# Tutorial 1

*//Tutorial 1 - Q1*

public class HelloWorld{

public static void main (String[] args){

System.out.println("Hello World");

}

}

*//Tutorial 1 - Q2*

public class ShortPoem{

public static void main (String[] args){

System.out.println("Stop! Don't swat the fly\nWho wrings his hands,\nWho wrings his feet.\n\n\tKobayashi Issa (1763-1827)");

}

}

*//Tutorial 1 - Q3*

public class TriangleOfStars{

public static void main (String[] args){

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

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

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

}

}

# Additional Tutorial 1

*//Additional Tutorial 1 - Q1*

public class Question1{

public static void main(String[] args){

System.out.println("Hello\nAlexandra Abramov");

}

}

*//Additional Tutorial 1 - Q2*

public class Question2{

public static void main(String[] args){

System.out.println(74+36);

}

}

*//Additional Tutorial - Q3*

public class Question3{

public static void main (String [] args){

System.out.println(Math.round(50/3));

}

}

*//Additional Tutorial - Q4*

public class Question4{

public static void main (String []args){

System.out.println(-5+8\*6);

System.out.println((55+9)%9);

System.out.println(20+-3\*5/8);

System.out.println(5+15/3\*2-8%3);

}

}

*//Additional Tutorial - Q5*

import java.util.Scanner;

public class Question5{

public static void main(String []args){

Scanner reader = new Scanner(System.in);

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

int n1 = reader.nextInt();

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

int n2 = reader.nextInt();

System.out.println(Integer.toString(n1)+"+"+Integer.toString(n2)+"="+(n1+n2));

System.out.println(Integer.toString(n1)+"-"+Integer.toString(n2)+"="+(n1-n2));

System.out.println(Integer.toString(n1)+"X"+Integer.toString(n2)+"="+(n1\*n2));

System.out.println(Integer.toString(n1)+"/"+Integer.toString(n2)+"="+(n1/n2));

System.out.println(Integer.toString(n1)+" mod "+Integer.toString(n2)+"="+(n1%n2));

}

}

*//Additional Tutorial - Q6*

public class Question6{

public static void main(String []args){

System.out.println(" J a v v a");

System.out.println(" J a a v v a a");

System.out.println("J J aaaaa V V aaaaa");

System.out.println(" JJ a a V a a");

}

}

*//Additional Tutorial - Q7*

public class Question7{

public static void main(String []args){

System.out.println((25.5\*3.5-3.5\*3.5)/(40.5-4.5));

}

}

*//Additional Tutorial - Q8*

public class Question8{

public static void main(String []args){

System.out.println(4.0\*(1-(1.0/3)+(1.0/5)-(1.0/7)+(1.0/9)-(1.0/11)));

}

}

*//Additional Tutorial - Q9*

public class Question9{

public static void main(String []args){

double r = 7.5;

System.out.println("Perimeter is = "+(2\*3.14\*r));

System.out.println("Area is = "+(3.14\*(Math.pow(r,2))));

}

}

*//Additional Tutorial - Q10*

public class Question10{

public static void main (String []args){

double width = 5.5;

double height = 8.5;

System.out.println("Area is "+Double.toString(width)+"\*"+Double.toString(height)+"="+(width\*height));

System.out.println("Perimeter is 2\*("+Double.toString(width)+"+"+Double.toString(height)+")="+(2\*(width+height)));

}

}

*//Additional Tutorial - Q11*

public class Question11{

public static void main (String []args){

System.out.println("\* \* \* \* \* \* ==================================\n\* \* \* \* \* ==================================\n\* \* \* \* \* \* ==================================\n\* \* \* \* \* ==================================\n\* \* \* \* \* \* ==================================\n\* \* \* \* \* ==================================\n\* \* \* \* \* \* ==================================\n\* \* \* \* \* ==================================\n\* \* \* \* \* \* ==================================\n==============================================\n==============================================\n==============================================\n==============================================\n==============================================\n==============================================");

}

}

*//Additional Tutorial 1 - Q12*

public class Question12{

public static void main (String[] args){

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

System.out.println("[| o o |]");

System.out.println(" | ^ |");

System.out.println(" | '\_' |");

System.out.println(" +-----+");

}

}

# Tutorial 2

*//Tutorial 2 V 2016 - Q1*

public class Q1 {

public static final double KILO = 1.609;

public static void main(String []args){

System.out.println("One mile is " + (KILO \* 1) +" kilometers.");

System.out.println( "Ten miles is " + (KILO \* 10) + "kilometers.");

System.out.println( "One hundred miles is " + (KILO \* 100)+ " kilometers.");

}

}

*//Tutorial 2 V 2016 - Q2*

public class Q2{

public static void main(String[] args){

System.out.println("\"It's \'\\n\' for a newline\", the lecturer said." );

}

}

A close up of a device

Description generated with high confidence

*//Tutorial 2 V 2016 - Q4*

import java.util.Scanner;

import java.math.BigDecimal;

public class Q4{

public static void main(String[] args){

final BigDecimal usdRate= new BigDecimal("146.53");

Scanner input = new Scanner(System.in);

System.out.print("How many Sri Lankan Rupees do you wish to convert to USD? :");

BigDecimal amountToConvert = new BigDecimal(input.nextLine());

BigDecimal convertedAmount = amountToConvert.divide(usdRate,3,BigDecimal.ROUND\_HALF\_UP);

String display = String.format("%s LKR = %s USD",amountToConvert, convertedAmount);

System.out.println(display);

}

}

*//Tutorial 2 V 2016 - Q5*

public class Q5{

public static void main(String[] args){

final double pi = 22/7;

System.out.println("Degrees\tRadians\n--------------------");

for(int i=0;i<=90;i+=15){

int radians = (int)((i\*pi)/180);

System.out.println(i+"\t"+radians);

}

}

# Additional Tutorial 2

*//Additional Tutorial 2 - Q3.9*

import java.util.Scanner;

public class Q\_3\_9{

public static void main(String[] args){

double temp=0.0;

String state="";

Scanner inputTemp = new Scanner(System.in);

System.out.print("Enter the temperature followed by C for Celsius or F for Fahrenheit: ");

String t = inputTemp.nextLine();

if(t.charAt(t.length()-1)=='C'){

t=t.replace("C","");

temp = Double.valueOf(t);

}

else if(t.charAt(t.length()-1)=='F'){

t=t.replace("F","");

temp = Double.valueOf(t);

temp = (temp-32)\*5/9;

}

else{System.out.println("Unit hasn't been provided OR Unit provided is invalid");} *//EndIf*

if(temp>=100.0){state = "Water is at gaseous state";}

else if(temp>0.0){state = "Water is at liquid state";}

else{state = "Water is at solid state";}

System.out.println(state);

} *//End Main*

} *//End Class*

*//Additional Tutorial 2 - Q3.10*

import java.util.Scanner;

public class Q\_3\_10{

public static void main(String[] args){

double temp=0.0;

double boilingTemp=100.0;

double altitude=0.0;

String state="";

Scanner inputTemp = new Scanner(System.in);

System.out.print("Enter the temperature followed by C for Celsius or F for Fahrenheit: ");

String t = inputTemp.nextLine();

Scanner inputAlt = new Scanner(System.in);

System.out.print("Enter the altitude followed by m for meter or f for feet: ");

String a = inputAlt.nextLine();

if(a.charAt(a.length()-1)=='m'){

a=a.replace("m","");

altitude=Double.valueOf(a);

if(altitude>=300.0){boilingTemp=boilingTemp-(altitude/300);}

}

if(a.charAt(a.length()-1)=='f'){

a=a.replace("f","");

altitude=Double.valueOf(a);

if(altitude>=1000.0){boilingTemp=boilingTemp-(altitude/1000);}

}

if(t.charAt(t.length()-1)=='C'){

t=t.replace("C","");

temp = Double.valueOf(t);

}

else if(t.charAt(t.length()-1)=='F'){

t=t.replace("F","");

temp = Double.valueOf(t);

temp = (temp-32)\*5/9;

}

else{System.out.println("Unit hasn't been provided OR Unit provided is invalid");} //EndIf

if(temp>=boilingTemp){state = "Water is at gaseous state";}

else if(temp>0.0){state = "Water is at liquid state";}

else{state = "Water is at solid state";}//EndIf

System.out.println(state);

} //End Main

} //End Class

*//Additional Tutorial 2 - Q3.11*

import java.util.Scanner;

public class Q\_3\_11{

public static void main(String[] args){

double temp=0.0;

double boilingTemp=100.0;

double altitude=0.0;

String state="";

Scanner inputTemp = new Scanner(System.in);

System.out.print("Enter the temperature followed by C for Celsius or F for Fahrenheit: ");

String t = inputTemp.nextLine();

if(t.matches("\\d+\\s\*[a-zA-Z]")==false){

System.out.println("Invalid temperature input");

System.exit(0);

}

if(t.charAt(t.length()-1)=='C'){

t=t.replace("C","");

temp = Double.valueOf(t);

}

else if(t.charAt(t.length()-1)=='F'){

t=t.replace("F","");

temp = Double.valueOf(t);

temp = (temp-32)\*5/9;

}

else{

System.out.println("Unit hasn't been provided OR Unit provided is invalid");

System.exit(0);

}

Scanner inputAlt = new Scanner(System.in);

System.out.print("Enter the altitude followed by m for meter or f for feet: ");

String a = inputAlt.nextLine();

if(a.matches("\\d+\\s\*[a-zA-Z]")==false){

System.out.println("Invalid temperature input");

System.exit(0);

}

if(a.charAt(a.length()-1)=='m'){

a=a.replace("m","");

altitude=Double.valueOf(a);

if(altitude>=300.0){boilingTemp=boilingTemp-(altitude/300);}

}

else if(a.charAt(a.length()-1)=='f'){

a=a.replace("f","");

altitude=Double.valueOf(a);

if(altitude>=1000.0){boilingTemp=boilingTemp-(altitude/1000);}

}

else{

System.out.println("Unit hasn't been provided OR Unit provided is invalid");

System.exit(0);

}

if(temp>=boilingTemp){state = "Water is at gaseous state";}

else if(temp>0.0){state = "Water is at liquid state";}

else{state = "Water is at solid state";}//EndIf

System.out.println(state);

}

}

*//Additional Tutorial 2 - Q3.12*

import java.util.Scanner;

public class Q\_3\_12{

public static void main(String[] args){

double grade=0.0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter a letter grade: ");

String input = sc.nextLine();

char[] ary = input.toCharArray();

char letter = ary[0];

char postfix = ary[1];

switch(letter){

case 'A':

grade+=4;

break;

case 'B':

grade+=3;

break;

case 'C':

grade+=2;

break;

case 'D':

grade+=1;

break;

case 'F':

grade+=0;

break;

}

if(postfix=='+' && letter!='A'){grade+=0.3;}

if(postfix=='-'){grade-=0.3;}

System.out.println("The numeric value is "+grade);

}

}

*//Additional Tutorial 2 - Q3.13*

import java.util.Scanner;

public class Q\_3\_13{

public static void main(String[] args){

char letterGrade='';

Scanner sc = new Scanner();

System.out.print("Enter numerical grade value: ");

double input = sc.nextDouble();

if(input==4.0){letterGrade='A+';}

else if(input>=3.85){letterGrade='A-';}

else if(input>=3.15){letterGrade='A';}

else if(input>=2.85){letterGrade='B+';}

else if(input>=2.7){letterGrade='B-';}

else if(input>=2.15){letterGrade='B';}

else if(input>=1.85){letterGrade='C+';}

else if(input>=1.7){letterGrade='C-';}

else if(input>=1.15){letterGrade='C';}

else if(input>=0.85){letterGrade='D+';}

else if(input>=0.7){letterGrade='D-';

elseif(input>0){letterGrade='D''}

else{letterGrade='F';}

System.out.println(letterGrade);

}

}

*//Additional Tutorial 2 - Q3.14*

import java.util.Scanner;

public class Q\_3\_14{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

System.out.print("Enter the card notation: ");

String input = sc.nextLine();

char[] ary = input.toCharArray();

if (Character.toString(ary[0]).matches("[^a-zA-z]")){

System.out.print(ary[0]);

}

else{

switch(ary[0]){

case 'J':

System.out.print("Jack");

break;

case 'Q':

System.out.print("Queen");

break;

case 'K':

System.out.print("King");

break;

case 'A':

System.out.print("Ace");

break;

}

}

switch(ary[1]){

case 'D':

System.out.print(" of Diamonds");

break;

case 'H':

System.out.print(" of Hearts");

break;

case 'S':

System.out.print(" of Spades");

break;

case 'C':

System.out.print(" of Clubs");

break;

}

}

}

*//Additional Tutorial 2 - Q3.15*

import java.util.Scanner;

public class Q\_3\_15{

public static void main(String[] args){

String largestVal="";

Scanner sc = new Scanner(System.in);

System.out.print("Please enter three numbers:");

String input = sc.nextLine();

String[] aryOfNums= input.split("\\s+");

for(int i=1;i<aryOfNums.length;i++){

if(Double.valueOf(aryOfNums[i])>Double.valueOf(aryOfNums[i-1])){

largestVal = aryOfNums[i];

}

}

System.out.println("Largest value is: "+largestVal);

}

}

*//Additional Tutorial 2 - Q3.16*

import java.util.Scanner;

import java.util.Arrays;

public class Q\_3\_16{

public static void main(String[] args){

Scanner sc = new Scanner(System.in);

System.out.print("Enter three strings: ");

String input = sc.nextLine();

String[] aryOfStrings = input.split("\\s");

Arrays.sort(aryOfStrings);

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

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

}

}

}

*//Additional Tutorial 2 - Q3.17*

import java.util.Scanner;

public class Q\_3\_17{

public static void main(String[] args){

Scanner sc1 = new Scanner(System.in);

System.out.print("Enter military time [1]: ");

int time1 = sc1.nextInt();

Scanner sc2 = new Scanner(System.in);

System.out.print("Enter military time [2]: ");

int time2 = sc2.nextInt();

if(time1>time2){

System.out.println(time1);

System.out.println(time2);

}

if(time2>time1){

System.out.println(time2);

System.out.println(time1);

}

else{System.out.println("Both times are the same");}

}

}

*//Additional Tutorial - Q3.18*

import java.util.Scanner;

public class Q\_3\_18{

public static void main(String[] args){

String season = "";

Scanner sc1 = new Scanner(System.in);

Scanner sc2 = new Scanner(System.in);

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

int month = sc1.nextInt();

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

int day = sc2.nextInt();

if(month<=3){

season="Winter";

}

else if(month<=6){

season="Spring";

}

else if(month<=9){

season="Summer";

}

else{

season="Fall";

}

if(month%3==0 && day>=21){

if(season=="Winter"){season="Spring";}

else if(season=="Spring"){season="Summer";}

else if(season=="Summer"){season="Fall";}

else{season="Winter";}

}

System.out.println("The season for the month and the day you entered is "+season);

}

}

*//Additional Tutorial - Q3.19*

import java.util.Scanner;

import java.lang.Math;

public class Q\_3\_19{

public static void main(String[] args){

Scanner sc= new Scanner(System.in);

System.out.print("Enter two floating point numbers: ");

String input = sc.nextLine();

String[] aryOfFloatingNum = input.split("\\s");

double num1 = Double.valueOf(aryOfFloatingNum[0]);

double num2 = Double.valueOf(aryOfFloatingNum[1]);

num1 = Math.round(num1\*100)/100;

num2 = Math.round(num2\*100)/100;

if(num1==num2){

System.out.println("They are same upto two decimal places");

}

else{

System.out.println("They are different");

}

}

}

*//Additional Tutorial - Q3.20*

import java.util.Scanner;

public class Q\_3\_20{

public static void main(String[] args){

String sign="";

Scanner sc = new Scanner(System.in);

System.out.print("Please enter your birthday(month and day): ");

String input = sc.nextLine();

String[] ary = input.split("\\s");

int month = Integer.valueOf(ary[0]);

int day = Integer.valueOf(ary[1]);

if((month==1 && day<20) || (month==12 && day>=22)){sign="Capricorn";}

else if((month==1 && day>=20) || (month==2 && day<19)){sign="Aquarius";}

else if((month==2 && day>=19) || (month==3 && day<21)){sign="Pisces";}

else if((month==3 && day>=21) || (month==4 && day<20)){sign="Aries";}

else if((month==4 && day>=20) || (month==5 && day<21)){sign="Taurus";}

else if((month==5 && day>=21) || (month==6 && day<21)){sign="Gemini";}

else if((month==6 && day>=21) || (month==7 && day<23)){sign="Cancer";}

else if((month==7 && day>=23) || (month==8 && day<23)){sign="Leo";}

else if((month==8 && day>=23) || (month==9 && day<23)){sign="Virgo";}

else if((month==9 && day>=23) || (month==10 && day<23)){sign="Libra";}

else if((month==10 && day>=23) || (month==11 && day<22)){sign="Scorpio";}

else{sign="Saggitarius";}

System.out.println("You are a "+sign);

}

}