

Unlimited Attempts Allowed

Available: Feb 20, 2024 12:00am until Mar 5, 2024 11:59pm Available: Feb 20, 2024 12:00am until Mar 5, 2024 11:59pm

Details

For this lab, you will be working in groups again. You are each expected to contribute to the successful completion of this lab. When you are done, you will upload the source code to Canvas using a .java file as an attachment.

As before, you will be working with Visual Studio Code. By now, you should be proficient with all aspects of VSC. I expect each member of your group to get comfortable using all aspects of your IDE throughout the quarter. During your lab, I want you to continue to play with the debugger to step through your code, as well as the system and environment settings.

I also want each of you to be proficient with using GitHub and start getting familiar with LinkedIn for your final assignment. Practice creating files, branching, and falling back to previous versions as you work on your labs. Git/GitHub is commonly used out in industry, as well as many colleges and universities. For those of you taking CS 240 (Data Structures) we will also be using it.

Pascal's Triangle or Fractals

There are times when using recursion leads to a more elegant solution than iteration. Here are a couple of examples. As a group, please research either Pascal's Triangle or the sample fractal program in chapter 18 of your book. I want you to create either a sample of Pascal's Triangle or a version of a GUI version of a Fractal (Your choice). Each member of your team must fully understand how the code works.

Good Luck :)

Style Guidelines and Grading:

Follow good general Java style guidelines such as: appropriately using control structures like loops and if/else statements; avoiding redundancy using techniques such as methods, loops, and factoring common code out of if/else statements; properly using indentation, good variable names, and types; and not having any lines of code longer than 100 characters in length.

Functionality: 50%; half of your grade comes from the output of the program; make sure there is communication with the user of your program; if your program has no output, I will dock 50% of your points; you must include a main() method.

Style: 25%; every .java file you submit must have a header comment with at least the following four elements: your name, the date, the project (e.g., CS 145 Lab 2), and a purpose statement (you may also include your instructor's name if it is helpful for you to keep track, but it is not required); every file needs to have all four of these elements; if some are missing, I will dock points from this portion of your grade.

Readability: 25%; follow standard practices for indentation, naming (camelCase for methods and variables, PascalCase for classes, etc.), and line length; keep your lines under 80 characters long or at most 100 characters; if you include a line, even if it is a comment, that has 101 or more characters, I will dock points.