

Pseudocode Motivation (v. 1.0)
BE-205, Winter '08, Dr. C. S. Tritt

I noticed few, if any, students created pseudocode before starting on the lab assignment last week. I think that if you understand the purpose and usefulness of pseudocode you might be more inclined to use it.

What is pseudocode for?

Pseudocode (and for that matter flowcharting) can serve several purposes. These include aiding in the design of a program, documenting the design of a program and communicating the design of a program. Pseudocode is intended to capture the detailed sequence of operations necessary to solve a problem using a program. The rules of pseudocode are less strict than those of Matlab, allowing you to concentrate on the logic of the program rather than the details of the language. However, the communications aspect of pseudocode requires some standardization so others can understand it.

When should pseudocode be written?

After you thought through the programming problem, but before you start writing the Matlab code to solve it.

Why bother with pseudocode?

Pseudocode provides you with a chance to focus on the sequence of steps required to solve a problem, without having to worry about the details of Matlab syntax and function names. You'll probably find your design will change somewhat as you convert your pseudocode into Matlab. As you gain experience, you'll find that designing your program (figuring out the sequence of steps) will get easier and your familiarity with Matlab will increase so you may be able to skip the pseudocode completely (but your professor or employer may still require it).

What are some specific differences between pseudocode and Matlab?

The structure of pseudocode control constructs is communicated via indentation while the structure of Matlab constructs is based on keywords (particularly *end*).

Assignment in pseudocode is indicated using a left or right pointing arrow (either is acceptable provided it points to the variable being assigned to) while in Matlab a single equals sign indicates assignment and the variable being assigned to must be on the left.

Tests for equality in pseudocode are indicated with words or single equals signs while in Matlab double equals signs must be used to test for equality of numeric and logical values and *strcmp* (or related functions) are used to compare string values.