

Nasty Nested Choices: Dangling

The following Java code was intended to output "lo" if the percent p is less than 50, and output "hi" if it is greater than 90. Show, on the truth table, what it actually produces in all cases, and then code it properly in three different ways in Java.

					OUTPUT	
<code>// s = "UnDefined"; if (p >= 50)</code>	range	p	(p >= 50)	(p > 90)	actual	proper
<code> if (p > 90)</code>	0..50	33	false	false	UD	Lo
<code> s = "Hi ";</code>	not so	??	false	true	NS	NS
<code>else</code>	51..90	66	true	false	Lo	--
<code> s = "Lo ";</code>	91..100	99	true	true	Hi	Hi

`System.out.println(s);`

<pre>// Proper bracket if (p >= 50) { if (p > 90) s = "Hi "; } //EndIf else s = "Lo "; System.out.println(s);</pre>	<pre>// Proper bracket if (p <= 90) { if (p < 50) s = "Lo "; } //EndIf else s = "Hi "; System.out.println(s);</pre>
<pre>// If-ElseIf nest if (p < 50) s = "Lo "; else if (p > 90) s = "Hi "; System.out.println(s);</pre>	<pre>// If-ElseIf nest if (p > 90) s = "Hi "; else if (p < 50) s = "Lo "; System.out.println(s);</pre>
<pre>// Series of Ifs if (p < 50) s = "Lo "; if (p > 90) s = "Hi "; System.out.println(s);</pre>	<pre>// Series of Ifs if (p > 90) s = "Hi "; if (p < 50) s = "Lo "; System.out.println(s);</pre>

It may be instructive to draw a flow block of each structure