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1  /* This is a seperat Java class that contains three
2     private instance variables of type double for the
3     gross pay, savings rate, and IRA investment rate.
4     This class will be called by another maine method.
5
6     Methods:
7         Zachary_2_09_Calc() - default constructor initializes grosspay,
8         savings rate, and ira rate to zero
9         Zachary_2_09_Calc(double val1, double val2, double val3) - constructor
10        that initializes grosspay to val1, savingsRate to val2, and
11        iraRate to val3
12        getNumber() - Allows the user to input values for
13        each var using the keyboard
14        getAmounts(String moneyRate) - method used to get amounts from
15        keyboard and check that user is putting in valid inputs.
16        printOut() - prints out the values that have been input with
17        appropriate message
18        savingsAmount() - calculates and return amount in savings
19        iraAmount() - calculate and returns amount invested in IRA
20 */
21
22 import java.util.Scanner;
23
24 public class ZacharyStall_2_09_Calc {
25
26     // Instance var to get/calc gross pay, savings rate,
27     // and IRA investment percentage
28     private double grossPay;    // The gross pay ammount
29     private double savingsRate; // The percentage rate that will be saved
30     private double iraRate;    // The percentage rate that will invested
31
32     // Establish the keyboard
33     // Access the toolkit for formatting
34     Scanner console = new Scanner(System.in);
35     static Toolkit tools = new Toolkit();
36
37     // *****
38
39     // Default (no arg) constructor - initialize grossPay, savingsRate,
40     // and iraInvest to zero
41     public ZacharyStall_2_09_Calc() {
42         grossPay = 0.0;
43         savingsRate = 0.0;
44         iraRate = 0.0;
45     } // End initialization of var
46
47     // *****
48
49     // Constructor (3-arg) - initialize grossPay to val1,
50     // savingsRate to val2 and iraInvest to val3
51     public ZacharyStall_2_09_Calc(double val1, double val2, double val3) {
52         grossPay = val1;
53         savingsRate = val2;
54         iraRate = val3;
55     } // End ZacharyStall_2_09_Calc(double val1, double val2, double val3)
56
57     // *****
58
59     // Get values of grossPay, savingsRate, and iraInvest from the user.
60     // This method uses getAmounts method.
61     public void getNumbers() {
62         grossPay = getAmounts("gross pay amount:");
63         savingsRate = getAmounts("savings rate:");
64         iraRate = getAmounts("IRA invesmtment rate:");
65     } // End getNumbers
66
67     // *****
68

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69 // Get a single number from the keyboard and check that it is not
70 // zero or negative.
71 public double getAmounts(String moneyRate) {
72     double amount;
73     System.out.print("Enter your " + moneyRate);
74     amount = console.nextDouble();
75
76     if(amount <= 0) {
77         System.out.println("Not an acceptable input.");
78         getNumbers();
79     }
80
81     return amount;
82 } // End getAmounts
83
84 // *****
85
86 // Prints formatted gross pay, savings rate, and IRA rate
87 // to the console.
88 public void printOut() {
89
90     System.out.print("\nThe gross pay is: " +
91                     tools.leftPad(grossPay, 20, "$##,##0.00") + "\n" +
92                     "The savings rate is: " +
93                     tools.leftPad(savingsRate, 16, "##0.0") + "\n" +
94                     "The IRA investment rate is: " +
95                     tools.leftPad(iraRate, 9, "##0.0"));
96 } // End printOut
97
98 // *****
99
100 // Calculate the amount of money in savings from gross pay and the
101 // savings rate
102 public double calcSavingAmount() {
103     return (savingsRate / 100) * grossPay;
104 } // End savingAmount
105
106 // *****
107
108 // Calculate the amount in the IRA account based off fo the gross pay
109 // and the IRA investment rate
110 public double calcIraAmount() {
111     return (iraRate / 100) * grossPay;
112 } // End iraAmount
113 } // End Class

```