1.

import java.io.\*;

public class Grade

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

double pcent;

String grade = "";

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

pcent = Double.parseDouble(br.readLine());

if(pcent>=75.0&&pcent<=100.0)

grade = "Passed with star";

else if(pcent>=60.0&&pcent<=74.0)

grade = "1st Division";

else if(pcent>=40.0&&pcent<=59.0)

grade = "2nd Division";

else if(pcent<40.0&&pcent>=0)

grade = "Failed";

else

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

System.out.println("Grade is = " + grade);

}

}

2.

import java.io.\*;

public class Series

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int N,i = 0;

double sum = 0.0;

System.out.println("Enter N:");

N = Integer.parseInt(br.readLine());

for(i=3;i<=N;i++)

{

sum = sum + Math.pow(i,3);

}

System.out.println("The sum of the series is "+ sum);

}

}

3.

import java.io.\*;

public class Evaluation

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int n, absn = 0;

double sqrt, power = 0.0;

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

n = Integer.parseInt(br.readLine());

absn = Math.abs(n);

System.out.println("i) Absolute value of n is "+ absn);

sqrt = Math.sqrt(n);

System.out.println("ii) Square root of n is " + sqrt);

power = Math.pow(n,n);

System.out.println("iii) Power: n to the power n is "+ power);

}

}

4.

import java.io.\*;

public class Vowel

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

char ch;

System.out.println("Enter the character");

ch = (char)System.in.read();

char c = ch;

ch = Character.toUpperCase(ch);

switch(ch)

{

case 'A':

System.out.println(c + " is a vowel");

break;

case 'E':

System.out.println(c + " is a vowel");

break;

case 'I':

System.out.println(c + " is a vowel");

break;

case 'O':

System.out.println(c + " is a vowel");

break;

case 'U':

System.out.println(c + " is a vowel");

break;

default:

System.out.println(c + " is not a vowel");

break;

}

}

}

5.

import java.io.\*;

public class Library

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int days = 0;

double charge = 0.0;

int n,i;

System.out.println("Enter the number of people:");

n = Integer.parseInt(br.readLine());

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

{

System.out.println("For customer " + i);

System.out.println("Enter the number of days:");

days = Integer.parseInt(br.readLine());

if(days<5)

charge = 1.00;

else if(days>=5&&days<8)

charge = 2.00;

else

charge = 3.50;

System.out.println("The charge for the issued book for "+ days + " days is Rs. "+ charge+" \n");

}

}

}

6.

import java.io.\*;

public class Overload

{

int add(int a[])

{

int n = a.length;

int sum = 0;

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

{

sum = sum + a[i];

}

return sum;

}

int add(int a[],char c)

{

int sum = 0;

int n = a.length;

if(c=='O')

{

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

{

if(a[i]%2!=0)

sum=sum+a[i];

}

}else if(c=='E')

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

{

if(a[i]%2==0)

sum=sum+a[i];

}

return sum;

}

}

7.

import java.io.\*;

public class AltChar

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String S1,S2,S3 = "";

int n,i;

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

S1 = br.readLine();

S2 = br.readLine();

n = S1.length();

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

{

S3 = S3 + S1.charAt(i) + S2.charAt(n-i-1);

}

System.out.println(S3);

}

}

8.

import java.io.\*;

public class NoOfWords

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String s;

int n,i;

int twoctr=0;

int threectr=0;

int fourctr=0;

String w = "";

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

s = br.readLine();

s = s + " ";

n = s.length();

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

{

char ch = s.charAt(i);

if(ch!=' ')

w = w + ch;

else

{

int x = w.length();

switch(x)

{

case 2:

twoctr = twoctr+1;

break;

case 3:

threectr = threectr+1;

break;

case 4:

fourctr = fourctr+1;

break;

default:

break;

}

w = "";

}

}

System.out.println("Number of two letter words = " + twoctr);

System.out.println("Number of three letter words = " + threectr);

System.out.println("Number of four letter words = " + fourctr);

}

}

9.

import java.io.\*;

public class KesarDiscount

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int amt,n,i;

double d, dAmt = 0.0,netAmt;

String name;

System.out.println("Enter the number of customers:");

n = Integer.parseInt(br.readLine());

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

{

System.out.println("Enter the name of the customer:");

name = br.readLine();

System.out.println("Enter the ticket amount:");

amt = Integer.parseInt(br.readLine());

if(amt<=25000)

{

d = 2.0;

dAmt = d/100\*amt;

}else if(amt>25000&&amt<=35000)

{

d = 10.0;

dAmt = d/100\*amt;

}else if(amt>35000&&amt<=55000)

{

d = 12.0;

dAmt = d/100\*amt;

}else if(amt>55000&&amt<=70000)

{

d = 16.0;

dAmt = d/100\*amt;

}else

{

d = 18.0;

dAmt = d/100\*amt;

}

netAmt = amt - dAmt;

System.out.println("Slno.\t Name \t Ticket charge \t Discount \t Net amount");

System.out.println(i+" \t " + name +" \t"+ amt +" \t\t"+ d +"\t\t"+ netAmt);

}

}

}

10.

import java.io.\*;

public class Arrays

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int rollno[] = new int[50];

int sub1[] = new int[50];

int sub2[] = new int[50];

int sub3[] = new int[50];

void marks(int rollno[],int sub1[],int sub2[],int sub3[])

{

int i;

double sum[] = new double[50];

for(i=0;i<50;i++)

{

sum[i] = (sub1[i]+sub2[i]+sub3[i])/3;

System.out.println("Average marks obtained by " + rollno[i] + " is" + sum[i]);

}

System.out.println();

for(i=0;i<50;i++)

{

if(sum[i]>85.0)

System.out.println("Average marks obtained by " + rollno[i] + " is " + sum[i] + " which is above 85");

}

System.out.println();

for(i=0;i<50;i++)

{

if(sum[i]<45.0)

System.out.println("Average marks obtained by " + rollno[i] + " is " + sum[i] + " which is below 45");

}

}

}

11.

import java.io.\*;

public class Longest

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String s, w = "";

int i,maxl=0;

int l = 0;

char ch;

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

s = br.readLine();

s = s+" ";

for(i=0;i<s.length();i++)

{

ch = s.charAt(i);

if(ch!=' ')

w = w+ch;

else

{

l = w.length();

maxl = (l>maxl)?l:maxl;

w = "";

}

}

System.out.println("The number of characters in the longest word= " + maxl);

}

}

12.

import java.io.\*;

public class Shapes

{

void polygon(int n,char ch)

{

int i,k = 0;

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

{

for(k=0;k<n;k++)

{

System.out.print(ch);

}

System.out.println();

}

}

void polygon(int x,int y)

{

int i,k = 0;

for(i=0;i<y;i++)

{

for(k=0;k<x;k++)

{

System.out.print("@");

}

System.out.println();

}

}

void polygon()

{

int s = 39;

int i,k,l;

for(i=1;i<=9;i+=2)

{

for(l=1;l<=s;l++)

System.out.print(" ");

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

{

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

}

s=s-1;

System.out.println();

}

}

}

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1.

import java.io.\*;

public class Employee

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int empcode[] = new int[10];

double sal[] = new double[10];

double spl[] = new double[10];

double totsal[] = new double[10];

int i;

double tots = 0.0;

double tota = 0.0;

for(i=0;i<10;i++)

{

System.out.println("Employee "+ (i+1));

System.out.println("Enter employee code:");

empcode[i] = Integer.parseInt(br.readLine());

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

sal[i] = Double.parseDouble(br.readLine());

System.out.println("Enter the special allowance granted:");

spl[i] = Double.parseDouble(br.readLine());

totsal[i] = sal[i]+spl[i];

}

System.out.println("Employee code\tSalary\t\tAllowance\tTotal Salary\tAnnual Salary");

for(i=0;i<10;i++)

{

System.out.println(empcode[i]+"\t\t"+sal[i]+"\t\t"+spl[i]+"\t\t"+totsal[i]+"\t\t"+totsal[i]\*12);

tots = tots + totsal[i];

tota = tota + spl[i];

}

System.out.println("Total salary= " + tots);

System.out.println("Total allowance= " + tota);

}

}

2.

public class Tax

{

void showtax(double tax[])

{

int i;

double sum = 0.0;

double avg;

double min, max;

for(i=0;i<8;i++)

{

sum = sum + tax[i];

}

avg = sum/8;

System.out.println("Average tax paid is " + avg);

min=tax[0];max=tax[0];

for(i=0;i<8;i++)

{

if(tax[i]>max)

max = tax[i];

if(tax[i]<min)

min = tax[i];

}

System.out.println("Maximum tax paid is " + max);

System.out.println("Minimum tax paid is " + min);

}

}

3.

import java.io.\*;

public class BubbleSort

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int num[] = new int[10];

int n[] = new int[10];

int i,k,t;

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

for(i=0;i<10;i++)

{

num[i] = Integer.parseInt(br.readLine());

n[i] = num[i];

}

//Bubble Sort

for(i=0;i<=8;i++)

{

for(k=0;k<=8-i;k++)

{

if(num[k]<num[k+1])

{

t = num[k];

num[k] = num[k+1];

num[k+1] = t;

}

}

}

System.out.print("Array before sorting: ");

for(i=0;i<10;i++)

{

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

}

System.out.println();

System.out.print("Array after sorting: ");

for(i=0;i<10;i++)

{

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

}

}

}

4.

import java.io.\*;

public class Phone

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

long number[] = new long[8];

int i,k,high,low,mid;

long t,phone;

System.out.println("Enter 8 phone numbers: ");

for(i=0;i<8;i++)

{

number[i] = Long.parseLong(br.readLine());

}

//Bubble Sort

for(i=0;i<=6;i++)

{

for(k=0;k<=6-i;k++)

{

if(number[k]> number[k+1])

{

t = number[k];

number[k] = number[k+1];

number[k+1] = t;

}

}

}

System.out.println("Enter the phone number to be found: ");

phone= Long.parseLong(br.readLine());

System.out.print("Sorted array: ");

for(i=0;i<8;i++)

{

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

}

//Binary search

low=0;high=7;

while(low<=high)

{

mid = (low+high)/2;

if(phone == number[mid])

{

System.out.println("Phone number found at subscript " + mid);

break;

}

if(phone > number[mid])

low = mid+1;

if(phone< number[mid])

high = mid-1;

}

if(low>high)

System.out.println("Phone number not found in the list, search unsuccessful");

}

}

5.

import java.io.\*;

public class CycleSpeed

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

double speed[] = new double[10];

int i,ctr1=0,ctr2=0,ctr3=0,ctr4=0,ctr5=0;

System.out.println("Enter the average speeds of 10 cyclists:");

for(i=0;i<10;i++)

{

speed[i] = Double.parseDouble(br.readLine());

}

for(i=0;i<10;i++)

{

if(speed[i]>=5.0&&speed[i]<=20.0)

ctr1 = ctr1+1;

else if(speed[i]>=21.0&&speed[i]<=50.0)

ctr2 = ctr2+1;

else if(speed[i]>=51.0&&speed[i]<=75.0)

ctr3 = ctr3+1;

else if(speed[i]>=76.0&&speed[i]<=89.0)

ctr4 = ctr4+1;

else if(speed[i]>=90.0&&speed[i]<=100.0)

ctr5 = ctr5+1;

}

System.out.println("Average speed(km/hr)\tNumber of cyclists");

System.out.println("5- 20\t\t\t\t"+ ctr1);

System.out.println("21- 50\t\t\t\t"+ ctr2);

System.out.println("51- 75\t\t\t\t"+ ctr3);

System.out.println("76- 89\t\t\t\t"+ ctr4);

System.out.println("90- 100\t\t\t\t"+ ctr5);

}

}

6.

import java.io.\*;

public class StringPattern

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String s;

int i,n,k;

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

s = br.readLine();

s = s.toLowerCase();

n = s.length();

for(i=n-1;i>=0;i--)

{

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

{

System.out.print(s.charAt(k));

}

System.out.println();

}

}

}

7.

import java.io.\*;

public class Characters

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String s;

int i,n,ctr1=0,ctr2=0,ctr3=0;

char c;

System.out.println("Enter a string:");

s = br.readLine();

n = s.length();

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

{

c = s.charAt(i);

if(c>='a'&&c<='z')

ctr1 = ctr1+1;

else if(c>='A'&&c<='Z')

ctr2 = ctr2+1;

else if(c>='1'&&c<='9')

ctr3 = ctr3+1;

else

continue;

}

System.out.println("Number of uppercase letters= " + ctr2);

System.out.println("Number of lowercase letters= " + ctr1);

System.out.println("Number of digits= " + ctr3);

}

}

8.

import java.io.\*;

public class Arrange

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String cars[] = new String[5];

String c[] = new String[5];

String t = "";

int i,k;

System.out.println("Enter the names of 5 cars: ");

for(i=0;i<5;i++)

{

cars[i] = br.readLine();

c[i] = cars[i];

}

//Bubble Sort

for(i=0;i<=3;i++)

{

for(k=0;k<=3-i;k++)

{

if(cars[k].compareTo(cars[k+1])<0)

{

t = cars[k];

cars[k] = cars[k+1];

cars[k+1] = t;

}

}

}

System.out.println("The unsorted array: ");

for(i=0;i<5;i++)

{

System.out.println(c[i]);

}

System.out.println("The sorted array(in reverse-alphabetical order): ");

for(i=0;i<5;i++)

{

System.out.println(cars[i]);

}

}

}

9.

import java.io.\*;

public class arrangeletters

{

void formalletters(String S)

{

char ch;

int av,i,l;

System.out.println("Original word= " + S);

S = S.toUpperCase();

System.out.println("Word in capitals= " + S);

l = S.length();

System.out.print("Word after sorting= ");

for(av=65;av<=90;av++)

{

for(i=0;i<l;i++)

{

ch = S.charAt(i);

if(ch == (char)av)

System.out.print(ch);

}

}

}

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String S1;

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

S1 = br.readLine();

arrangeletters obj = new arrangeletters();

obj.formalletters(S1);

}

}

10.

import java.io.\*;

public class Ball

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int c=0,ans=1;

String S;

while(ans==1)

{

System.out.println("Enter a string:");

S = br.readLine();

if(S.endsWith("ball"))

{

System.out.println(S);

c=c+1;

}

System.out.println("Do you wish to continue? Press 1 for YES and 0 for NO");

ans = Integer.parseInt(br.readLine());

}

System.out.println("Number of words which end with 'ball'= " + c);

}

}

11.

import java.io.\*;

public class OppCase

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String s1,s2="";

int i,av,n;

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

s1 = br.readLine();

n = s1.length();

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

{

av = (int)s1.charAt(i);

if(av>=65&&av<=90)

av = av + 32;

else if(av>=97&&av<=122)

av = av - 32;

s2 = s2+(char)av;

}

System.out.println("Original name: " + s1);

System.out.println("New name: " + s2);

}

}

12.

import java.io.\*;

public class Initials

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String name, initials;

int space1,space2;

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

name = br.readLine();

name = name.trim();

space1 = name.indexOf(' ');

space2 = name.lastIndexOf(' ');

initials = name.charAt(0)+". "+name.charAt(space1+1)+"."+name.substring(space2);

System.out.println(initials);

System.out.println("Number of letters in the original String: "+(name.length()-2));

System.out.println("Number of letters in the String with initials: "+(initials.length()-4));

}

}

13.

import java.io.\*;

public class interchange

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String S;

interchange()

{

S = "";

}

void accept()throws IOException

{

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

S = br.readLine();

System.out.println("String before interchanging: " + S);

}

void change(interchange s)

{

String t;

t = S;

S = s.S;

s.S = t;

}

void display()

{

System.out.println("String after interchanging: " + S);

}

public static void main(String args[])throws IOException

{

interchange I1 = new interchange();

interchange I2 = new interchange();

I1.accept();

I2.accept();

I1.change(I2);

I1.display();

I2.display();

}

}

14.

public class Vowels

{

int countvowels(String str,char ch)

{

int i,ctr=0;

ch = Character.toUpperCase(ch);

if(ch == 'A'||ch == 'E'||ch == 'I'||ch == 'O'||ch == 'U')

{

for(i=0;i<str.length();i++)

{

if(str.charAt(i)==ch)

ctr = ctr+1;

}

return ctr;

}

else

return -1;

}

}

15.

import java.util.\*;

public class Maximum

{

int findmax(int n1,int n2)

{

if(n1>n2)

return n1;

else if(n1==n2)

return 0;

else

return n2;

}

int findmax(int n1,int n2,int n3)

{

int max = 0;

if(n1>n2&&n1>n3)

max = n1;

else if(n2>n3&&n2>n1)

max = n2;

else if(n3>n1&&n3>n2)

max = n3;

else if(n3==n1&&n1==n2)

max = 0;

return max;

}

public static void main(String args[])throws IOException

{

Scanner input = new Scanner(System.in);

System.out.println("Enter x,y and z: ");

int x = input.nextInt();

int y = input.nextInt();

int z = input.nextInt();

Maximum obj = new Maximum();

System.out.println(obj.findmax(x,y));

System.out.println(obj.findmax(x,y,z));

}

}

16.

import java.io.\*;

public class Neon

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int number,square,digit,sum=0;

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

number = Integer.parseInt(br.readLine());

square = (int)Math.pow(number,2);

while(square>0)

{

digit = square%10;

sum = sum + digit;

square = square/10;

}

if(sum==number)

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

else

System.out.println(number + " is not a neon number");

}

}

17.

public class Function

{

public static void main(String args[])

{

double x;

int z;

for(z=-4;z<=4;z++)

{

x = (Math.pow(z,3)+(2\*z))/(z+1);

System.out.println(x);

}

}

}

18.

import java.io.\*;

public class Merge

{

public static void main(String args[])throws IOException

{

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

int s1,s2,s3,s,ctr=0;

System.out.println("Enter s1 and s2: ");

s1 = Integer.parseInt(br.readLine());

s2 = Integer.parseInt(br.readLine());

s = s2;

while(s2>0)

{

ctr++;

s2 = s2/10;

}

s3 =(int)(s1\*(Math.pow(10,ctr)))+s;

System.out.println("s1= "+s1);

System.out.println("s2= "+s);

System.out.println("s3= "+s3);

}

}