/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 1\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Addition {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

System.out.println("Input how many answers you want to add");

int count= sc.nextInt();

double total = 0;

double num= 0;

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

System.out.println("Input num "+(i+1));

num= sc.nextDouble();

total+=num;

}

System.out.println("The answer is " + total);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 2\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

import java.util.concurrent.TimeUnit ;

public class Countdown {

public static void main (String args[])throws InterruptedException{

Scanner sc = new Scanner(System.in);

System.out.println("The Countdown starts");

//Not needed in task 1//

for(int i= 10 ; i!=0;i--){

System.out.println("\f"+i);

Thread.sleep(1000);

}

System.out.println("It is Midnight Happy new year! ");

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 3\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Factorial\_5 {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

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

int num = sc.nextInt();

int factorial = 1;

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

factorial \*=i ;

}

System.out.println("The Factorial of "+ num +" is "+ factorial);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 4\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Numbers {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int random=0;

int c1=0,c2=0,c3=0,c4=0,c5=0;

for(int i = 1; i<=30;i++){

random=(int) (Math.random()\*5+1);

if(i%10==0)

System.out.print(random+" \n");

else

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

if(random==1)

c1++;

else if(random==2)

c2++;

else if(random==3)

c3++;

else if(random==4)

c4++;

else if(random==5)

c5++;

}

System.out.println("\nThe number 1 appeared " + c1 + " times");

System.out.println("The number 2 appeared " + c2 + " times");

System.out.println("The number 3 appeared " + c3 + " times");

System.out.println("The number 4 appeared " + c4 + " times");

System.out.println("The number 5 appeared " + c5 + " times");

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 5\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Highest {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

System.out.println("Input how many answers you want to add");

int count= sc.nextInt();

int total = 0;

int num= 0;

int max= Integer.MIN\_VALUE;

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

System.out.println("Input num "+(i+1));

num= sc.nextInt();

total+=num;

if(max<num)

max=num;

}

System.out.println("The highest number is "+ max);

System.out.println("The answer is " + total);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 6\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class naturalNumbers {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

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

int num = sc.nextInt();

int sum = 0;

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

sum+=i;

}

System.out.println("The total of the natural numbers of "+num+" is "+sum);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 7\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class NameCode {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

System.out.println("Input how many letters your name has ");

int num = sc.nextInt();

sc.nextLine();

char letter ;

int ans;

String name="";

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

System.out.println("Input letter "+ i);

letter = (sc.nextLine()+" ").charAt(0);

ans= (int)(letter);

name=name+ans+ " ";

}

System.out.println("Your name is "+ name);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 8\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class rangemarks {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

System.out.println("Input a mark between 0 and 100 ");

int mark = sc.nextInt();

while((mark<0)||(mark>100)){

System.out.println("Re-enter mark ");

mark = sc.nextInt();

}

System.out.println("You netered a valid mark ");

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 9\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class numberGuess{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int ans = (int)(Math.random()\*10+1);

System.out.println("Guess the generated number ");

int guess= sc.nextInt();

int count=0;

while(guess!=ans){

System.out.println("You are unfortunately incorrect , re-enter number ");

guess= sc.nextInt();

count++;

}

System.out.println("You have manged to guess the random number which was "+ ans+ " in "+ count + " tries");

}

}

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 10\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Odd{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int count= 100;

System.out.println(" The following numbers are odd: ");

while(count!=0){

if((count%2)!=0)

System.out.println("\t\t\t\t"+count);

count--;

}

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 11\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class lock{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int l1 = 27;

int l2 = 18;

int l3 = 54;

int choice = 3;

while(choice!=0){

System.out.println("Turn the Dial to the first number(num1)");

int num1 = sc.nextInt();

System.out.println("Turn the Dial to the second number(num2)");

int num2 = sc.nextInt();

System.out.println("Turn the Dial to the third number(num3)");

int num3 = sc.nextInt();

if((num1==l1)&&(num2==l2)&&(num3==l3)){

System.out.println("The lock opens !");

break;

}

else{

System.out.println("Failed to open lock !\nYou have "+ (choice-1)+" chances left");

choice--;

}

}

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 12\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class avgNumbers{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

double avg= 0;

int choice = 0;

int count = 0;

int total = 0;

System.out.println("Input numbers to calculate avergae press 0 to quit");

do{

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

choice = sc.nextInt();

count++;

total+=choice;

}while(choice!=0);

avg=total/count;

System.out.println("The average is "+ avg);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 13\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class oddNumbers{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int choice = 0;

int count = 0;

int total = 0;

System.out.println("Input 20 whole numbers");

do{

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

choice = sc.nextInt();

if((choice%2)!=0)

total++;

count++;

}while(count<20);

System.out.println("There were "+ total +" odd numbers");

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 14\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Marks{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int passed=0;

int count = 0;

int failed=0;

double marks = 0;

double max = Double.MIN\_VALUE;

String name = null;

System.out.println("Input the pass mark of the exam");

double mark =sc.nextDouble();

sc.nextLine();

System.out.println("Input 10 Student names and marks");

String n=null;

do{

System.out.println("Input Student name ");

name = sc.nextLine();

System.out.println("Input Student mark ");

marks = Double.parseDouble(sc.nextLine());

if(marks>=mark){

System.out.println(name + " Passed ");

passed++;

}

else if(marks<=mark){

System.out.println(name + " Failed");

failed++;

}

if(max<marks){

max=marks;

n=name;

}

count++;

}while(count<10);

System.out.println("There were "+ passed +" students who passed\n and there were "+failed+" students who failed");

System.out.println("The student who got the highest mark of " +max + " was "+ n);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 15\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Shapes{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

System.out.println("Choose from the following options:\n1.Rectangle\n 2.Square\n 3.Quit");

int choice = sc.nextInt();

double area=0;

double per= 0;

double length=0;

double height=0;

do{

switch (choice){

case 1:System.out.println("Choose from the following options:\n1.Area \n2.Perimeter\n3.Quit");

choice = sc.nextInt();

if(choice!=3){

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

length = sc.nextDouble();

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

height = sc.nextDouble();

}

switch (choice){

case 1:System.out.println("You chose Area");

area = length\*height;

System.out.println("The area is "+ area);

break;

case 2:System.out.println("You chose Perimeter");

per = (2\*length)+(2\*height);

System.out.println("The perimeter is "+ per);

break;

case 3: System.out.println("Back to main Menu");

break;

default :System.out.println("Invalid");

}

break;

case 2:System.out.println("Choose from the following options:\n1.Area \n2.Perimeter\n3.Quit");

choice = sc.nextInt();

if(choice!=3){

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

length = sc.nextDouble();

}

switch (choice){

case 1:System.out.println("You chose Area");

area = length\*length;

System.out.println("The area is "+ area);

break;

case 2:System.out.println("You chose Perimeter");

per = 4\*length;

System.out.println("The perimeter is "+ per);

break;

case 3: System.out.println("Back to main Menu");

break;

default :System.out.println("Invalid");

}

break;

case 3: System.out.println("Goodbye");

break;

default :System.out.println("Invalid");

}

}while(choice!=3);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 16\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Letters{

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int letter = (int)(Math.random()\*26+'A');

//can do character for the above function

char l = (char)(letter);

char choice = ' ';

int c=0;

int count = 3;

do{

System.out.println("Try to guess the randomised letter (enter \* to quit)");

choice = sc.next().charAt(0);

c= Character.toUpperCase(choice);

if(c=='\*'){

System.out.println("Goodbye , The letter was "+ l);

count=0;

}

else if(c>letter)

System.out.println("Too high \n You have "+ --count +" choices left");

else if(c<letter)

System.out.println("Too low\n You have "+ --count +" choices left");

else

System.out.println("Invalid");

}while(count!=0);

System.out.println("The letter was "+ l);

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 17\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Factorial {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int num = 10;

int factorial = 1;

int j= 0;

for(int i= 10 ; i!=0;i--){

factorial = 1;

for( j= i ; j!=0;j--){

factorial \*=j;

}

System.out.println("The Factorial of "+ i +" is "+ factorial);

}

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 18\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Triangle {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int j= 0;

for(int i= 3 ; i!=0;i--){

for( j= i ; j!=0;j--){

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

}

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

}

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 19\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class primeNumbers {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int j= 0;

int num = 50;

boolean check = false;

for(int i= num ; i!=1;i--){

check=false;

for( j= i-1 ; j!=1;j--){

if(i%j==0)

check = true;

}

if(check==false)

System.out.println(" The number "+ i +" is prime");

}

}

}

---------------------------------------------------------------------------------------------------------

/\*Matthias Bartolo

\*Class Bc1B

\*Module8 Section D Q 20\*/

// Java program to read data of various types using Scanner class.

import java.util.\*;

public class Factors {

public static void main (String args[]){

Scanner sc = new Scanner(System.in);

int j= 0;

int num = 20;

for(int i= num ; i!=1;i--){

System.out.println("\nThe number "+ i+" has factors ");

for( j= i ; j!=1;j--){

if(i%j==0)

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

}

System.out.print("1");

}

}

}