//Any year is entered through the keyboard, write a program to

//determine whether the year is leap or not. Use the logical operators

//&& and ||.

import java.util.\*;

class Logical\_leap

{

public static void mian(String[]args)

{

Scanner sc=new Scanner(System.in);

System.out.print("Enter any Year=");

int Year=sc.nextInt();

if((Year%4==0 || Year%400==0 ) && Year%3!=0)

{

System.out.println("This year is Leap year");

}

else

System.out.println("This year is not Leap year");

}

}

/\*(2) Any character is entered through the keyboard, write a program to

determine whether the character entered is a capital letter, a small

case letter, a digit or a special symbol.

The following table shows the range of ASCII values for various

characters:

Characters ASCII Values

A – Z 65 – 90

a – z 97 – 122

0 – 9 58 - 64

special symbols\*/

import java.util.\*;

class Asc\_values

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter any character : ");

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

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

System.out.println("Entered character is in Upper Case.");

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

System.out.println("Entered character is in lower case.");

else if(c>=48 && c<=57)

System.out.println("Entered character is digit.");

else if((c>=0 && c<=48) || (c>=58 && c<=64) || (c>=91 && c<=96))

System.out.println("Entered character is special symbol.");

}

}

/\*If the three sides of a triangle are entered through the keyboard,

write a program to check whether the triangle is valid or not. The

triangle is valid if the sum of two sides is greater than the largest of

the three sides.\*/

import java.util.\*;

class Valid\_Triangle

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter first side of a triangle : ");

int S1 = sc.nextInt();

System.out.print("Enter second side of a triangle : ");

int S2 = sc.nextInt();

System.out.print("Enter first third of a triangle : ");

int S3 = sc.nextInt();

if(S1+S2>S3 || S1+S3>S2 || S2+S3>S1)

System.out.println("It's a valid Triangle");

else

System.out.println("It's not a valid Triangle");

}

}

/\*4) If the three sides of a triangle are entered through the keyboard,

write a program to check whether the triangle is isosceles,

equilateral, scalene or right angled triangle.

(5) In boxing the weight class of a boxer is decided as per the following

table. Write a program that receives weight as input and prints out

the boxer’s weight class.

Boxer Class Weight in Pounds

Flyweight < 115

Bantamweight 115 - 121

Featherweight 122 - 153

Middleweight 154 – 189

Heavyweight >= 190\*/

import java.util.\*;

class Triangle\_Type

{

public static void main(String[]args)

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter side 1 : ");

int a = sc.nextInt();

System.out.print("Enter side 2 : ");

int b = sc.nextInt();

System.out.print("Enter side 3 : ");

int c = sc.nextInt();

if(a<b+c && b<a+c && c<a+b)

{

if(a==b && b==c)

{

System.out.println("Equilateral triangle");

}

else if(a==b || b==c || c==a)

{

System.out.println("Isosceles triangle");

}

else

System.out.println("Scalene triangle");

}

else

System.out.println("not a triangle");

}

}

/\*(6) Using conditional operators determine:

(1) Whether the character entered through the keyboard is a

lower case alphabet or not.

(2) Whether a character entered through the keyboard is a special

symbol or not.\*/

import java.util.\*;

class Lower\_Case

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter any character : ");

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

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

System.out.println("Entered character is in lower case.");

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

System.out.println("Entered character is not lower case.");

else if((c>=0 && c<=48) || (c>=58 && c<=64) || (c>=91 && c<=96))

System.out.println("Entered character is special symbol.");

else

System.out.println("Enter alphabet or symbol");

}

}

/\*7 Write a Java program to check whether the triangle is equilateral, isosceles or scalene triangle.\*/

import java.util.\*;

class Triangle\_Type

{

public static void main(String[]args)

{

Scanner sc = new Scanner(System.in);

System.out.print("\nEnter side 1 = ");

int a = sc.nextInt();

System.out.print("Enter side 2 = ");

int b = sc.nextInt();

System.out.print("Enter side 3 = ");

int c = sc.nextInt();

if(a<b+c && b<a+c && c<a+b)

{

if(a==b && b==c)

{

System.out.println("Equilateral triangle");

}

else if(a==b || b==c || c==a)

{

System.out.println("Isosceles triangle");

}

else

System.out.println("Scalene triangle");

}

else

System.out.println("Cannot form a triangle");

}

}

//Write a Java program to calculate profit or loss.

import java.util.\*;

class Profit\_Loss

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

System.out.println("Enter Cost Price : ");

double cp = sc.nextDouble();

System.out.print("Enter Selling Price : ");

double sp = sc.nextDouble();

if(sp>cp)

{

double P = sp-cp;

System.out.println("Your profit amount is : " +P );

}

else

{

double L = cp-sp;

System.out.println("Your loss amount is : " +L);

}

}

}

/\*Write a Java program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:

Percentage >= 90% : Grade A

Percentage >= 80% : Grade B

Percentage >= 70% : Grade C

Percentage >= 60% : Grade D

Percentage >= 40% : Grade E

Percentage < 40% : Grade F\*/

import java.util.\*;

class Grade

{

public static void main(String[]args)

{

Scanner sc=new Scanner(System.in);

System.out.print("Enter Physics marks = ");

int p=sc.nextInt();

System.out.print("Enter Chemistry = ");

int ch=sc.nextInt();

System.out.print("Enter Biology = ");

int b=sc.nextInt();

System.out.print("Enter Mathematics = ");

int m=sc.nextInt();

System.out.print("Enter Computer = ");

int com=sc.nextInt();

int five = p+ch+b+m+com;

int t = (five\*100)/500;

if(t>=90)

{

System.out.println("Grade A");

}

else if(t>=80)

{

System.out.println("Grade B");

}

else if(t>=70)

{

System.out.println("Grade C");

}

else if(t>=60)

{

System.out.println("Grade D");

}

else if(t>=40)

{

System.out.println("Grade F");

}

else

System.out.println("Grade F");

}

}

/\*10 Write a Java program to input basic salary of an employee and calculate its Gross salary according to following:

Basic Salary <= 10000 : HRA = 20%, DA = 80%

Basic Salary <= 20000 : HRA = 25%, DA = 90%

Basic Salary > 20000 : HRA = 30%, DA = 95% \*/

import java.util.\*;

class Basic\_Salary

{

public static void main(String[]args)

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter Basic Salary = ");

int Sal=sc.nextInt();

if(Sal<=10000)

{

double DA=(Sal\*0.8);

double HRA=(Sal\*0.2);

double GS=(DA+HRA+Sal);

System.out.println("Gross Salary Is = " + GS);

}

else if(Sal<=20000)

{

double DA=(Sal\*0.9);

double HRA=(Sal\*0.25);

double GS=(DA+HRA+Sal);

System.out.println("Gross Salary Is = " + GS);

}

else if(Sal>=20000)

{

double DA=(Sal\*0.95);

double HRA=(Sal\*0.30);

double GS=(DA+HRA+Sal);

System.out.println("Gross Salary Is = " + GS);

}

}

}

/\*Write a Java program to input electricity unit charges and calculate total electricity bill according to the given condition:

For first 50 units Rs. 0.50/unit

For next 100 units Rs. 0.75/unit

For next 100 units Rs. 1.20/unit

For unit above 250 Rs. 1.50/unit

An additional surcharge of 20% is added to the bill \*/

import java.util.\*;

class Electricity\_Bill

{

public static void main(String[]args)

{

Scanner sc=new Scanner(System.in);

System.out.println("Enter Electricity Units : ");

double u=sc.nextDouble();

if(u<=50)

{

double t = u\*0.50;

System.out.println("Your total electricity bill is = " +t);

}

else if(u<=100)

{

double t = u\*0.75;

System.out.println("Your total electricity bill is = " +t);

}

else if(u<=200)

{

double t = u\*1.20;

System.out.println("Your total electricity bill is = " +t);

}

else if(u>250)

{

double t = u\*1.50;

double su = t\*0.2;

double a = t+su;

System.out.println("Your total electricity bill is = " +a);

}

}

}