

CSE142—Computer Programming I

Programming Assignment #2

due: Tuesday, 1/19/21, 11 pm

This assignment will give you practice with for loops, static methods, print/println statements and a class constant. This assignment is worth 16 points instead of the normal 20 points.

Part A: ASCII Art (2 points):

The first part of your assignment is to write a program that produces any text art (sometimes called “ASCII art”) picture you like. Write a Java class called AsciiArt in a file called AsciiArt.java.. Your program can produce any text picture you like, with the following restrictions and details:

- The picture should be your own creation, not an ASCII image you found on the Internet or elsewhere.
- The number of lines of output should be between 3 and 200 with no more than 100 characters per line.
- The picture should not include hateful, offensive, or otherwise inappropriate images.
- The code should use at least one for loop or static method, but should not contain infinite loops.
- The picture must not be identical to your solution for Part B or consist entirely of reused Part B code.
- Your code should not use material beyond chapter 3 of the book.

If your Part A program compiles and runs successfully and meets the above constraints, it will receive the full 2 points. Part A will not be graded on style ("internal correctness").

Part B: Rocket Ship (14 points):

In the second part of the assignment, you are going to generate output that looks like the following:

```

      /**\
     /***\
    /****\
   /*****\
  /******\
 /*******\
+*****+
|..\/.....\/..|
|.\/\..\/\..|
|\/\\/\\/\\/\|
|\\/\\/\\/\\/\|
|.\/\\/..\/\\/..|
|..\/.....\/..|
+*****+
|\\/\\/\\/\\/\|
|.\/\\/..\/\\/..|
|..\/.....\/..|
|..\/.....\/..|
|.\/\..\/\..|
|\/\\/\\/\\/\|
+*****+
      /**\
     /***\
    /****\
   /*****\
  /******\
 /*******\

```

You are to exactly reproduce this output. The various subfigures in the middle of this output have a height of 3. These subfigures have the property that their height determines their width, so there is only one size variable. You are to use a class constant to make it possible to change a single number in one place in the program to have it produce a corresponding figure of a different size.

