import java.util.Scanner;

class Main {

public double SimpleInterest(double principal, double rate, double time) {

return (principal \* rate \* time) / 100;

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

double principal = sc.nextDouble();

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

double rate = sc.nextDouble();

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

double time = sc.nextDouble();

sc.close();

Main obj = new Main();

double si = obj.SimpleInterest(principal, rate, time);

System.out.println("The final simple interest is " + si);

}

}

import java.util.Scanner;

class Main {

public double Combinations(double n) {

return (n \* (n - 1)) / 2;

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

double n = sc.nextDouble();

sc.close();

Main obj = new Main();

double handshakes = obj.Combinations(n);

System.out.println("The final number of handshakes is: " + handshakes);

}

}

import java.util.Scanner;

class Main {

public double Combinations(double n) {

return (n \* (n - 1)) / 2;

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

double NumberOfStudents = sc.nextDouble();

sc.close();

Main obj = new Main();

double handshakes = obj.Combinations(NumberOfStudents);

System.out.println("The final number of handshakes is: " + handshakes);

}

}

import java.util.Scanner;

class Main {

public int NumberChecker(int n) {

if(n>0){

return 1;

}

else if(n<0){

return -1;

}

else{

return 0;

}

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int n = sc.nextInt();

sc.close();

Main obj = new Main();

int check = obj.NumberChecker(n);

System.out.println("if Numberchecker is 1 Number is positive else if -1 Number is negative else 0. Numberchecker == " + check);

}

}

import java.util.Scanner;

public class SpringSeason {

public static boolean isSpringSeason(int month, int day) {

if ((month == 3 && day >= 20) ||

(month == 4) ||

(month == 5) ||

(month == 6 && day <= 20)) {

return true;

}

return false;

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter month (1-12): ");

int month = scanner.nextInt();

System.out.print("Enter day (1-31): ");

int day = scanner.nextInt();

scanner.close();

if (isSpringSeason(month, day)) {

System.out.println("It's a Spring Season");

} else {

System.out.println("Not a Spring Season");

}

}

}

import java.util.Scanner;

class Main {

public double Rounds(double perimeter, double distance) {

return distance\*1000/perimeter;

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the length of first side of the triangle in meters:");

double n1 = sc.nextDouble();

System.out.println("Enter the length of second side of the triangle in meters:");

double n2 = sc.nextDouble();

System.out.println("Enter the length of third side of the triangle in meters:");

double n3 = sc.nextDouble();

System.out.println("Enter the distance to be covered in Kilometers:");

double distance = sc.nextDouble();

double perimeter = n1+n2+n3;

sc.close();

Main obj = new Main();

double Totalrounds = obj.Rounds(perimeter, distance);

System.out.println("The final number of rounds is: " + Totalrounds);

}

}

import java.util.Scanner;

class Main {

public int SumOfNaturalNumbers(int n) {

if (n==0||n<0){

return 0;

}

else{

return (n\*(n+1))/2;

}

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the number to find sum of natural numbers:");

int n = sc.nextInt();

sc.close();

Main obj = new Main();

int sum = obj.SumOfNaturalNumbers(n);

System.out.println("The sum of Natural numbers is " + sum);

}

}

mport java.util.Scanner;

class Main {

public int GreatestOfThree(int n1, int n2, int n3) {

return (n1 > n2) ? ((n1 > n3) ? n1 : n3) : ((n2 > n3) ? n2 : n3);

}

public int LeastOfThree(int n1, int n2, int n3) {

return (n1 < n2) ? ((n1 < n3) ? n1 : n3) : ((n2 < n3) ? n2 : n3);

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int n1 = sc.nextInt();

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

int n2 = sc.nextInt();

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

int n3 = sc.nextInt();

sc.close();

Main obj = new Main();

int lowest = obj.LeastOfThree(n1, n2, n3);

int greatest = obj.GreatestOfThree(n1, n2, n3);

System.out.println("The greatest of the three numbers is " + greatest +

" and the lowest of the three numbers is " + lowest);

}

}

import java.util.Scanner;

class Main {

public static int[] findRemainderAndQuotient(int number1, int number2) {

int quotient = number1 / number2;

int remainder = number1 % number2;

return new int[]{quotient, remainder};

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the first Number:");

int n1 = sc.nextInt();

System.out.println("Enter the Second Number:");

int n2 = sc.nextInt();

sc.close();

int[] result = findRemainderAndQuotient(n1, n2);

System.out.println("The quotient is: " + result[0]);

System.out.println("The remainder is: " + result[1]);

}

}

import java.util.Scanner;

class Main {

public static int[] findRemainderAndQuotient(int number1, int number2) {

int quotient = number1 / number2;

int remainder = number1 % number2;

return new int[]{quotient, remainder};

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the Number of children:");

int numberOfChildren = sc.nextInt();

System.out.println("Enter the Number of chocolates:");

int numberOfChocolates = sc.nextInt();

sc.close();

int[] result = findRemainderAndQuotient(n1, n2);

System.out.println("The distributed chocolates is is: " + result[0]);

System.out.println("The remaining chocolates is: " + result[1]);

}

}

import java.util.Scanner;

class Main {

public static double calculateWindChill(double temp, double windSpeed) {

return 35.74 + 0.6215 \* temp + (0.4275 \* temp - 35.75) \* Math.pow(windSpeed, 0.16);

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

double temperature = sc.nextDouble();

System.out.println("Enter the wind speed:");

double windSpeed = sc.nextDouble();

sc.close();

double result = calculateWindChill(temperature, windSpeed);

System.out.println("The corresponding wind chill temperature is " + result);

}

}

import java.util.Scanner;

class Main {

public static double[] calculateTrigonometricFunctions(double angle) {

double radians = Math.toRadians(angle);

double sine = Math.sin(radians);

double cosine = Math.cos(radians);

double tangent = Math.tan(radians);

return new double[]{sine, cosine, tangent};

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the angle in degrees:");

double angle = sc.nextDouble();

sc.close();

double[] results = calculateTrigonometricFunctions(angle);

System.out.println("The sin of the angle is " + results[0] + "the cosine of the angle is " + results[1] + "the tangent of the angle is " + results[2]);

}

}