.out.print((char)(64 + j) + " ");

}

System.out.println();

}

}

}

4.import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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

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

if (i == 1 || i == n || j == 1 || j == n) {

System.out.print("\*");

} else {

System.out.print(" ");

}

}

System.out.println();

}

}

}

5.import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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

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

if (i == 1 || i == n || j == 1 || j == n) {

System.out.print("\*");

} else {

System.out.print(" ");

}

}

System.out.println();

}

}

}

6.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

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) {

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);

}

}

7.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int[] doors = new int[n];

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

doors[i] = sc.nextInt();

}

int target = sc.nextInt();

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);

}

}

}

8.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

String s = sc.next();

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;

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);

}

}

9.import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int positiveCount = 0;

int negativeCount = 0;

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

int num = sc.nextInt();

if (num > 0) {

positiveCount++;

} else if (num < 0) {

negativeCount++;

}

}

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

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

}

}

10.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int sum = 0;

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

int val = sc.nextInt();

if (val > 0) {

sum += val \* val;

}

}

System.out.println(sum);

}

}

11.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int[] arr = new int[n];

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

arr[i] = sc.nextInt();

}

int k = sc.nextInt();

Arrays.sort(arr);

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

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

System.out.print(arr[i]);

if (i < n - 1) System.out.print(" ");

}

System.out.println();

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

for (int i = n - 1; i >= n - k; i--) {

System.out.print(arr[i]);

if (i > n - k) System.out.print(" ");

}

}

}

12.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

int[] arr = new int[n];

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

arr[i] = sc.nextInt();

}

int searchElement = sc.nextInt();

boolean found = false;

for (int num : arr) {

if (num == searchElement) {

found = true;

break;

}

}

if (found) {

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

} else {

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

}

}

}

13.import java.util.\*;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt();

Set<Integer> distinctSet = new HashSet<>();

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

distinctSet.add(sc.nextInt());

}

int distinctCount = distinctSet.size();

if (distinctCount == 1) {

System.out.println("There are 1 distinct element in the array.");

} else {

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

}

}

}

14.import java.util.\*;

public class Main {

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++) {

sum += sc.nextInt();

}

double mean = sum / n;

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

}

}