**Reverse a String**

import java.util.Scanner;

public class ok{

public static void main (String[] args)

{

try{

Scanner sc=new Scanner(System.in);

System.out.println("Enter the String:");

String a = sc.next();

StringBuilder b =new StringBuilder(a).reverse();

System.out.println("The Reverse of the string is:" + b);

}

catch(Exception e){

System.out.println("Enter Only String");

}

}

}

**(OR)**

import java.util.Scanner;

public class ok {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

System.out.println("Enter the String:");

String a = s.next();

StringBuilder b = new StringBuilder(a).reverse();

System.out.println("The Reverse of the string is:" + b);

}

}

**String palindrome**

import java.util.Scanner;

public class Ok {

public static void main(String[] args) {

try {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the String:");

String a = sc.next();

StringBuilder b = new StringBuilder(a).reverse();

System.out.println("The Reverse of the string is: " + b);

// Check if the string is a palindrome

if (a.equals(b.toString())) {

System.out.println("The string is a palindrome.");

} else {

System.out.println("The string is not a palindrome.");

}

} catch (Exception e) {

System.out.println("Enter Only String");

}

}

}

**User name valid or not?**

import java.util.Scanner;

public class ok {

public static void main(String[] args) {

Scanner s = new Scanner(System.in);

System.out.println("Enter the two names :");

String s1 = s.nextLine();

String s2 = s.nextLine();

if (s1.equals(s2)) {

System.out.println("User name is valid");

} else {

System.out.println("User name is Invalid");

}

}

}

**Reverse a number**

import java.util.Scanner;

public class ok {

public static void main(String[] arg) {

Scanner sc = new Scanner(System.in);

int n = sc.nextInt(), re = 0, rem;

while (n != 0) {

rem = n % 10;

re = re \* 10 + rem;

n = n / 10;

}

System.out.println("The reversed number is:" + re);

}

}

**Reverse a number in Palindrome**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n, num, rem, reverse = 0;

System.out.print("Enter the n value: ");

n = scanner.nextInt();

num = n;

while (n != 0) {

rem = n % 10;

reverse = reverse \* 10 + rem;

n = n / 10;

}

if (num == reverse) {

System.out.println("Palindrome");

} else {

System.out.println("Not a Palindrome");

}

}

}

**Eligibility of vote**

import java.util.Scanner;

public class ok{

public static void main(String[]args)

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter your age:");

int age=sc.nextInt();

if(age<18){

System.out.println("your are not eligible to vote:");

}else{

System.out.println("your are eligible to vote:");

}

}

}

**Diamond**

import java.util.Scanner;

public class ok{

public static void main(String[]args)

{

Scanner sc= new Scanner(System.in);

System.out.print("");

int n=sc.nextInt();

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

{

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

System.out.print(" ");

}

for(int k=1;k<=2\*i-1;k++)

{

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

}

System.out.println();

}

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

{

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

System.out.print(" ");

}

for(int k=1;k<=2\*i-1;k++)

{

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

}

System.out.println();

}

}

}

**PascalTriangle**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the n value: ");

int n = sc.nextInt();

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

{

int c=1;

for(int j=0;j<=n-i;j++)

{

System.out.print(" ");

}

for(int k=0;k<=i;k++)

{

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

c=c\*(i-k)/(k+1);

}

System.out.println();

}

}

}

Or

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the row value: ");

int n = sc.nextInt();

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

int c = 1; // Reset num to 1 for each row

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

System.out.print(" ");

}

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

System.out.print(c + " "); // Print number followed by space

c = c \* (i - k) / (k + 1); // Update number using the formula

}

System.out.println();

}

sc.close();

}

}

**Simple intrest**

import java.util.Scanner;

class Main {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the principal: ");

double principal = input.nextDouble();

System.out.print("Enter the rate: ");

double rate = input.nextDouble();

System.out.print("Enter the time: ");

double time = input.nextDouble();

double interest = (principal \* time \* rate) / 100;

System.out.println("Principal: " + principal);

System.out.println("Interest Rate: " + rate);

System.out.println("Time Duration: " + time);

System.out.println("Simple Interest: " + interest);

input.close();

}

}

**Fibonacci series**

import java.util.Scanner;

public class ok {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the N value:");

int n = sc.nextInt(), a = 0, b = 1, c;

System.out.print(a+" "+b+" ");

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

{

c=a+b;

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

a=b;

b=c;

}

}

}

**Printing even sum in Fibonacci series**

import java.util.Scanner;

public class FibonacciSeries {

public static void main(String[] args) {

int n1 = 0, n2 = 1, n3, i, number;

int evenSum = 0;

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of elements: ");

number = scanner.nextInt();

System.out.print(n1 + " " + n2); // Printing the first two elements

for (i = 2; i < number; ++i) {

n3 = n1 + n2;

if (n3 % 2 == 0) { // Check if n3 is even

System.out.print(" " + n3);

evenSum += n3; // Add even number to evenSum

}

n1 = n2;

n2 = n3;

}

System.out.println("\nSum of even numbers in Fibonacci series: " + evenSum);

}

}

**Fibonacci using Recursion**

import java.util.Scanner;

public class Main {

public static int fibonacci(int n) {

if (n == 0)

return 0;

else if (n == 1)

return 1;

else

return fibonacci(n - 1) + fibonacci(n - 2);

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n;

System.out.print("Enter the n value: ");

n = scanner.nextInt();

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

int value = fibonacci(i);

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

}

}

}

**Factorial:**

import java.util.Scanner;

public class Factorial {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int number = scanner.nextInt();

int factorial = 1;

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

factorial \*= i;

}

System.out.println("Factorial of " + number + " is: " + factorial);

}

}

**Factorial Using recursion**

import java.util.Scanner;

public class Main {

public static int factorial(int n) {

if (n == 0)

return 1;

else

return n \* factorial(n - 1);

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int number, fact;

System.out.print("Enter the Number: ");

number = scanner.nextInt();

fact = factorial(number);

System.out.println("Factorial is: " + fact);

}

}

**Sum of the digits**

import java.util.Scanner;

public class ok {

public static void main(String[] arg){

Scanner sc=new Scanner(System.in);

System.out.print("Enter n value:");

int n=sc.nextInt(), sum=0,rem;

while(n!=0){

rem=n%10;

sum=sum+rem;

n=n/10;

}

System.out.println("Sum:"+sum);

}

}

**Amstrong Number:**

import java.util.Scanner;

public class ok {

public static void main(String[] arg) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter n value:");

int n = sc.nextInt(), sum = 0, rem, t;

t = n;

while (t != 0) {

rem = t % 10;

sum = sum + (rem \* rem \* rem);

t = t / 10;

}

if (sum == n) {

System.out.println("Amstrong" );

} else {

System.out.println("Not");

}

}

}

**Matrics Addition**

import java.util.Scanner;

public class ok{

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter number of rows in first matrix: ");

int rows1 = scanner.nextInt();

System.out.print("Enter number of columns in first matrix: ");

int cols1 = scanner.nextInt();

System.out.print("Enter number of rows in second matrix: ");

int rows2 = scanner.nextInt();

System.out.print("Enter number of columns in second matrix: ");

int cols2 = scanner.nextInt();

if (rows1 != rows2 || cols1 != cols2) {

System.out.println("Matrix addition is not possible.");

return;

}

int[][] matrix1 = new int[rows1][cols1];

int[][] matrix2 = new int[rows2][cols2];

int[][] sumMatrix = new int[rows1][cols1];

System.out.println("Enter elements of first matrix:");

for (int i = 0; i < rows1; i++) {

for (int j = 0; j < cols1; j++) {

matrix1[i][j] = scanner.nextInt();

}

}

System.out.println("Enter elements of second matrix:");

for (int i = 0; i < rows2; i++) {

for (int j = 0; j < cols2; j++) {

matrix2[i][j] = scanner.nextInt();

}

}

System.out.println("First Matrix:");

printMatrix(matrix1);

System.out.println("Second Matrix:");

printMatrix(matrix2);

// Perform matrix addition

for (int i = 0; i < rows1; i++) {

for (int j = 0; j < cols1; j++) {

sumMatrix[i][j] = matrix1[i][j] + matrix2[i][j];

}

}

System.out.println("Matrix after addition:");

printMatrix(sumMatrix);

}

public static void printMatrix(int[][] matrix) {

for (int[] row : matrix) {

for (int num : row) {

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

}

System.out.println();

}

}

}

**RightTrianglePattern**

import java.util.Scanner;

public class RightTrianglePattern {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the number of rows: ");

int rows = scanner.nextInt();

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

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

System.out.print(" ");

}

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

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

}

System.out.println();

}

}

}

**Rectangle Pattern**

import java.util.Scanner;

public class ok{

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.println("Enter the n value:");

int n=sc.nextInt();

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

{

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

{

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

}

System.out.println();

}

}

}

**Left triangle nd numbers printing**

import java.util.Scanner;

public class ok{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

System.out.print("Enter the n value:");

int n=sc.nextInt();

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

{

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

{

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

}

System.out.println();

}

}

}

**Perfect number:**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n, i, sum = 0;

System.out.print("Enter the n value: ");

n = scanner.nextInt();

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

if (n % i == 0)

sum += i;

}

if (sum == n)

System.out.println("Perfect num");

else

System.out.println("Not a perfect num");

}

}

**Prime or Not**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n, i, count = 0;

System.out.print("Enter the number n: ");

n = scanner.nextInt();

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

if (n % i == 0) {

count++;

}

}

if (count > 2) {

System.out.println("Composite");

} else {

System.out.println("Prime number");

}

}

}

**To print all the composite numbers between a and b**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int A, B;

System.out.print("Enter the values of A and B: ");

A = scanner.nextInt();

B = scanner.nextInt();

System.out.println("Composite numbers between " + A + " and " + B + ":");

for (int i = A; i <= B; i++) {

if (isComposite(i)) {

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

}

}

}

public static boolean isComposite(int num) {

if (num <= 1) return false;

for (int i = 2; i <= Math.sqrt(num); i++) {

if (num % i == 0) return true;

}

return false;

}

}

**Prime(1 to n)**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n;

System.out.print("Enter the number n: ");

n = scanner.nextInt();

for (int i = 2; i <= n; i++)

{

int count = 0;

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

{

if (i % j == 0) {

count++;

}

}

if (count == 2) {

System.out.println(i);

}

}

}

}

**Swap b/w 2 numbers**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int a, b, c, temp;

System.out.println("Enter three numbers a, b, and c:");

a = scanner.nextInt();

b = scanner.nextInt();

c = scanner.nextInt();

temp = a;

a = b;

b = c;

c = temp;

System.out.println("After swapping:");

System.out.println("a = " + a);

System.out.println("b = " + b);

System.out.println("c = " + c);

}

}

**Pythagorean triplets**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int a, b, c, n;

System.out.print("Enter the n value: ");

n = scanner.nextInt();

for (a = 1; a <= n; a++) {

for (b = a; b <= n; b++) {

for (c = b; c <= n; c++) {

if (a \* a + b \* b == c \* c) {

System.out.println("(" + a + "," + b + "," + c + ")");

}

}

}

}

}

}

**Leap or not**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int year, x;

System.out.print("Enter a year: ");

year = scanner.nextInt();

if (year % 4 == 0) {

System.out.println("It is a leap year");

} else {

System.out.println("It is not a leap year");

}

x = year % 4;

if (x != 0) {

System.out.println("Previous leap year: " + (year - x));

} else {

System.out.println("Next leap year: " + (year + x));

}

}

}

**GCD (Greatest Common Divisor) and LCM (Least Common Multiple) of two numbers:**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n1, n2, temp, gcd, lcm;

System.out.print("Enter n1 and n2 values: ");

n1 = scanner.nextInt();

n2 = scanner.nextInt();

int a = n1;

int b = n2;

while (b != 0) {

temp = b;

b = a % b;

a = temp;

}

gcd = a;

lcm = (n1 \* n2) / gcd;

System.out.println("GCD of " + n1 + " and " + n2 + " = " + gcd);

System.out.println("LCM of " + n1 + " and " + n2 + " = " + lcm);

}

}

**Floyad pattern**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n, i, j, k = 1;

System.out.print("Enter the n value: ");

n = scanner.nextInt();

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

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

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

k++;

}

System.out.println();

}

}

}

**HCF of 2 numbers**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int n1, n2, hcf = 1;

System.out.print("Enter the n1 and n2 values: ");

n1 = scanner.nextInt();

n2 = scanner.nextInt();

for (int i = 1; i <= n1 && i <= n2; ++i) {

if (n1 % i == 0 && n2 % i == 0) {

hcf = i;

}

}

System.out.println("HCF: " + hcf);

}

}

**Area of triangle**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int b, h;

float area;

System.out.print("Enter the base and height value: ");

b = scanner.nextInt();

h = scanner.nextInt();

area = 0.5f \* b \* h;

System.out.printf("Area of Triangle: %.2f", area);

}

}

**Area of Circle**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int r;

float area;

float pi = 3.145f; // or you can use Math.PI for a more accurate value of pi

System.out.print("Enter the radius r: ");

r = scanner.nextInt();

area = pi \* r \* r;

System.out.println("Area of circle is: %.4f", area);

}

}

**to print the special characters separately and print number of Special characters in the line**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the text: ");

String text = scanner.nextLine();

int specialCount = 0;

char[] characters = text.toCharArray(); // Convert the string to a character array

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

char ch = characters[i];

if ((ch < 'A' || ch > 'Z') && (ch < 'a' || ch > 'z') && (ch < '0' || ch > '9')) {

System.out.print(ch);

specialCount++;

}

}

System.out.println("\nTotal special characters: " + specialCount);

}

}

**Vote eligibility**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the age: ");

int age = sc.nextInt();

if (age >= 18) {

System.out.println("You are eligible to vote.");

} else {

int yearleft = 18 - age;

System.out.println("You are not eligible to vote.You can vote after " + yearleft + "years");

}

}

}

Enter the age: 6

You are not eligible to vote.You can vote after 12years

**Sum of digits:**

import java.util.Scanner;

public class Main{

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the n value:");

int n=sc.nextInt();

int sum=0,rem;

while(n!=0)

{

rem=n%10;

sum=sum+rem;

n=n/10;

}

System.out.println("Sum is :"+sum);

}

}

**Amstrong number:**

import java.util.Scanner;

public class Main{

public static void main(String[] args){

Scanner sc=new Scanner(System.in);

System.out.print("Enter n value:");

int n=sc.nextInt();

int t ,sum=0,rem;

t=n;

while(t!=0)

{

rem=t%10;

sum=sum+(rem\*rem\*rem);

t=t/10;

}

if(sum==n){

System.out.println("Amstrong");

}else{

System.out.println(" Not Amstrong");

}

}

}

**Skiping numbers**

import java.util.Scanner;

public class SkipNumbers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of M: ");

int M = scanner.nextInt();

System.out.print("Enter the value of N: ");

int N = scanner.nextInt();

System.out.print("Enter the value of K: ");

int K = scanner.nextInt();

// Print the numbers from M to N, skipping K numbers in between

for (int i = M; i <= N; i += K) {

System.out.print(i);

if (i + K <= N) {

System.out.print(", ");

}

}

System.out.println();

}

}

import java.util.Scanner;

public class MatrixAddition {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

// Input matrix dimensions (assuming both matrices have the same dimensions)

int rows = 2;

int columns = 2;

// Initialize matrices

int[][] mat1 = new int[rows][columns];

int[][] mat2 = new int[rows][columns];

// Input values for Mat1

System.out.println("Enter values for Mat1:");

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

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

mat1[i][j] = scanner.nextInt();

}

}

// Input values for Mat2

System.out.println("Enter values for Mat2:");

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

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

mat2[i][j] = scanner.nextInt();

}

}

// Create a new matrix to store the sum

int[][] matSum = new int[rows][columns];

// Compute the sum of matrices

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

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

matSum[i][j] = mat1[i][j] + mat2[i][j];

}

}

// Print the result

System.out.println("Mat Sum =");

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

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

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

}

System.out.println();

}

}

}

import java.util.regex.\*;

public class Main {

public static void main(String[] args) {

String str = "geeks01for02geeks03!!!";

int count = 0;

// Regular expression to match special characters

Pattern p = Pattern.compile("[^A-Za-z0-9 ]");

Matcher m = p.matcher(str);

System.out.println("Special characters: ");

while (m.find()) {

System.out.print(m.group() + " ");

count++;

}

System.out.println("\nNumber of special characters: " + count);

}

}

**Median level**

**Max and Min**

import java.util.Scanner;

public class MaxMinDifference {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the number of elements in the array:");

int n = scanner.nextInt();

int[] a = new int[n];

System.out.println("Enter the elements of the array:");

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

a[i] = scanner.nextInt();

}

int max = a[0];

int min = a[0];

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

if (a[i] >= max) {

max = a[i];

}

if (a[i] <= min) {

min = a[i];

}

}

int diff = max - min;

int sum=max+min;

System.out.println("Max element: " + max);

System.out.println("Min element: " + min);

System.out.println("Difference: " + diff);

System.out.println("Sum: " + sum);

}

}

**Duplicate**

import java.util.Scanner;

public class DuplicateNumbers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the number of elements in the array:");

int n = scanner.nextInt();

int[] a = new int[n];

System.out.println("Enter the elements of the array:");

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

a[i] = scanner.nextInt();

}

System.out.println("Duplicate numbers:");

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

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

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

System.out.println(a[j]);

}

}

}

}

}**ATM**

import java.util.Scanner;

public class ATMCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the number of 2000 denomination notes:");

int note2000 = scanner.nextInt();

System.out.println("Enter the number of 500 denomination notes:");

int note500 = scanner.nextInt();

System.out.println("Enter the number of 200 denomination notes:");

int note200 = scanner.nextInt();

System.out.println("Enter the number of 100 denomination notes:");

int note100 = scanner.nextInt();

int totalAmount = note2000 \* 2000 + note500 \* 500 + note200 \* 200 + note100 \* 100;

System.out.println("The total amount available in the ATM is: " + totalAmount);

}

}

**INCOME TAX:**

import java.util.Scanner;

public class TaxCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the income:");

double income = scanner.nextDouble();

double tax = 0;

if (income <= 150000) {

tax = 0;

} else if (income > 150000 && income <= 300000) {

tax = income \* 0.10;

} else if (income > 300000 && income <= 500000) {

tax = 15000 + (income - 300000) \* 0.20;

} else if (income > 500000) {

tax = 75000 + (income - 500000) \* 0.30;

}

System.out.println("The tax is: " + tax);

}

}

**Perfect square root;**

import java.util.Scanner;

public class SquareRoot {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a perfect square number: ");

int number = scanner.nextInt();

scanner.close();

double squareRoot = Math.sqrt(number);

System.out.println("Square root of " + number + ": " + squareRoot);

System.out.println("Positive value: " + squareRoot);

System.out.println("Negative value: " + (-squareRoot));

}

}

**N perefect numbers**

import java.util.Scanner;

public class PerfectNumbers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n: ");

int n = scanner.nextInt();

scanner.close();

int count = 0;

int num = 1;

while (count < n) {

int sum = 0;

for (int i = 1; i <= num / 2; i++) {

if (num % i == 0) {

sum += i;

}

}

if (sum == num) {

System.out.println(num + " is a perfect number");

count++;

}

num++;

}

}

}

**\* encounter**

import java.util.Scanner;

public class CharacterCounter {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int uppercaseCount = 0;

int lowercaseCount = 0;

int digitCount = 0;

int characterCount = 0;

System.out.println("Enter characters. Type '\*' to stop.");

while (true) {

char c = scanner.next().charAt(0);

characterCount++;

if (c == '\*') {

break;

}

if (Character.isUpperCase(c)) {

uppercaseCount++;

} else if (Character.isLowerCase(c)) {

lowercaseCount++;

} else if (Character.isDigit(c)) {

digitCount++;

}

}

System.out.println("Number of uppercase characters: " + uppercaseCount);

System.out.println("Number of lowercase characters: " + lowercaseCount);

System.out.println("Number of digits: " + digitCount);

System.out.println("Total number of characters: " + characterCount);

scanner.close();

}

}

**-1 encounters**

import java.util.Scanner;

public class AverageNumbers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int positiveCount = 0;

int negativeCount = 0;

double positiveSum = 0;

double negativeSum = 0;

System.out.print("Enter a number (type -1 to stop): ");

int num = scanner.nextInt();

while (num != -1) {

if (num > 0) {

positiveSum += num;

positiveCount++;

} else if (num < 0) {

negativeSum += num;

negativeCount++;

}

System.out.print("Enter a number (type -1 to stop): ");

num = scanner.nextInt();

}

if (positiveCount > 0) {

double positiveAverage = positiveSum / positiveCount;

System.out.println("The average of positive numbers is: " + positiveAverage);

} else {

System.out.println("No positive numbers were entered.");

}

if (negativeCount > 0) {

double negativeAverage = negativeSum / negativeCount;

System.out.println("The average of negative numbers is: " + negativeAverage);

} else {

System.out.println("No negative numbers were entered.");

}

scanner.close();

}

}