

Worksheet: String Class Basics**1. Fill in the boxes with the correct code segment**

- a) Given a variable named `myString` of type `String`, write a statement that will print the length of (the number of characters in) the string.

- b) In Java, objects are usually created using the `new` keyword, such as:

```
String s = new String("Hello!");
```

However, there is a simplified method of declaring and initializing a `String` object in Java. In the box below, write the simplified method of *declaring* an *initializing* the exact same string as in the code statement above.

- c) Consider the following code:

```
String s = /* missing code */ ;  
System.out.print( s );
```

What code segment would replace `/* missing code */` such that executing the code would result in precisely the output:

```
I said:  
"Hello!"
```

- d) Consider the following code segment with preceding line numbers:

```
1 | boolean comp = ( str1 == str2 );  
2 | System.out.print( comp );
```

Both `str1` and `str2` are valid `String` objects, and both contain the same sequence of characters; however, the equality comparison `str1 == str2` returns the value `false`. Please rewrite line 1 of the code such that `comp` will be evaluate to `true` when the `str1` and `str2` contain the same sequence of characters, and `false` if they do not.

- e) Write a Java expression that will return the last 3 characters of a string with the identifier `str`.

- f) Given two variables, `str1` and `str2`, both of type `String`, write Java code that will print out the string that is the first of the two lexicographically (basically alphabetically).

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- g) Assuming `str1` and `str2` are never `null`, write a java expression using the string method `compareTo` that will always evaluate to the same value as the expression:
`str1.equals(str2)`

- h) Write a chained `if` statement that will determine the longest of the three strings `"pea"`, `"pear"`, and `"pearl"` that occur in variable `str` of type `String`. For example, if `str` has the value `"the pear in the bowl"`, the code segments should both print `"pear"` and if `str` has the value `"the pea and the pearl"`, the code segments should both print `"pearl"`. Assume that `str` contains at least one instance of `"pea"`. Use only `String` methods from the *AP Java Subset* (which does not include the method `contains`).

2. Given the following method header, write the method body that performs linear search on the array parameter named `arr` to search for the string given in the `String` parameter named `value`, and returns the index of the first location in the array containing the string (returning `-1` if the string is not found in the array).

```
public static int linearSearch(String[] arr, String value) {
```

```
}
```