

Intro to Java Week 5 Coding Assignment

Points possible: 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

Instructions: In Eclipse, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your Java project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

Coding Steps:

- Create an interface named Logger.
- Add two void methods to the Logger interface, each should take a String as an argument
 - Log
 - Error
- Create two classes that implement the Logger interface
 - AsteriskLogger
 - SpacedLogger
- The log method on the AsteriskLogger should print out the String it receives between 3 asterisks on either side of the String (e.g. if the String passed in is "Hello", then it should print ***Hello*** to the console.

- The error method on the AsteriskLogger should print the String it receives inside a box of asterisks, with the String preceded by the word “ERROR:”. For example, if “Hello” is the argument, the following should be printed:

```
*****
***Error: Hello***
*****
```

- The SpacedLogger should add spaces between each character of the String argument passed into its methods.
- If the log method received “Hello” as an argument, it should print H e l l o
- The error method should do the same, but with “ERROR:” preceding the spaced out input (i.e. ERROR: H e l l o)
- Create a class named App that has a main method.
- In this class instantiate an instance of each of your logger classes that implement the Logger interface.
- Test both methods on both instances, passing in Strings of your choice.

Screenshots of Code:

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The screenshot shows an IDE window with a toolbar at the top and a tab bar containing four files: `Logger.java`, `AsterikLogger.java`, `*SpacedLogger.java`, and `App.java`. The `Logger.java` file is active, displaying the following code:

```
1
2 public interface Logger {
3
4     public void log (String log);
5     public void error (String error);
6
7 }
8 |
```

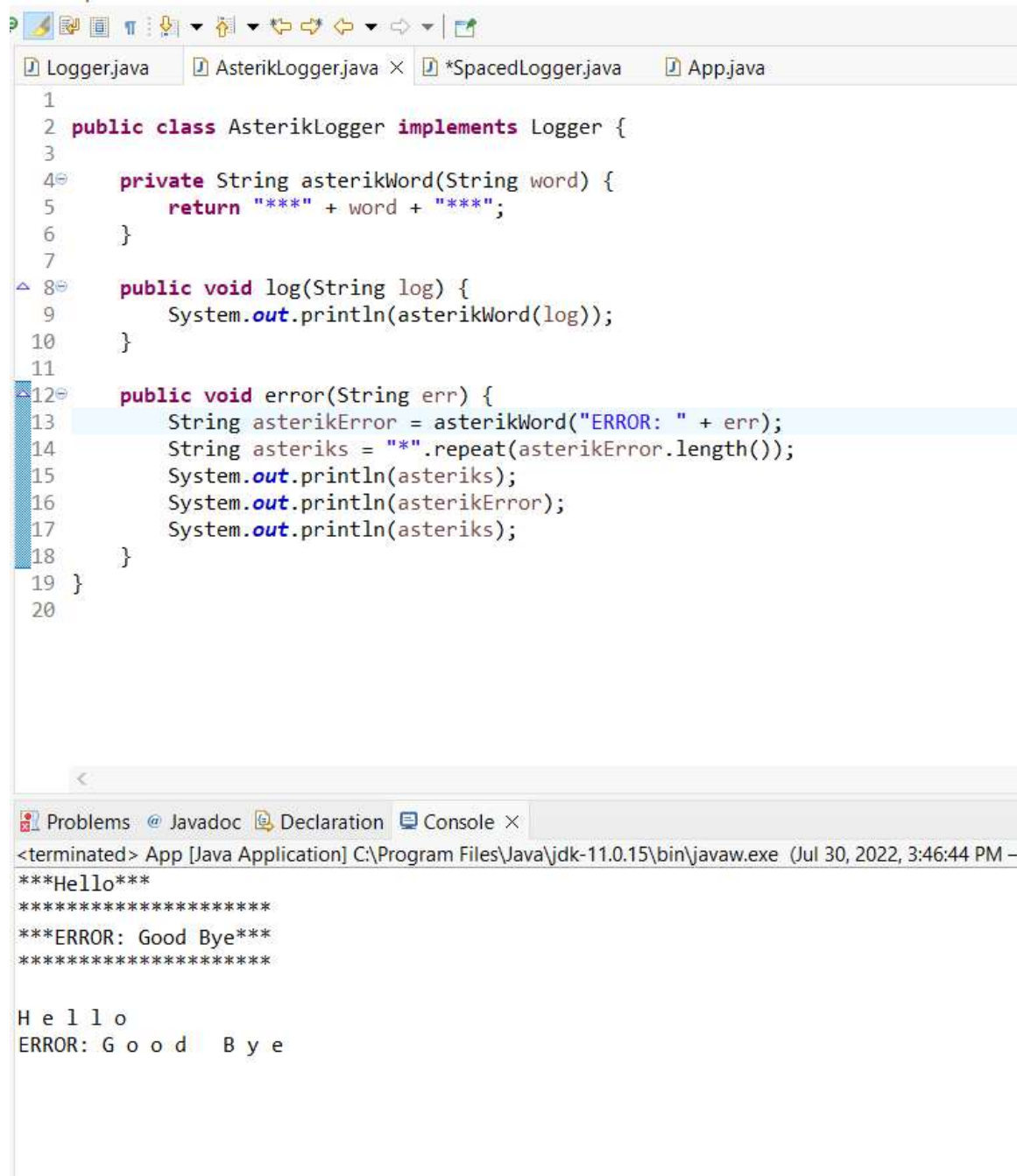
Below the code editor is a console window with tabs for `Problems`, `Javadoc`, `Declaration`, and `Console`. The `Console` tab is selected, showing the output of the `App` application. The output consists of two lines of text, each preceded by a series of asterisks:

```
<terminated> App [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Jul 30, 2022, 3:46:44 PM)
***Hello***
*****
***ERROR: Good Bye***
*****

H e l l o
ERROR: G o o d   B y e
```

use IDE

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The screenshot shows an IDE window with four tabs: Logger.java, AsterikLogger.java, *SpacedLogger.java, and App.java. The AsterikLogger.java tab is active, displaying the following code:

```
1
2 public class AsterikLogger implements Logger {
3
4     private String asterikWord(String word) {
5         return "****" + word + "****";
6     }
7
8     public void log(String log) {
9         System.out.println(asterikWord(log));
10    }
11
12    public void error(String err) {
13        String asterikError = asterikWord("ERROR: " + err);
14        String asteriks = "*".repeat(asterikError.length());
15        System.out.println(asteriks);
16        System.out.println(asterikError);
17        System.out.println(asteriks);
18    }
19 }
20
```

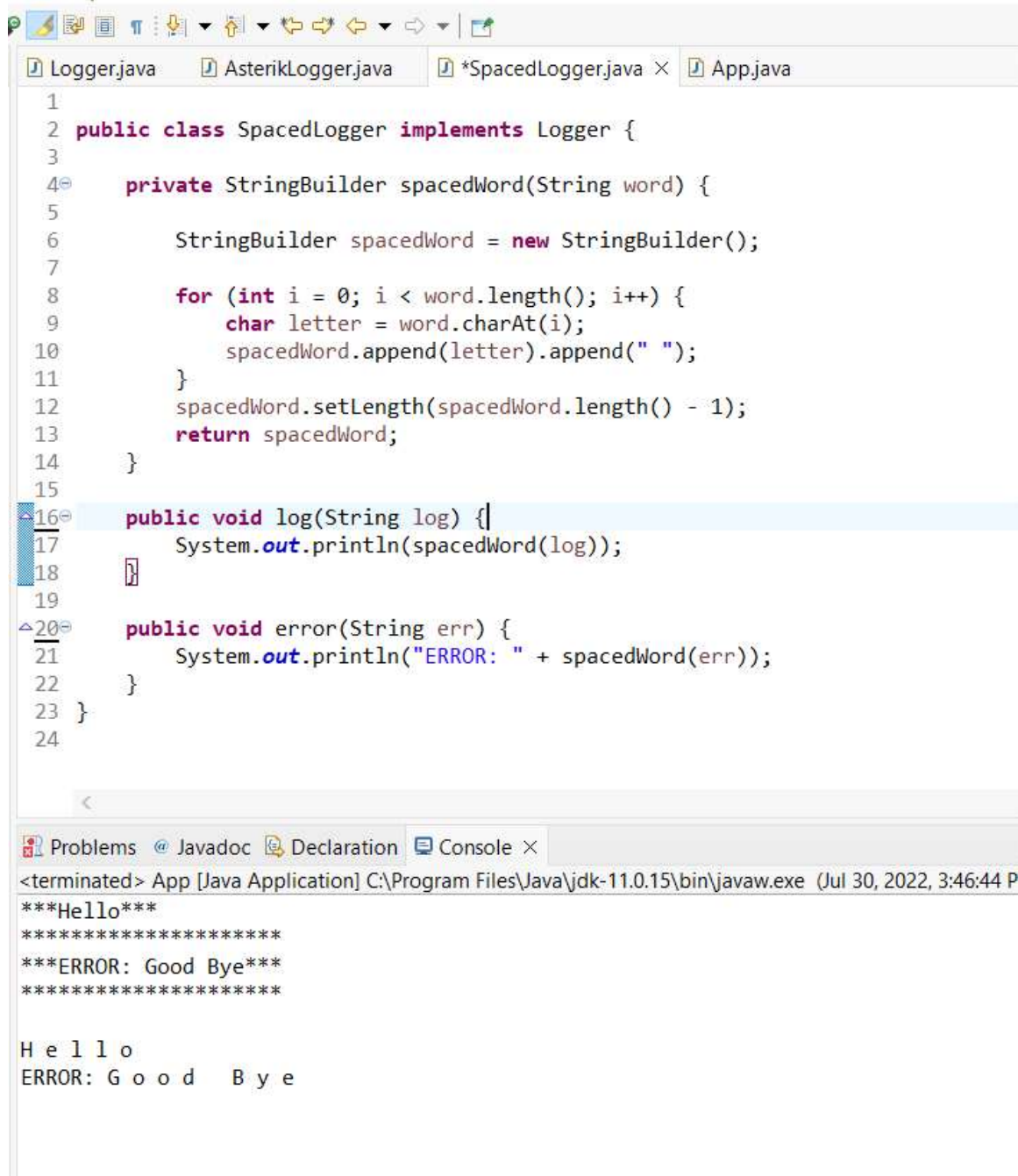
Below the code editor, the 'Console' tab is active, showing the output of the application:

```
<terminated> App [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Jul 30, 2022, 3:46:44 PM -
****Hello****
*****
***ERROR: Good Bye***
*****

H e l l o
ERROR: G o o d   B y e
```

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The screenshot shows a Java IDE with a toolbar at the top and a tab bar containing 'Logger.java', 'AsterikLogger.java', '*SpacedLogger.java', and 'App.java'. The main editor displays the code for 'SpacedLogger' which implements a 'Logger' interface. It includes a 'spacedWord' method that formats a string with spaces between characters, and 'log' and 'error' methods that print the formatted strings. The console at the bottom shows the output of the 'App' application, which prints 'Hello' and 'ERROR: Good Bye'.

```
1
2 public class SpacedLogger implements Logger {
3
4     private StringBuilder spacedWord(String word) {
5
6         StringBuilder spacedWord = new StringBuilder();
7
8         for (int i = 0; i < word.length(); i++) {
9             char letter = word.charAt(i);
10            spacedWord.append(letter).append(" ");
11        }
12        spacedWord.setLength(spacedWord.length() - 1);
13        return spacedWord;
14    }
15
16    public void log(String log) {
17        System.out.println(spacedWord(log));
18    }
19
20    public void error(String err) {
21        System.out.println("ERROR: " + spacedWord(err));
22    }
23 }
24
```

<terminated> App [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Jul 30, 2022, 3:46:44 P
Hello

ERROR: Good Bye

H e l l o
ERROR: G o o d B y e

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The screenshot shows an IDE with a toolbar at the top and a tab bar containing 'Logger.java', 'AsterikLogger.java', '*SpacedLogger.java', and 'App.java'. The main editor displays the code for 'App.java' with line numbers 1 through 20. The code defines a public class 'App' with a main method that creates instances of 'AsterikLogger' and 'SpacedLogger', logs 'Hello' and 'Good Bye' messages, and prints them to the console. Below the editor, a 'Console' tab is active, showing the output of the program. The output consists of two sections: one with asterisks and another with spaced-out characters.

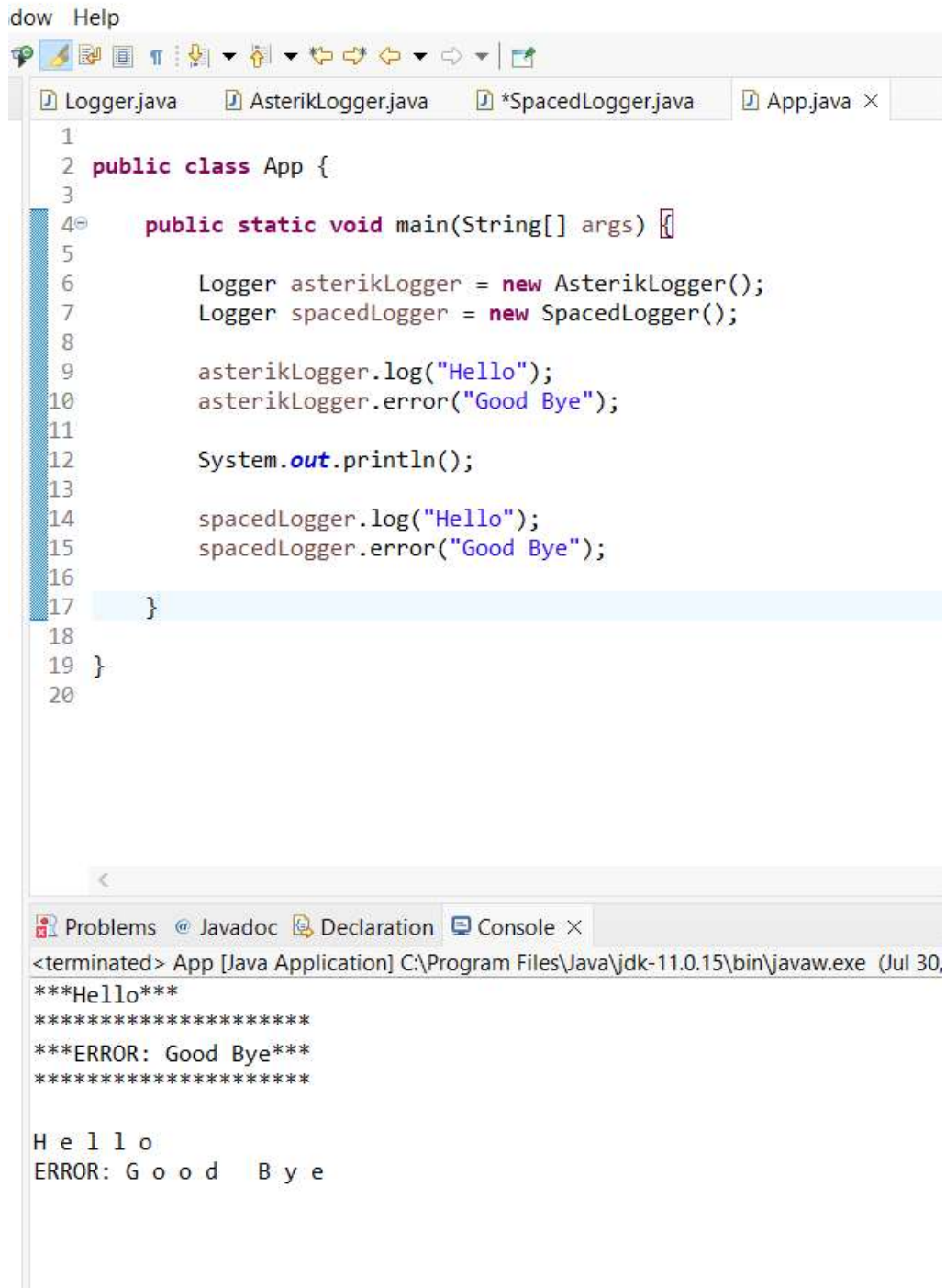
```
1
2 public class App {
3
4     public static void main(String[] args) {
5
6         Logger asterikLogger = new AsterikLogger();
7         Logger spacedLogger = new SpacedLogger();
8
9         asterikLogger.log("Hello");
10        asterikLogger.error("Good Bye");
11
12        System.out.println();
13
14        spacedLogger.log("Hello");
15        spacedLogger.error("Good Bye");
16
17    }
18 }
19
20
```

<terminated> App [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Jul 30, 2020 10:00:00 AM)
Hello

ERROR: Good Bye

H e l l o
ERROR: G o o d B y e

Screenshots of Running Application:



The screenshot displays an IDE with a code editor and a console window. The code editor shows the following Java code:

```
1
2 public class App {
3
4     public static void main(String[] args) {
5
6         Logger asterikLogger = new AsterikLogger();
7         Logger spacedLogger = new SpacedLogger();
8
9         asterikLogger.log("Hello");
10        asterikLogger.error("Good Bye");
11
12        System.out.println();
13
14        spacedLogger.log("Hello");
15        spacedLogger.error("Good Bye");
16
17    }
18 }
19
20
```

The console window shows the output of the application:

```
<terminated> App [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Jul 30,
***Hello***
*****
***ERROR: Good Bye***
*****

H e l l o
ERROR: G o o d   B y e
```

clipse IDE

Run Window Help

Logger.java AsterikLogger.java SpacedLogger.java App.java ×

```
1
2 public class App {
3
4     public static void main(String[] args) {
5
6         Logger asterikLogger = new AsterikLogger();
7         Logger spacedLogger = new SpacedLogger();
8
9         asterikLogger.log("C ya");
10        asterikLogger.error("Wouldn't want to be ya");
11
12        System.out.println();
13
14        spacedLogger.log("C ya");
15        spacedLogger.error("Wouldn't want to be ya");
16
17    }
18
19 }
20
```

Problems Javadoc Declaration Console ×

<terminated> App [Java Application] C:\Program Files\Java\jdk-11.0.15\bin\javaw.exe (Jul 30, 2022, 3:54:38 PM)

```
***C ya***
*****
***ERROR: Wouldn't want to be ya***
*****

C   y a
ERROR: W o u l d n ' t   w a n t   t o   b e   y a
```

URL to GitHub Repository:

<https://github.com/NckDeSimone/Java-Week-5-Coding-Assignment/tree/main/src>