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1 // Name: Leon Singleton
2 // User Name:acal6ls
3
4 import sheffield.* ;
5 public class Assignment1 {
6     public static void main(String[] args) {
7         //Assigns the Easyreader method to a variable so i can read input from the console
8         EasyReader Keyboard = new EasyReader();
9         EasyWriter screen = new EasyWriter();
10
11         //Asks the user to enter values for their decimal currecny and and allows the user to input them
12         double poundsNew = Keyboard.readDouble("How many pounds? ");
13         double shillingsNew = Keyboard.readDouble("How many Shillings? ");
14         double penceNew = Keyboard.readDouble("How many Pence? ");
15         //Calculates the decimal currency based on the user's inputs
16         double decimalCurrency = (poundsNew / 20) + (penceNew/240));
17         //writes the new converted currecny to the console to 2 decimal places
18         System.out.print("That is ");
19         screen.print(decimalCurrency, 2);
20         System.out.println(" in decimal currency");
21
22         //Assigns a new easyreader method to a variable in order to read from the text file money.txt
23         EasyReader fileInput = new EasyReader("money.txt") ;
24         //Reads the first line in the text file and assigns it to a variable
25         String inputString = fileInput.readString();
26         //Using the string obtained from the file the substring method extracts just the number from the file
27         inputString = inputString.substring(26,inputString.length() -0) ;
28         //The number is then converted from a string to a double in order to carry out calculations
29         double stringValue = Double.valueOf(inputString);
30         //creates new integer variables to represent and calculate the number of each type of coin used to represent the value
31         int poundsOld = (int)stringValue;
32         int shillingsOld = (int)((stringValue - poundsOld) / 0.05);
33         //I used a shortened value to represent one pence in new money for calculations as the results tend towards infinity
34         int penceOld = (int)((stringValue - poundsOld - (shillingsOld * 0.05)) / (0.0041666));
35         //Outputs the number of each type of coin in old money the in an appropriate format
36         System.out.println(stringValue + " in old money is " + "L" + poundsOld + "." + shillingsOld + "s" + "." + penceOld + "d");

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37
38 //Here I write the headings of the columns for the table format to the console
39 System.out.println(" old L s d");
40 //Here I specify the number of characters assigned to each Variable output whilst right-justifying them in a table format
41 screen.print(stringValue, 2 , 7 );
42 screen.print(poundsOld, 5);
43 screen.print(shillingsOld, 3);
44 screen.println(penceOld, 3);
45
46 //using the same method above i read the second value from the second line of the file
47 double inputNum = fileInput.readDouble();
48 //I then calculate the number of each type of coin used to represent this value
49 poundsOld = (int)inputNum;
50 shillingsOld = (int)((inputNum - poundsOld) / 0.05);
51 penceOld = (int)((inputNum - poundsOld - (shillingsOld * 0.05)) / (0.0041666));
52 screen.print(inputNum, 2 , 7 );
53 screen.print(poundsOld, 5);
54 screen.print(shillingsOld, 3);
55 screen.print(penceOld, 3);
56 }
57 }

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