Steps (of an algorithm) written in English are commands to do something

A description of execution of a Java statement is an algorithm, giving the sequence of steps to be carried out. Let’s take a look at another kind of algorithm, a cooking recipe.

Here is the start of a recipe taken from the internet for making refrigerator dill pickles. We show the first three steps. Each step is written as a command to do something. It doesn’t say who is to execute the statement.

We use the same style when writing an algorithmic step in English: We write a command to do something. That’s how we present execution of the assignment statement:

Evaluate the <expression>.
Store its value in the <variable>.

When you write algorithmic steps in English, make them commands, as every cooking recipe does.

How not to write a command

In describing the assignment statement, many write sentences like this:

1. Java evaluates the expression …
2. The computer will store …
3. Space is allocated in the computer …

First, Java doesn’t do anything. It is just a programming language. Saying that Java evaluates something is not correct, although we all—including the instructors—do it sometimes. Try not to do it. A person or a computer is doing the evaluation, not Java.

Second, sentences 2 and 3 suggest that only a computer can execute a Java statement. But we can execute the statement too!

If cooking recipes were to be written in the form of sentences 2 and 3, they would contain sentences like:

The chef stirs water, vinegar, sugar, and sea salt together in a saucepan over high heat.

In the chef’s kitchen, there is a stove, and the chef puts the pot on it and brings the contents to a boil.

You laugh at this! But realize that many people use this style in describing Java statements and other algorithms.

Don’t do that. Instead, use the style used in all cooking recipes.