

Name: _____

CSCE 145 Program1 (Ch3&4) Java Program: Grade Triangle Vowels

Setup

1. Be sure Java and Eclipse are installed. In Eclipse go to File/New/Java Project.
2. Name it (with no spaces): `HW1YourlastnameYourfirstname`
3. Go to File/New/Class name it the exact same as the project
4. You will need the Scanner class: `import java.util.Scanner;`
5. You will need a main method: `public static void main(String[] args)`

Homework

1. **Grade:**
 - a. Ask the user to type in their letter grade.
 - b. Using a **switch** statement tell them the numerical range of the grade they entered.
2. **Triangle:**
 - a. Ask the user to enter three sides of a triangle.
 - b. Is it is a triangle? (if one side is longer than the sum of the other two sides, then it is not)
 - i. If it is not a triangle tell the user that
 - ii. If it is a triangle tell them the perimeter of the triangle ($a + b + c$)
3. **Vowels:**
 - a. Ask the user to input a sentence. Then count the number of vowels in the sentence, divide it by the total number of characters in the sentence, and display the percentage of vowels. A vowel is a, e, i, o, and u (don't worry about y being a vowel sometimes). Use **for** loops to go through each sentence checking for vowels.
 - b. Add a **while** loop so that the program repeatedly asks the user for a sentence and prints the percentage of vowels in it unless the user enters "end" or "stop" as their sentence; in which case end the program.

Be sure to:

1. Use proper and clear comments
 - a. Include the following information at the top of your code:
Name: *Your Name*
Assignment: Homework1
Class: CSCE 145
Semester: Spring 2014
School: USC Sumter
 - b. Explain each block of code
2. Pick proper variable types
3. Use clear names for variables

Turn in: demonstrate your program to the instructor

Grading:

Function:

| | |
|--------------------------|-----|
| Objectives met of part 1 | 30% |
| Objectives met of part 2 | 30% |
| Objectives met of part 3 | 30% |

Organization: readable code and clear documentation 10%

Style: user experience (clear directions and creativity) and exception handling 5%