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C212 Homework 05
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1. The variable ***what*** gets established, and a member of the *What* class contains two values: one *int*, and another *What*. So the variable ***what*** contains the variables:

   (5, new What(4, new What(3, new What(2, new What(1, null)))));

   The toString() orders to return the int value plus there's an if statement essentially saying *if this.next == null*, to *return " "*; else to *return " " + this.next*.

   Therefore, the *What what* prints descending values, "5 4 3 2 1".

2. The zoom function creates a temporary ***What temp*** that becomes ***what***'s (or ***b***'s, according to the method) *next* value, which is a string of *What*'s in a row. It then modifies the value ***b.next*** to be equal to ***a***, and this is what the function is meant to do. It places numbers in increasing order. Lastly in order to do this, it returns *zoom(b, temp)*, iterating until the *What* is solved. It then returns the string "1 2 3 4 5".

3.

This section will be tracing the variables as they run in the program:

before zoom
a = null, b = (5 4 3 2 1)
after zoom
a = null, b = (5), temp = (4 3 2 1)

before zoom
a = (5), b = (4 3 2 1)
after zoom
a = (5), b = (4 5), temp = (3 2 1)

before zoom
a = (4 5), b = (3 2 1)
after zoom
a = (4 5), b = (3 4 5), temp = (2 1)

before zoom
a = (3 4 5), b = (2 1)
after zoom
a = (3 4 5), b = (2 3 4 5), temp = (1)

before zoom
a = (2 3 4 5), b = (1)
after zoom
a = (2 3 4 5), b = (1 2 3 4 5)

b gets returned, “1 2 3 4 5”.

- Another good name for *zoom* would be reverse, because its function is to reverse the *What*'s.