Show Header

writeChars

Language/Type: Java recursion recursive programming
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Write a method `writeChars` that accepts an integer parameter *n* and that prints out *n* characters as follows. The middle character of the output should always be an asterisk ("*"). If you are asked to write out an even number of characters, then there will be two asterisks in the middle ("**"). Before the asterisk(s) you should write out less-than characters ("<"). After the asterisk(s) you should write out greater-than characters (">"). For example, the following calls produce the following output:

Call	Output
`writeChars(1);`	`*`
`writeChars(2);`	`**`
`writeChars(3);`	`<*>`
`writeChars(4);`	`<**>`
`writeChars(5);`	`<<*>>`
`writeChars(6);`	`<<**>>`
`writeChars(7);`	`<<<*>>>`
`writeChars(8);`	`<<<**>>>`

Your method should throw an `IllegalArgumentException` if passed a value less than 1. Note that the output does not advance to the next line.

Type your solution here:

```
1  public void writeChars(int n) {
2      if(n <= 0) {
3          throw new IllegalArgumentException("n must be 1 or greater");
4      }
5      if(n == 1) {
6          System.out.print("*");
7      }
8      else if(n == 2) {
9          System.out.print("**");
10     }
11     else {
12         System.out.print("<");
13         writeChars(n-2);
14         System.out.print(">");
15     }
16 }
```

This is a **method problem.** Write a Java method as described. Do not write a complete program or class; just the method(s) above.

4 Indent

Sound F/X

Highlighting

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You passed 6 of 6 tests.

Go to the next problem: printTwos

test #1:	`writeChars(1);`
console output:	`*`
result:	pass
test #2:	`writeChars(2);`
console output:	`**`
result:	pass
test #3:	`writeChars(4);`
console output:	`<**>`
result:	pass
test #4:	`writeChars(7);`
console output:	`<<<*>>>`
result:	pass
test #5:	`writeChars(19);`
console output:	`<<<<<<<<<*>>>>>>>>>`
result:	pass
test #6:	`writeChars(0);`
console output:	
exp. exception:	`IllegalArgumentException`
your exception:	`IllegalArgumentException on line 3: n must be 1 or greater`
stack trace:	`IllegalArgumentException: n must be 1 or greater` `writeChars, line 3`
result:	pass

If you do not understand how to solve a problem or why your solution doesn't work, please contact your TA or instructor.