

Program Output

Mr. Poole
Java

What is output?

How can a program display information?

Screen and Audio



Where does output go for Java?

Output ends up in the shell of where you ran the program!

Administrator: Command Prompt

```
C:\Users\jpoole\Desktop\Test_Code>javac starter.java
```

Compile!

```
C:\Users\jpoole\Desktop\Test_Code>java starter
```

Run!

```
Hello World
```

Output!


```
C:\Users\jpoole\Desktop\Test_Code>_
```

Output in Java

Line of code:

```
System.out.print("Hello World");
```

This prints out to the Terminal

 Administrator: Command Prompt

```
C:\Users\jpoole\Desktop\Test_Code>javac starter.java  
  
C:\Users\jpoole\Desktop\Test_Code>java starter  
Hello World  
C:\Users\jpoole\Desktop\Test_Code>_
```

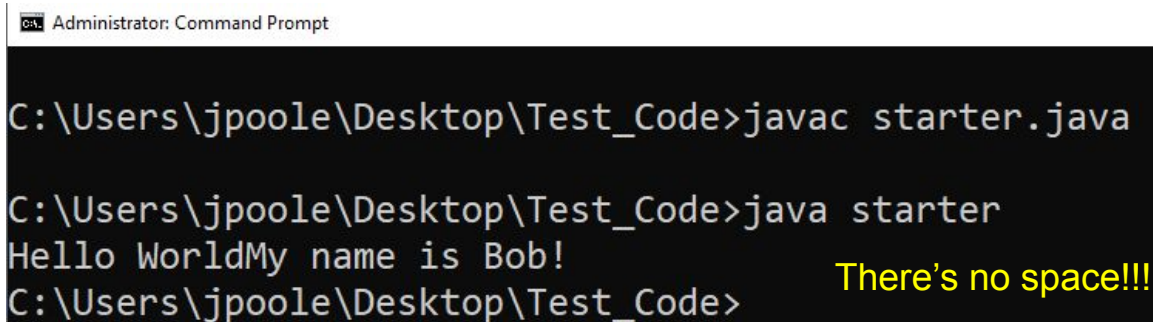
Output in Java

Let's try adding another line!

```
System.out.print("Hello World");
```

```
System.out.print("My name is Bob!");
```

This prints out to the Terminal



The screenshot shows a Windows Command Prompt window titled "Administrator: Command Prompt". The command prompt is open at the directory "C:\Users\jpoole\Desktop\Test_Code". The user has entered the command "javac starter.java" to compile the Java file. The next command entered is "java starter", which has been executed. The output of the program is displayed on the next line: "Hello WorldMy name is Bob!". The text "There's no space!!!" is written in yellow to the right of the output, indicating that the two print statements were concatenated without a space separator.

```
C:\Users\jpoole\Desktop\Test_Code>javac starter.java  
  
C:\Users\jpoole\Desktop\Test_Code>java starter  
Hello WorldMy name is Bob!  
C:\Users\jpoole\Desktop\Test_Code>
```

There's no space!!!

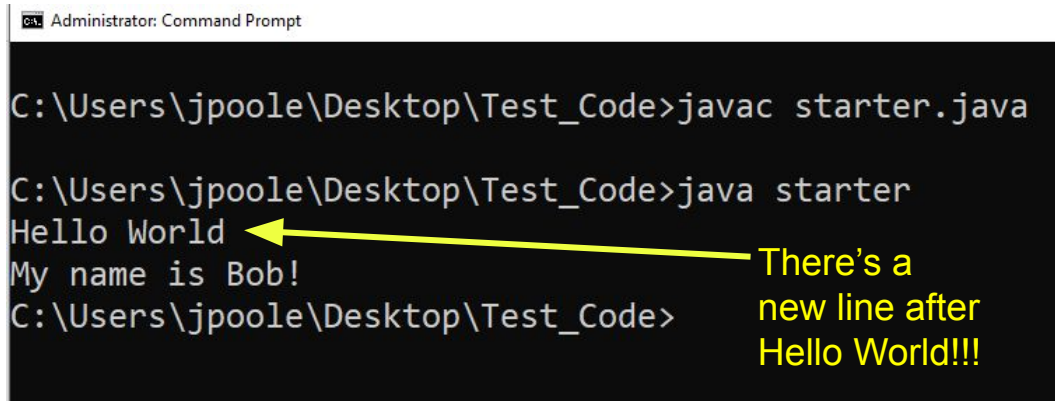
Output in Java - New Line

Adding **ln** (line) creates a new line after the String is printed.

```
System.out.println("Hello World");
```

```
System.out.print("My name is Bob!");
```

This prints out to the Terminal



```
Administrator: Command Prompt

C:\Users\jpoole\Desktop\Test_Code>javac starter.java

C:\Users\jpoole\Desktop\Test_Code>java starter
Hello World
My name is Bob!
C:\Users\jpoole\Desktop\Test_Code>
```

There's a new line after Hello World!!!

What is a String?

String Simple Definition

- A series of character *strung* together
- Enclosed by “ ”
- Can have zero or more characters

Advanced Definition: A class containing a character array and various methods in which to manipulate the character array.

Lab Notes

- Every set of **notes** will contain a **lab** at the end!
- Work on this **lab** in the **base_code** folder in the same directory
- Write your code **between** the squiggly brackets like below

```
public class starter {  
    public static void main(String args[]) {  
        System.out.println("Hello World");  
        System.out.print("My name is Bob!");  
    }  
}
```

You
code here!

Squiggly Brackets

For EVERY “open” bracket, there must be a “close”!

Always should have an even number of brackets.



```
public class starter {  
    public static void main(String args[]) {  
        System.out.println("Hello World");  
        System.out.print("My name is Bob!");  
    }  
}
```

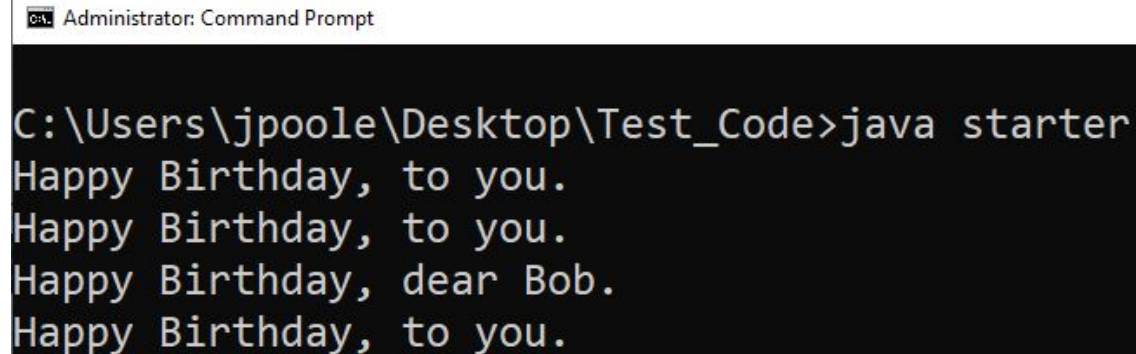
Diagram illustrating the matching of curly brackets in the code snippet above:

- Open 1:** Points to the opening curly bracket `{` at the end of the first line (`public class starter {`).
- Open 2:** Points to the opening curly bracket `{` at the end of the second line (`public static void main(String args[]) {`).
- Close 2:** Points to the closing curly bracket `}` at the end of the fourth line (`}`).
- Close 1:** Points to the closing curly bracket `}` at the end of the fifth line (`}`).

Lab: Output

- Write a program that outputs the Happy Birthday song to the screen.

Output should like such:



The screenshot shows a Windows Command Prompt window titled "Administrator: Command Prompt". The command prompt displays the following text:

```
C:\Users\jpoole\Desktop\Test_Code>java starter  
Happy Birthday, to you.  
Happy Birthday, to you.  
Happy Birthday, dear Bob.  
Happy Birthday, to you.
```