

**Assignment Title:**

Coursework

**Coursework type:**

Individual

**Module Name:**

ST4003CMD-Programming: Professional Practice

**Intake: March**

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**1. Write a program that prints Hello World! to the console. Save the program as Hello.java.**

**2. Extend/Modify the above program to print two additional lines:**

This is my first program

I am on module ST4003CEM

System.out.print (not println) and produces the same output.

**3. Write a program that prints the following output:**

A "quoted" String is

'much' better if you learn

the rules of "escape sequences."

Also, "" represents an empty

String. Don't forget: use \"

instead of " !

" is not the same as "

**4. WAP that prints the following pattern:**

\*

\*\*

\*\*\*

\*\*\*\*

\*\*\*\*\*

**5. WAP prints the following pattern:**

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

**6. WAP that prints the following output:**

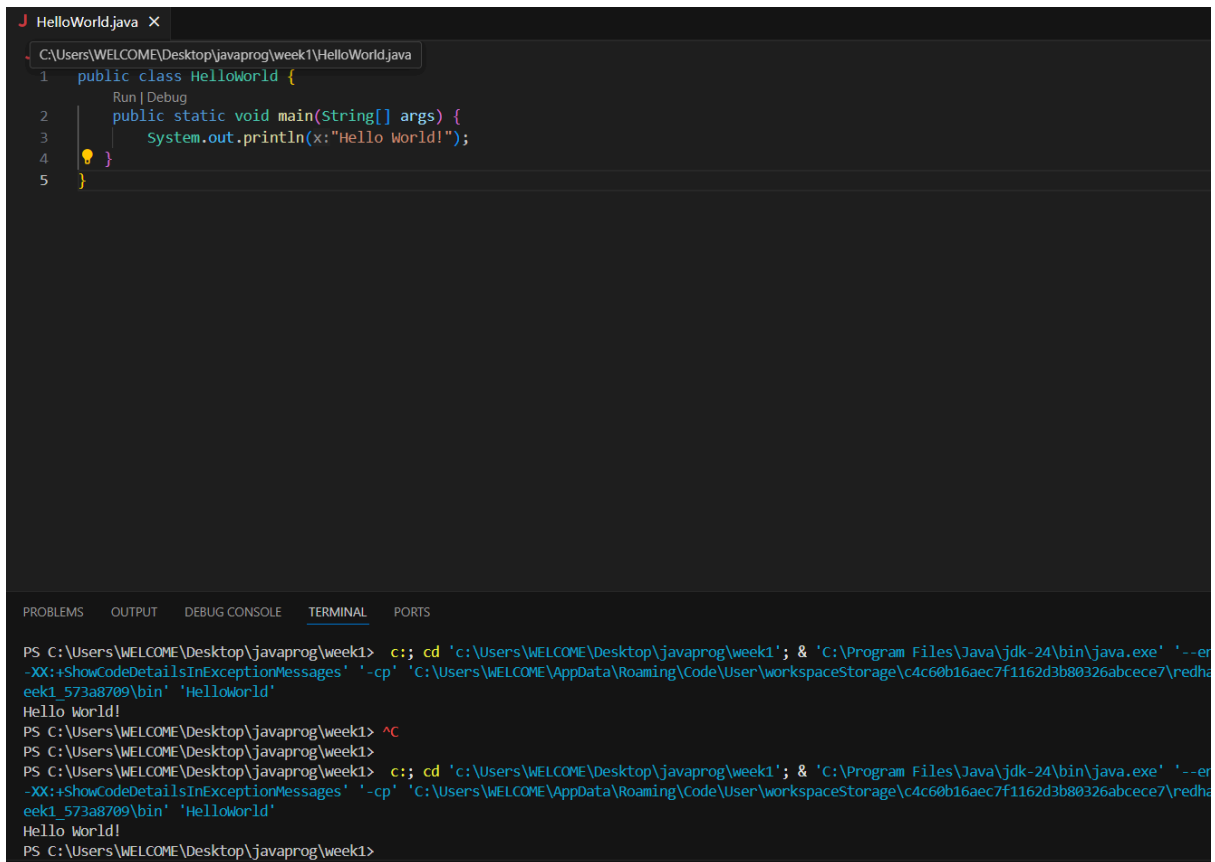
A well-formed Java  
program has a main  
method with { and } braces.

A System.out.println  
statement has ( and ) and  
usually a String that starts  
and ends with a " character.  
(But we type \" instead!)

What is the difference between  
a ' and a "? Or between a " and a \"?

One is what we see when we're typing our  
program. The other is what appears on the  
"console."

## Qn 1.



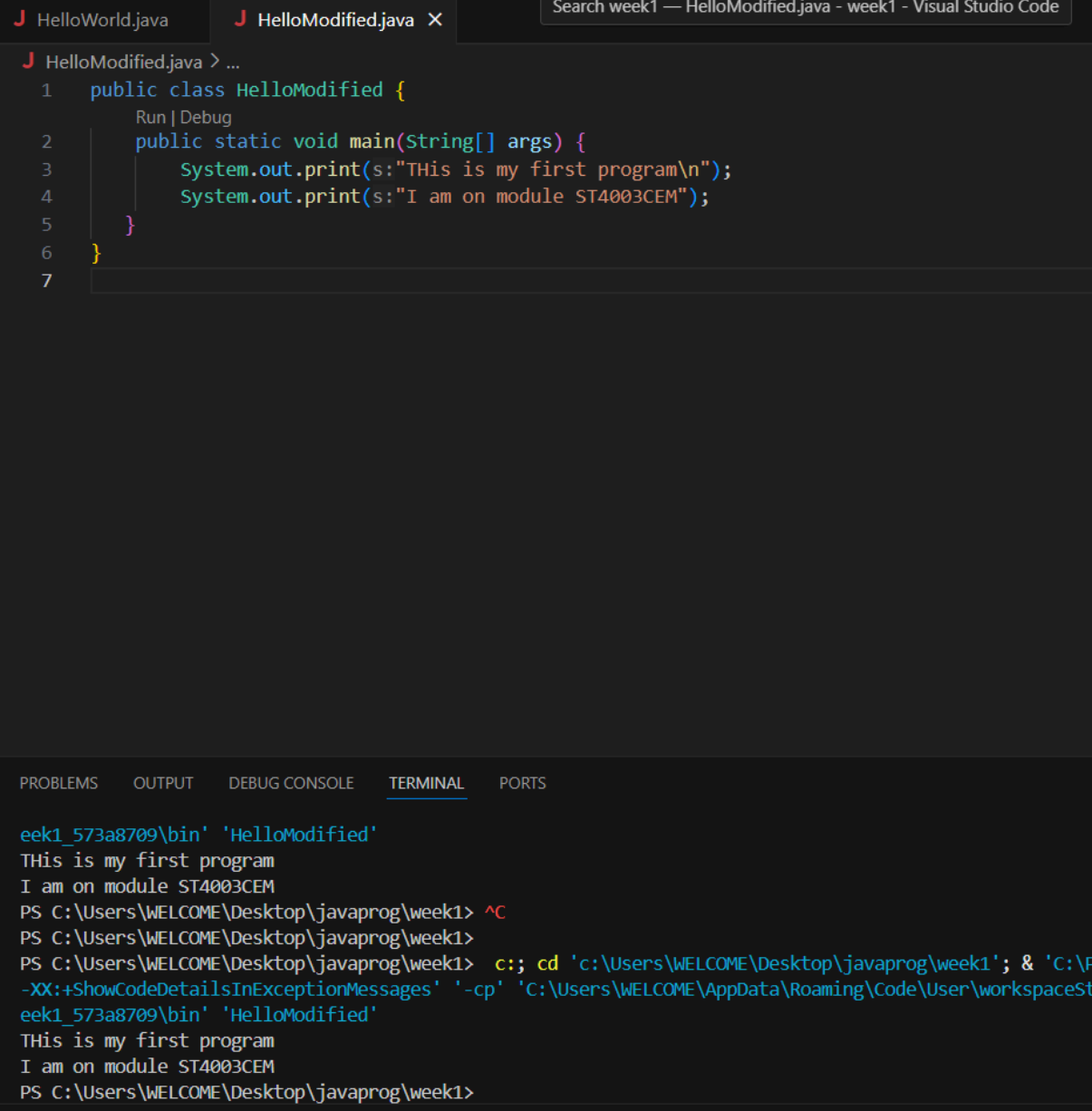
The image shows a screenshot of an IDE with a Java file named `HelloWorld.java` open. The file path is `C:\Users\WELCOME\Desktop\javaprog\week1\HelloWorld.java`. The code is as follows:

```
1 public class HelloWorld {  
2     public static void main(String[] args) {  
3         System.out.println(x:"Hello World!");  
4     }  
5 }
```

Below the code editor, the **TERMINAL** tab is active, showing the command prompt output:

```
PS C:\Users\WELCOME\Desktop\javaprog\week1> c::; cd 'c:\Users\WELCOME\Desktop\javaprog\week1'; & 'C:\Program Files\Java\jdk-24\bin\java.exe' '--er  
-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\WELCOME\AppData\Roaming\Code\User\workspaceStorage\c4c60b16aec7f1162d3b80326abcece7\redha  
eek1_573a8709\bin' 'HelloWorld'  
Hello World!  
PS C:\Users\WELCOME\Desktop\javaprog\week1> ^C  
PS C:\Users\WELCOME\Desktop\javaprog\week1>  
PS C:\Users\WELCOME\Desktop\javaprog\week1> c::; cd 'c:\Users\WELCOME\Desktop\javaprog\week1'; & 'C:\Program Files\Java\jdk-24\bin\java.exe' '--er  
-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\WELCOME\AppData\Roaming\Code\User\workspaceStorage\c4c60b16aec7f1162d3b80326abcece7\redha  
eek1_573a8709\bin' 'HelloWorld'  
Hello World!  
PS C:\Users\WELCOME\Desktop\javaprog\week1>
```

## Qn.2



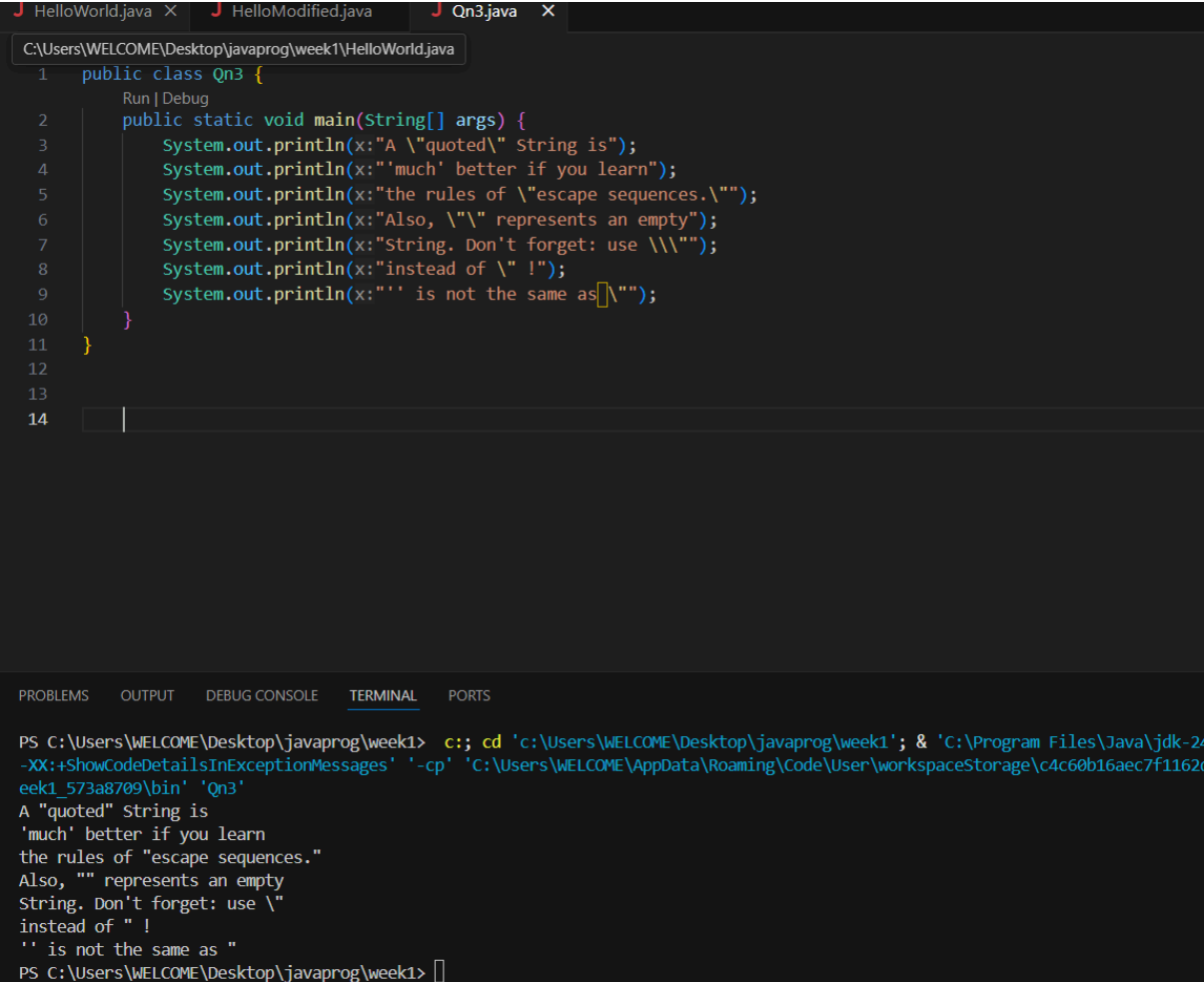
The image shows a screenshot of the Visual Studio Code editor. At the top, there are two tabs: 'HelloWorld.java' and 'HelloModified.java'. The 'HelloModified.java' tab is active, showing a Java class named 'HelloModified' with a 'main' method. The code is as follows:

```
1 public class HelloModified {  
2     Run | Debug  
3     public static void main(String[] args) {  
4         System.out.print(s:"This is my first program\n");  
5         System.out.print(s:"I am on module ST4003CEM");  
6     }  
7 }
```

Below the editor, the 'TERMINAL' panel is open, showing the output of running the program. The output is:

```
eeek1_573a8709\bin' 'HelloModified'  
This is my first program  
I am on module ST4003CEM  
PS C:\Users\WELCOME\Desktop\javaprogram\week1> ^C  
PS C:\Users\WELCOME\Desktop\javaprogram\week1>  
PS C:\Users\WELCOME\Desktop\javaprogram\week1> c:; cd 'c:\Users\WELCOME\Desktop\javaprogram\week1'; & 'c:\F  
-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\WELCOME\AppData\Roaming\Code\User\workspaceSt  
eeek1_573a8709\bin' 'HelloModified'  
This is my first program  
I am on module ST4003CEM  
PS C:\Users\WELCOME\Desktop\javaprogram\week1>
```

## Qn.3



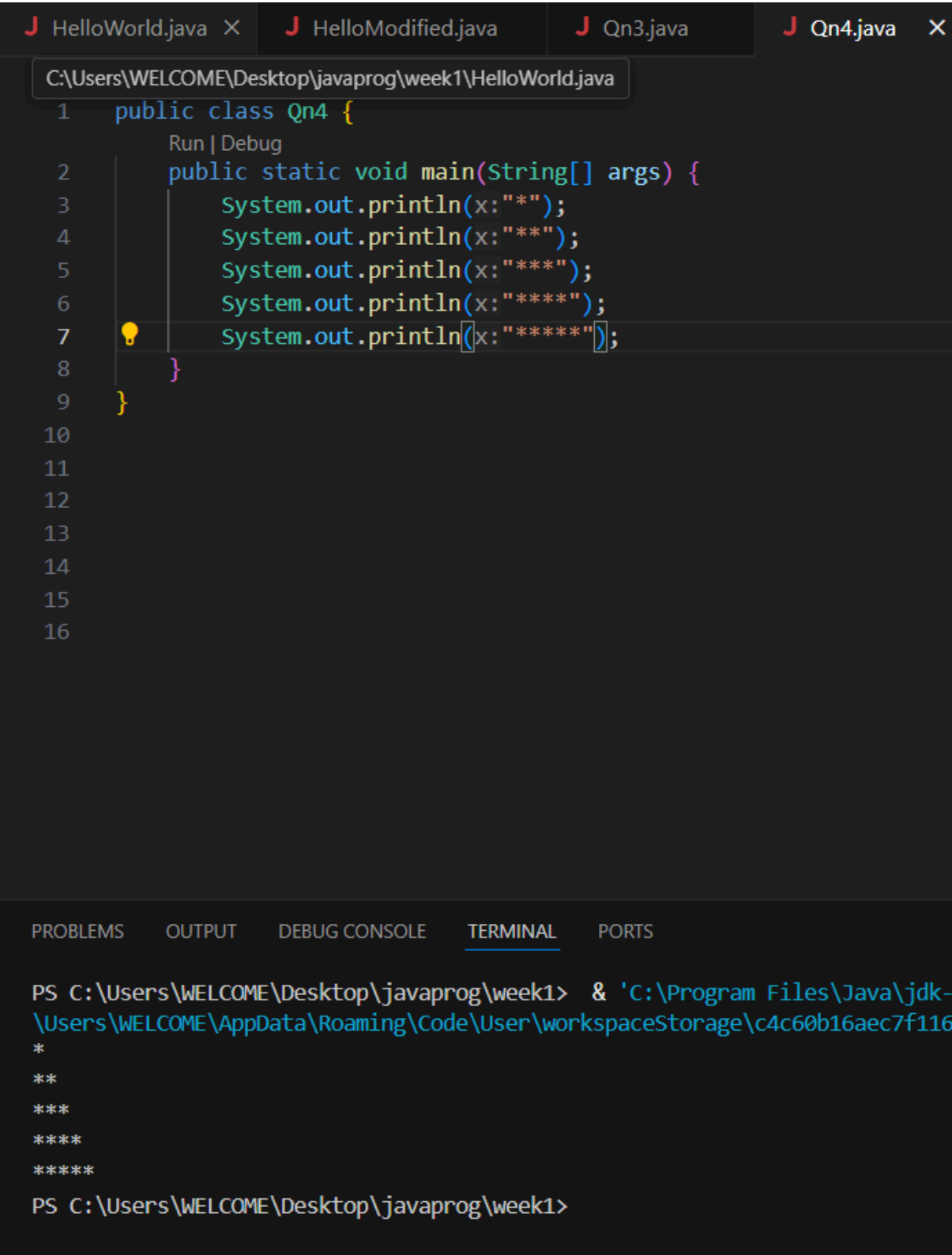
The screenshot shows an IDE with three tabs: `HelloWorld.java`, `HelloModified.java`, and `Qn3.java`. The active tab is `Qn3.java`, which contains the following Java code:

```
1 public class Qn3 {  
2     Run | Debug  
3     public static void main(String[] args) {  
4         System.out.println(x:"A \"quoted\" String is");  
5         System.out.println(x:"'much' better if you learn");  
6         System.out.println(x:"the rules of \"escape sequences.\"");  
7         System.out.println(x:"Also, \"\" represents an empty");  
8         System.out.println(x:"String. Don't forget: use \\\"");  
9         System.out.println(x:"instead of \" !");  
10        System.out.println(x:"' is not the same as \"");  
11    }  
12 }  
13  
14
```

The terminal output at the bottom shows the command executed and the resulting printed lines:

```
PS C:\Users\WELCOME\Desktop\javaprogram\week1> c::; cd 'c:\Users\WELCOME\Desktop\javaprogram\week1'; & 'C:\Program Files\Java\jdk-20.0.2\bin\java.exe' -XX:+ShowCodeDetailsInExceptionMessages -cp 'C:\Users\WELCOME\AppData\Roaming\Code\User\workspaceStorage\c4c60b16aec7f1162e0e1573a8709\bin' 'Qn3'  
A "quoted" String is  
'much' better if you learn  
the rules of "escape sequences."  
Also, "" represents an empty  
String. Don't forget: use \  
instead of " !  
' is not the same as "  
PS C:\Users\WELCOME\Desktop\javaprogram\week1>
```

## Qn.4



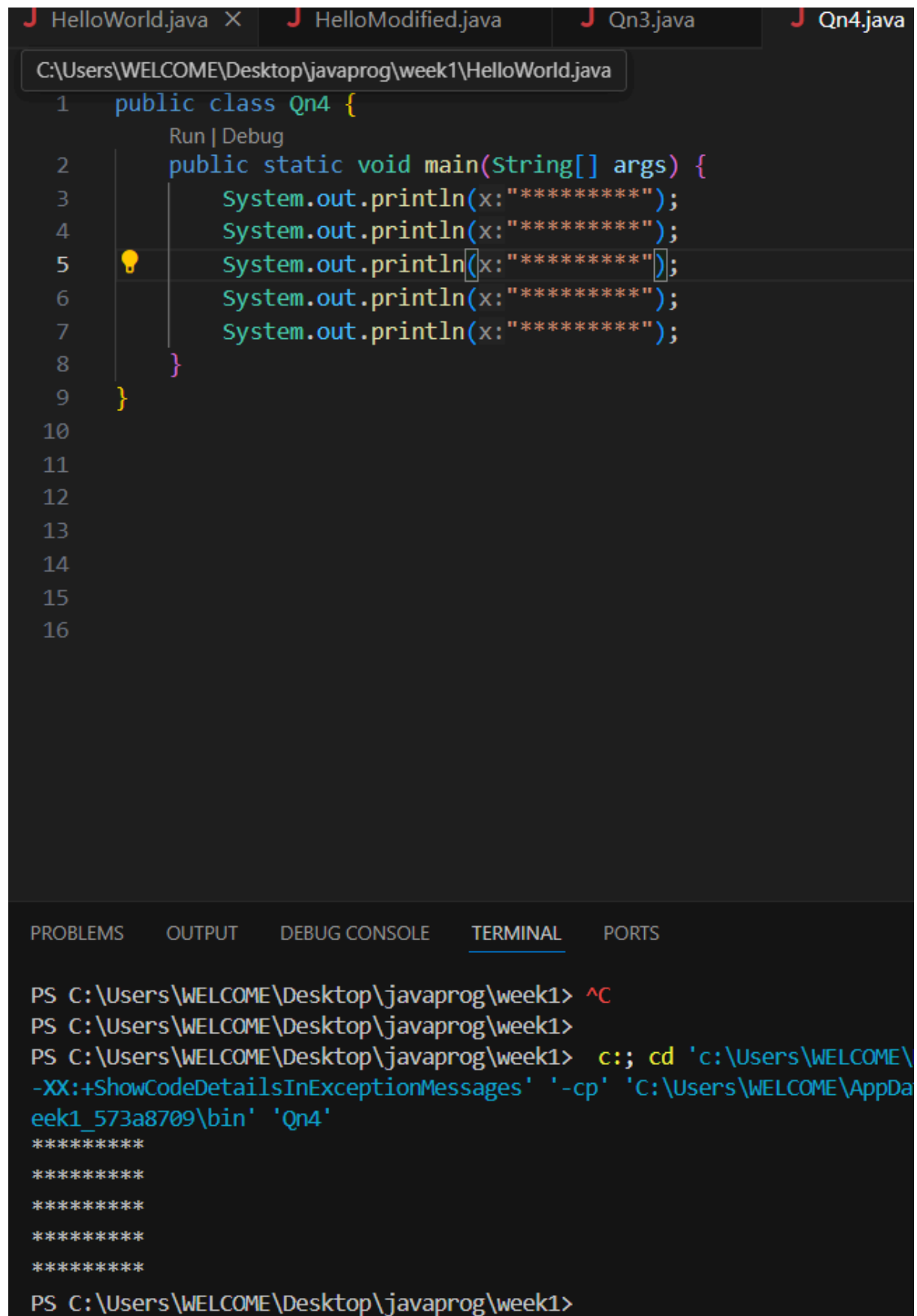
The screenshot shows an IDE with four tabs: HelloWorld.java, HelloModified.java, Qn3.java, and Qn4.java. The active tab is Qn4.java, which contains the following code:

```
1 public class Qn4 {  
2     Run | Debug  
3     public static void main(String[] args) {  
4         System.out.println(x:"*");  
5         System.out.println(x:**);  
6         System.out.println(x:***);  
7         System.out.println(x:****);  
8     }  
9 }
```

The terminal output shows the execution of the program, displaying the patterns of asterisks as specified in the code:

```
PS C:\Users\WELCOME\Desktop\javaprogram\week1> & 'C:\Program Files\Java\jdk-  
16.0.2\bin\java.exe' -cp 'C:\Users\WELCOME\AppData\Roaming\Code\User\workspaceStorage\c4c60b16aec7f116  
*  
**  
***  
****  
*****  
PS C:\Users\WELCOME\Desktop\javaprogram\week1>
```

## Qn.5



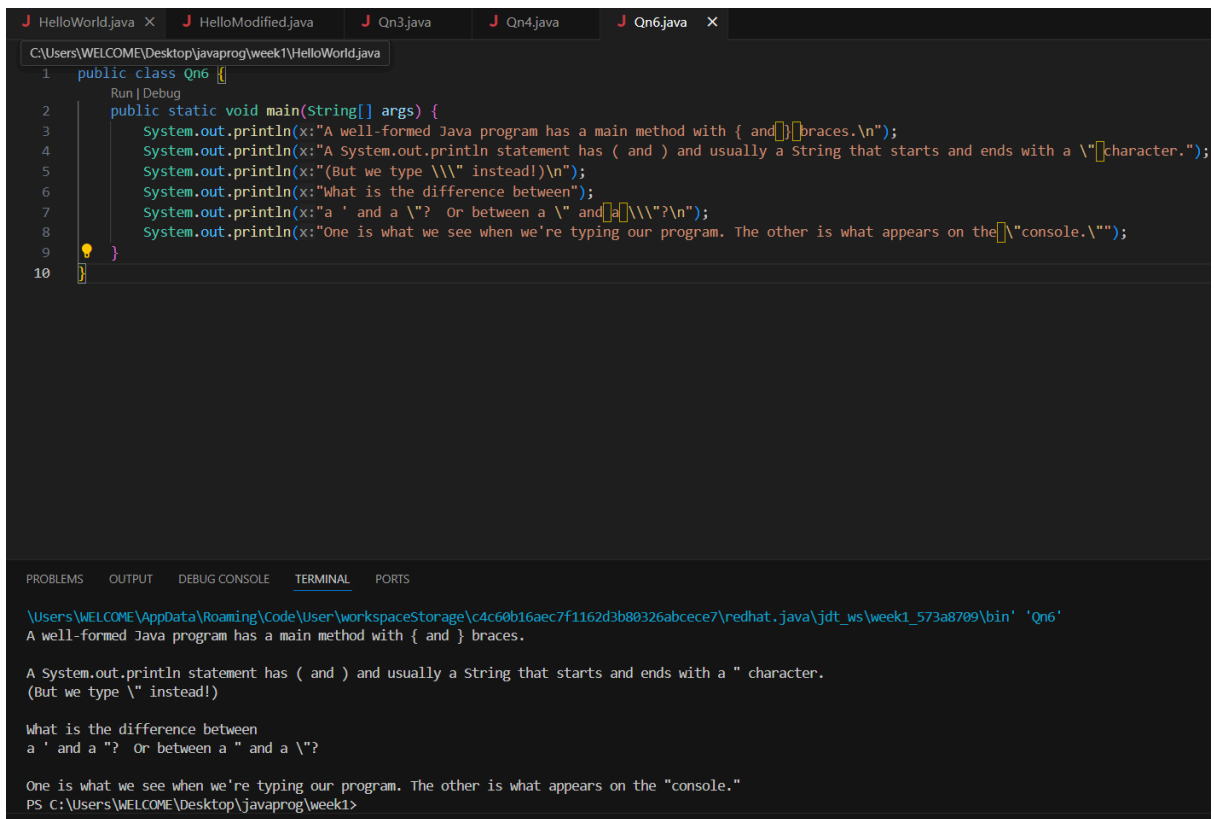
```

HelloWorld.java X  HelloWorldModified.java  Qn3.java  Qn4.java
C:\Users\WELCOME\Desktop\javaprogram\week1\HelloWorld.java
1  public class Qn4 {
    Run | Debug
2      public static void main(String[] args) {
3          System.out.println(x:"*****");
4          System.out.println(x:"*****");
5          System.out.println(x:"*****");
6          System.out.println(x:"*****");
7          System.out.println(x:"*****");
8      }
9  }
10
11
12
13
14
15
16

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\WELCOME\Desktop\javaprogram\week1> ^C
PS C:\Users\WELCOME\Desktop\javaprogram\week1>
PS C:\Users\WELCOME\Desktop\javaprogram\week1> c:; cd 'c:\Users\WELCOME\
-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\WELCOME\AppData
ee1_573a8709\bin' 'Qn4'
*****
*****
*****
*****
*****
PS C:\Users\WELCOME\Desktop\javaprogram\week1>
```

## Qn.6



The screenshot shows an IDE with a tab for `Qn6.java`. The code in the editor is as follows:

```
1 public class Qn6 {  
2     public static void main(String[] args) {  
3         System.out.println(x:"A well-formed Java program has a main method with { and } braces.\n");  
4         System.out.println(x:"A System.out.println statement has ( and ) and usually a String that starts and ends with a \" character.");  
5         System.out.println(x:"(But we type \\\" instead!)\n");  
6         System.out.println(x:"What is the difference between");  
7         System.out.println(x:"a ' and a \"? Or between a \" and a \\\"?");  
8         System.out.println(x:"One is what we see when we're typing our program. The other is what appears on the \"console.\"");  
9     }  
10 }
```

The terminal output at the bottom of the IDE shows the execution results:

```
\Users\WELCOME\AppData\Roaming\Code\User\workspaceStorage\c4c60b16aec7f1162d3b80326abcece7\redhat.java\jdt_ws\week1_573a8709\bin' 'Qn6'  
A well-formed Java program has a main method with { and } braces.  
  
A System.out.println statement has ( and ) and usually a String that starts and ends with a " character.  
(But we type \" instead!)  
  
What is the difference between  
a ' and a "? Or between a " and a \"?  
  
One is what we see when we're typing our program. The other is what appears on the "console."  
PS C:\Users\WELCOME\Desktop\javaprogram\week1>
```