CSE114 Spring 2023 : Assignment 1

Due: Mar 13, 2023 at 11:59 PM [KST]

Read This Right Away

For the due date of this assignment, don't go by the due date that you see on Brightspace unless you have set your timezone to KST. By default, Brightspace shows times in EST/EDT in the US.

Directions

- At the top of every file you submit, include the following information in a comment
  - Your first and last name
  - Your Stony Brook email address
- Please read carefully and follow the directions exactly for each problem.
- Your files, Java classes, and Java methods must be named as stated in the directions (including capitalization). Work that does not meet the specifications may not be graded.
- Your source code is expected to compile and run without errors. Source code that does not compile will have a heavy deduction (i.e. at least 50% off).
- You should create your program using a text editor (e.g. emacs, vim, atom, notepad++, etc).
- Your programs should be formatted in a way that is readable. In other words, indent appropriately, use informative names for variables, etc. If you are uncertain about what a readable style is, see the examples from class and textbook as a starting point for a reasonable coding style.

What Java Features to Use

For this assignment, you are *not* allowed to use more advanced features in Java than what we have studied ***at the time I post the assignment to Brightspace***. If you have a question about features you may use, please ask!

What to Submit

Combine all your .java files from the problems below into a single zip file named as indicated in the **Submission Instructions** section at the end of this assignment. Upload this file to **Brightspace** as described in that section.

Multiple submissions are allowed before the due date. Only the last submission will be graded.

Please do **not** submit `.class` files or any that I did not ask for.

Partial vs. Complete Solutions

Your programs should compile and run without errors, both compile-time and run-time errors! Please do not submit programs that do *not* even compile! Its better to submit a partial solution that compiles and runs as opposed to an almost complete solution that does not even compile. A program that does not compile even if it is very close to being perfect would only receive less than 50% maximum of the possible score for the program! This policy applies not only to this problem set but also to all the other ones in the remainder of the semester. I will not repeat this in each problem set though. So, please remember this.

Naming Conventions In Java And Programming Style In General

Please use these conventions as you establish your *programming style.* Programming professionals use these, too.

- **Names:** Choose informative names,
  - e.g. `hourlyRate` rather than `hr` for a variable name.
  - `CheckingAccount` rather than `CA` for a Java class name.
- **Class names:** We start a class name with an uppercase letter as I have in my examples: `Hello` not `hello` or `HELLO`. For multi-word names you should capitalize the first letter of each word, This is called 'Pascal' case.
  - e.g. `UndergraduateStudent`, `GraduateStudent`, `CheckingAccount`
- **Variable names:** We start a variable name with a lowercase letter. This is called 'Camel' case.
  - e.g. `count`, `hourlyRate`, averageMonthlyCost
- **Method names:** Naming convention for method names is the same as that for variable names.
- **Use of white space:** Adopt a good indentation style using white spaces and be consistent throughout to make your program more readable. Most text editors (like emacs and vim) should do the indentation automatically for you. If this is not the case, see me and I can help you configure your setup.

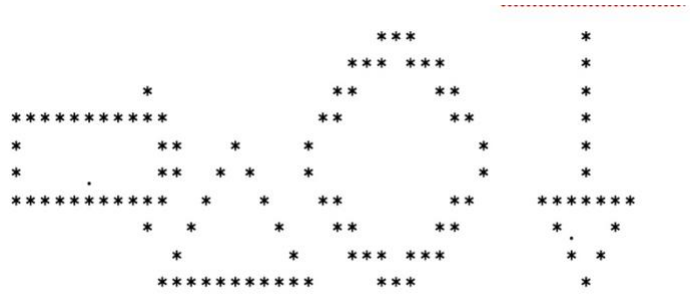
I will not repeat these directions in each assignment, but you should follow this style throughout the semester.

Problem 1 (5 Points)

Create a class named `Poem` in a file named `Poem.java`. The class should have its main method write a poem to the console. You will be writing a poem and it must be at least six lines long. Each line should be printed by a **separate** System.out.println() call. Hand in `Poem.java`.

Problem 2 (5 Points)

Write an application (named **Shapes.java**) that displays a thick right arrow, a small triangle, a rough diamond, and a down arrow using asterisks (*) in System.out.println() statements as shown below:



These should simply be formed exactly as shown above using a series of System.out.println() statements in Java.

Hand in **Shapes.java.**

Submission Instructions

Please follow this procedure for submission:

1. Place the deliverable source files (`Poem.java, Shapes.java`) into a folder by themselves. The folder's name should be CSE114_PS1_<yourname>_<yourid>. So if your name is Alice Kim and your id is 12345678, the folder should be named 'CSE114_PS1_AliceKim_12345678.

2. Compress the folder and submit the zip file.
    a. On windows, do this by pressing the right-mouse button while hovering over the folder. Select 'Send to -> Compressed (zipped) folder'. The compressed folder will have the same name with a .zip extension. You will upload that file to the Brightspace dropbox for **Assignment1**
    b. On mac, move the mouse over the folder then right-click (or for single button mouse, use Control-click) and select **Compress**. There should now be a file with the same name and a .zip extension. You will upload that file to the Blackboard dropbox for **Assignment1**.
3. Navigate to the course blackboard site. Click **Assignments** in the left column menu. Click **Assignment1**in the content area. Under **ASSIGNMENT SUBMISSION**, click **Browse My Computer** next to **Attach Files.** Find the zip file and click it to upload it to the web site.