CIS\_335A\_Week2\_iLab

Whitelaw

# Source Code for StudentInfo

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CIS355A\_Week2\_iLab\_Part1

Developed By: Brian Whitelaw

Prepared For: Prof. Michael Brown

DeVry University Online

12Jan16

Program Name: StudentGPAInfo Calculator

Nature and Necessity: The objective of this program is to receive inputs for student information and return GPA results.

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**public** **class** StudentInfo

{

// Set attributes as private

**private** String stuName; // Student name as string

**private** **int** totPoints; // Total possible points earned by student

**private** **int** totCredits; // Total amount of credits

**private** Double GPA; // GPA

// Default constructor

**public** StudentInfo ()

{

// Sets default values for variables

stuName = "void";

}

// Get methods

**public** String getName()

{

**return** stuName;

}

**public** **int** totPoints()

{

**return** totPoints;

}

**public** **int** totCredits()

{

**return** totCredits;

}

**public** Double getGPA()

{

**return** GPA;

}

// Set methods

**public** **void** setStuName(String name)

{

stuName = name;

}

**public** **void** setTotPoints(**int** points)

{

totPoints = points;

}

**public** **void** setTotCredits(**int** credits)

{

totCredits = credits;

}

// public void setGPA(Double GPA)

// {

// GPA = score;

// }

} // End of Class

# Second Part of Student Info

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Nature and Necessity: The objective of this program is to receive inputs for student information and return GPA results.

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// Import libraries

**import** java.text.DecimalFormat;

**import** java.util.Scanner;

**public** **class** StudentInfoTest

{

**public** **static** **void** main(String[] args)

{

// Instantiate a StudentInfo object

StudentInfo stu = **new** StudentInfo(); // Calls default constructor

// Initialize scanner

Scanner input = **new** Scanner(System.***in***);

// Declare variables

String name = "void"; // Student name

String alpha = "v"; // Default alpha character set to "v"

**int** totPoints = 0; // Total points

**int** units = 0; // Units

**int** points = 0; // Points actually earned

**int** totUnits = 0; // Total units

Double gpa = 0.00; // gpa

String addClass = "y"; // Defaulted to y

// Initialize the decimal format

DecimalFormat df = **new** DecimalFormat("#.##");

// Welcome message

System.***out***.println("Welcome to the Student GPA Calculator!!! \n");

// Begin while loop

**while** (addClass.equals("y"))

{

points += points;

// Gather information

**if** (name.equals("void") || !name.equals(name)) // begin if statement

{

System.***out***.print("Please enter a student's name: ");

name = input.nextLine();

}

**else**

{

System.***out***.print("What are the total units awarded for this class? ");

units = Integer.*parseInt*(input.nextLine());

System.***out***.print("What letter grade did " + name + " earn? \nPlease enter A,B,C, or D.");

alpha = input.nextLine();

String uAlpha = alpha.toUpperCase();

**if** (uAlpha.equals("A")) // begin nested if statement to decide points

{

points = units \* 4;

}

**else** **if** (uAlpha.equals("B"))

{

points = units \* 3;

}

**else** **if** (uAlpha.equals("C"))

{

points = units \* 2;

}

**else** **if** (uAlpha.equals("D"))

{

points = units \* 1;

}

**else**

{

System.***out***.println("That is an invalid letter grade.");

} // end nested if

totPoints += points;

totUnits += units;

System.***out***.print("Would you like to add another class? (y or n): ");

addClass = input.nextLine();

} // end if

} // end while

//System.out.println( name + "\n" + totPoints +"\n"+ totUnits + "\n" + points); // used to test inputs

// Store student name

stu.setStuName(name);

// Calculate GPA

gpa = (**double**)totPoints / (**double**)totUnits;

// Outputs

System.***out***.println("\n" + stu.getName() + ", your GPA is " + df.format(gpa));

// Close scanner

input.close();

System.***out***.println("Press any key to continue");

System.*exit*(0);

} // End of main

}// End of StudentInfoTest class

# Currency Conversion Calculator

// CIS-355A\_Week2 iLab\_Problem 2

// Developed By: Brian Whitelaw

// Prepared For: Professor Michael Brown

// DeVry University Online

// Program Name: Currency Conversion Calculator

// Program Description: This program will convert monetary amounts from US Dollars (USD), Euros, Yen in any direction.

import javax.swing.JOptionPane;

public class CurrencyConversion

{

public static void main(String[] args)

{

// Create variables

Double amount = 0.00; // amount for user to input

String to = "euro"; // Default is "euro

String from = "usd"; // Default is "usd"

Double converted = 0.00; // converted is the output variable

// Welcome message

JOptionPane.showMessageDialog (null, "Welcome to the Currency Conversion Calculator!");

// Gather inputs

from = JOptionPane.showInputDialog("Please enter the type of currency you would like to convert from. \nUS Dollar (USD), Euro, or Yen?");

String uFrom = from.toUpperCase(); // Converts variable response to all upper case

to = JOptionPane.showInputDialog("Please enter the type of currency you want to convert to. \nUS Dollar (USD), Euro, or Yen?");

String uTo = to.toUpperCase(); // Converts variable response to all upper case

amount = Double.parseDouble(JOptionPane.showInputDialog("Enter the amount of " + uFrom + " that you want to convert."));

// Create algorithms (use if statements)

if (uFrom.equals("USD") && uTo.equals("EURO"))

{

converted = amount \* .9;

JOptionPane.showMessageDialog(null, "The amount of " + uTo + "s you will have is: " + converted);

}

else if (uFrom.equals("USD") && uTo.equals("YEN"))

{

converted = amount \* 123.14;

JOptionPane.showMessageDialog(null, "The amount of " + uTo + "s you will have is: " + converted);

}

else if (uFrom.equals("EURO") && uTo.equals("USD"))

{

converted = amount \* 1.11;

JOptionPane.showMessageDialog(null, "The amount of " + uTo + "s you will have is: " + converted);

}

else if (uFrom.equals("EURO") && uTo.equals("YEN"))

{

converted = amount \* 136.08;

JOptionPane.showMessageDialog(null, "The amount of " + uTo + "s you will have is: " + converted);

}

else if (uFrom.equals("YEN") && uTo.equals("USD"))

{

converted = amount \* .0081;

JOptionPane.showMessageDialog(null, "The amount of " + uTo + "s you will have is: " + converted);

}

else if (uFrom.equals("YEN") && uTo.equals("EURO"))

{

converted = amount \* .0073;

JOptionPane.showMessageDialog(null, "The amount of " + uTo + "s you will have is: " + converted);

}

else

{

JOptionPane.showMessageDialog(null, "Session Terminated");

}

} // end main

} // end class

# Screenshots





 



