Review on String Parsing and Loops

Strings

1.)
   a.) What type does the method length return? ____int______
   b.) What type does the method substring return? ___String______
   c.) What type does the method indexOf return? ____int______
   d.) What type does the method charAt return? _____char_____

2.) Suppose you have the variable myString of type String with data “Go Tar heels! Beat Dook!” Write out the data stored in myString and place the index of each character below the string. (See page 83 if you have questions)

   | G | o | T | a | r | H | e | e | l | s | ! | B | e | a | t | D | o | o | k | ! |
   | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10| 11| 12| 13| 14| 15| 16| 17| 18| 19| 20| 21| 22| 23|

3.) Give the return type and data of the following method calls on myString (defined in question 2).
   a.) myString.length();
       int len = 24;
   b.) myString.trim();
       String theString = “Go Tar Heels! Beat Dook!”
   c.) myString.substring(7);
       String sub = “Heels! Beat Dook!”;
   d.) myString.indexOf(“!”);
       int index = 12;
   e.) myString.lastIndexOf(“ “);
       int index = 18;
Loops

4.) What is the value of \texttt{temp} at the end of the loop for the following input? \[5\]
4 6 2 7 6 4 1 9 8 -1

```java
System.out.print("Please input an int: ");
int input = kb.nextInt();
temp = 0;
while (input > 0)
{
    if(input > 5)
        temp++;
    System.out.print("Please input an int: ");
input = kb.nextInt();
}
```

What is a better name for \texttt{temp} (Think about what the program is doing)? \[\text{greaterthan5}\] (there are many good names)

5.) What is the value of \texttt{temp} at the end of the loop for the following input? \[10\]
3 5 -1 7 4 10 4 10 6

```java
System.out.print("Please input an int: ");
in = kb.nextInt();
temp = input;
for(int i = 0; i < 7; i++)
{
    if(input > temp)
        temp = input;
    System.out.print("Please input an int: ");
in = kb.nextInt();
}
```

What is a better name for \texttt{temp} (Think about what the program is doing)? \[\text{max}\]

6.) What is the value of \texttt{temp} at the end of the loop for the following input? \[44\]
4 7 2 8 4 5 9 1 1 3 -1

```java
int temp = 0;
do
{
    System.out.print("Please input an int: ");
in = kb.nextInt();
temp += input;
}while(input > 0);
```

What is a better name for \texttt{temp} (Think about what the program is doing)? \[\text{sum}\]