

For next time read LCR, ch. 3.

For this class you do not need a laptop at all!

All your programming can be done on EECS departments lab machines (Hydra and Cetus labs), and in fact all your programs will have to run on these computers in order to be graded.

These are linux machines (Ubuntu 8.10). This is because we think that everyone serious about computing need to be able to use linux.

We would like you to be able to run your robot programs on your own laptop (if have one). The problem is the Myro software has to be installed on your laptop. We are trying to make it easier to install Myro on your laptops. Right now, we have a Mac OSX package that should work fine. Windows is a real problem. So for Windows, the solution is for you to install a free virtual machine, and install linux on the virtual.

### Functions:

Two analogies:

Suppose you have a book, "How to build your own house."

There might be a chapter or appendix "How to build a window."

So the same procedure would work, no matter how wide or tall the window is supposed to be. This appendix would tell you how to do it in terms of parameters  $W$  and  $H$ .

Now anywhere in the book where you are supposed to build a window, it can refer to this appendix.

So in the Kitchen chapter, if you are supposed to build a 3' wide window, it says:

"Build a window 3' wide and 2' high (see appendix)."

Maybe in the dining room, with a wall of length  $L$  (which you can choose), it tells you:

"Build two windows, each of width  $L/2 - 1$  and height 2.5' (see appendix)."

The Build a Window appendix might make use of a Cut a Pane of Glass appendix.

And so on.

This is the way a large program is structured.

Procedures "calling" or "invoking" subprocedures, which may call other subprocedures, etc. When a subprocedure is done, it returns to its caller, which picks up where it left off.

In C++ these procedures and subprocedures are all called functions.

Another analogy.

Giving a job to a subordinate to do.



You put something in the subordinate's In Box. They take it out. Do what they are supposed to do with it. And they put the result in their Out Box. Then you come along and retrieve it from their Out Box.