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1  /*Addition program, in class example
2  prints out the addition of two input numbers
3  Written by A Student for CS1301
4  On: Month, Day, Year*/
5  import CSCI.*;
6  public class Calculator //begin calculator class
7  {
8      public final static double ERROR = 0; //declare error constant
9      public final static String FORMAT = "%10.2f %2s %10.2f = %10.2f"; //f is float, or
10     public final static String FORMAT2 = "%10.2f %2s %10.2f = %5b"; //f is float, or
11     public static String operator = "+"; //tells user what operation was completed
12     public static String operatorComparison = ">"; //operatorComparison is for
13     comparing the values
14
15     public static void main(String[] args) //begin main
16     {
17         double firstInput = CSCICovert.Parse(args[0], ERROR); //take input from
18         argument 0
19         double secondInput = CSCICovert.Parse(args[1], ERROR); //take input from
20         argument 1
21         double finalSum;
22
23         finalSum = add(firstInput,secondInput); //sum the inputs
24         printout(firstInput,operator,secondInput,finalSum); //print
25
26         finalSum = subtract(firstInput,secondInput); //subtract the inputs
27         printout(firstInput,operator,secondInput,finalSum); //print
28
29         finalSum = divide(firstInput,secondInput); //divide the inputs
30         if(secondInput == 0)
31         {
32             System.out.println("      Cannot divide by 0");
33         }
34         else
35         {
36             printout(firstInput,operator,secondInput,finalSum); //print
37         }
38         finalSum = multiply(firstInput,secondInput); //multiply the inputs
39         printout(firstInput,operator,secondInput,finalSum); //print
40
41         boolean booleanAnswer = greaterThan(firstInput,secondInput);
42         printout(firstInput,operatorComparison,secondInput,booleanAnswer); //return
43         whether first is greater than second
44
45         booleanAnswer = lesserThan(firstInput,secondInput);
46         printout(firstInput,operatorComparison,secondInput,booleanAnswer); //return
47         whether first is less than second
48
49         booleanAnswer = lessThanEqual(firstInput,secondInput);
50         printout(firstInput,operatorComparison,secondInput,booleanAnswer); //return
51         whether first is less than or equal to second
52
53         booleanAnswer = greatThanEqual(firstInput,secondInput);
54         printout(firstInput,operatorComparison,secondInput,booleanAnswer); //return
55         whether first is greater than or equal to second
56
57         booleanAnswer = doesEqual(firstInput,secondInput); //return whether first and
58         second are equal in value
59         printout(firstInput,operatorComparison,secondInput,booleanAnswer); //these
60         booleans all return true or false after
61
62         //making
63         the appropriate comparison
64     }
65
66     //operations methods below
67     public static double add(double firstInput, double secondInput) //addition method
68     {

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58     double answer = firstInput + secondInput; //create answer by adding inputs
59     return answer; //return answer
60 }
61 public static double subtract(double firstInput, double secondInput) //subtraction
method
62 {
63     double answer = firstInput - secondInput; //create answer by adding inputs
64     operator = "-"; //change operator string so everything makes sense when
displayed; all methods do this
65     return answer; //return answer
66 }
67 public static double divide(double firstInput, double secondInput) //division method
68 {
69     if(secondInput == 0)
70     {
71         return firstInput;
72     }
73     else
74     {
75         double answer = firstInput/secondInput; //create answer by adding inputs
76         operator = "/";
77         return answer; //return answer
78     }
79 }
80 public static double multiply(double firstInput, double secondInput)
//multiplication method
81 {
82     double answer = firstInput*secondInput; //create answer by adding inputs
83     operator = "*";
84     return answer; //return answer
85 }
86 public static boolean greaterThan(double first, double second)
87 {
88     boolean answer = first > second; //compare to see if first is greater than
second input
89     return answer; //return boolean value with regards to above comparison
90 }
91 public static boolean lesserThan(double first, double second)
92 {
93     boolean answer = first < second; //compare to see if first is less than second
input
94     operatorComparison = "<";
95     return answer; //return boolean value with regards to above comparison
96 }
97 public static boolean lessThanEqual(double first, double second)
98 {
99     boolean answer = first <= second; //compare to see if first is less than or
equal to second input
100     operatorComparison = "<=";
101     return answer; //return boolean value with regards to above comparison
102 }
103 public static boolean greatThanEqual(double first, double second)
104 {
105     boolean answer = first >= second; //compare to see if first is greater than or
equal to second input
106     operatorComparison = ">=";
107     return answer; //return boolean value with regards to above comparison
108 }
109 public static boolean doesEqual(double first, double second)
110 {
111     boolean answer = first == second; //compare to see if first is equal to second
input
112     operatorComparison = "=";
113     return answer; //return boolean value with regards to above comparison
114 }
115 public static void printout(double first, String operation, double second, double
answer)//printout method double
116 {
117     String line = String.format(FORMAT,first,operation,second,answer); //format

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118     everything nice and tidy
119     System.out.println(line); //use java println to print out
119 }
120 public static void printout(double first, String operation, double second, boolean
120 answer)//printout method boolean
121 {
122     String line = String.format(FORMAT2,first,operation,second,answer); //format
122     everything nice and tidy
123     System.out.println(line); //use java println to print out
124 }
125 //end operations methods
126
127 }//end calculator
```