Chapter 01 - Getting and Starting Matlab

First you'll have to get Matlab.

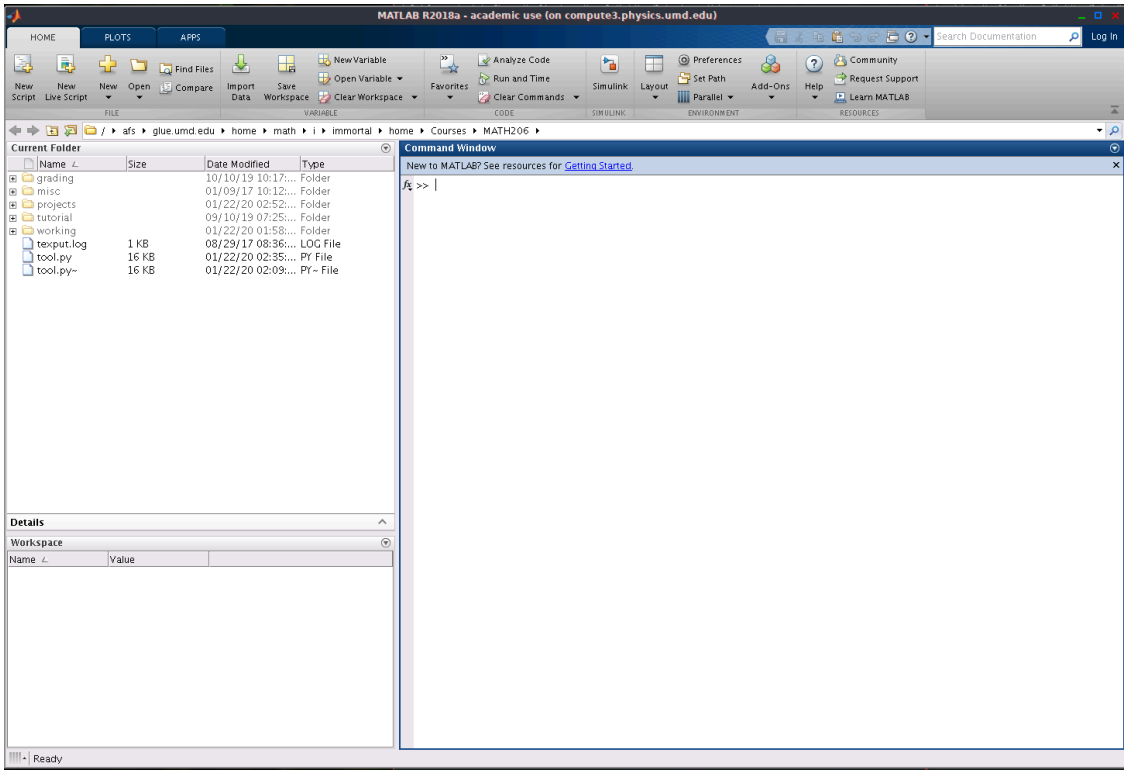
Three Ways

There are three primary ways in which you can obtain Matlab but I'm only going to recommend two of them as the third one is rife with file access problems which I cannot help with:

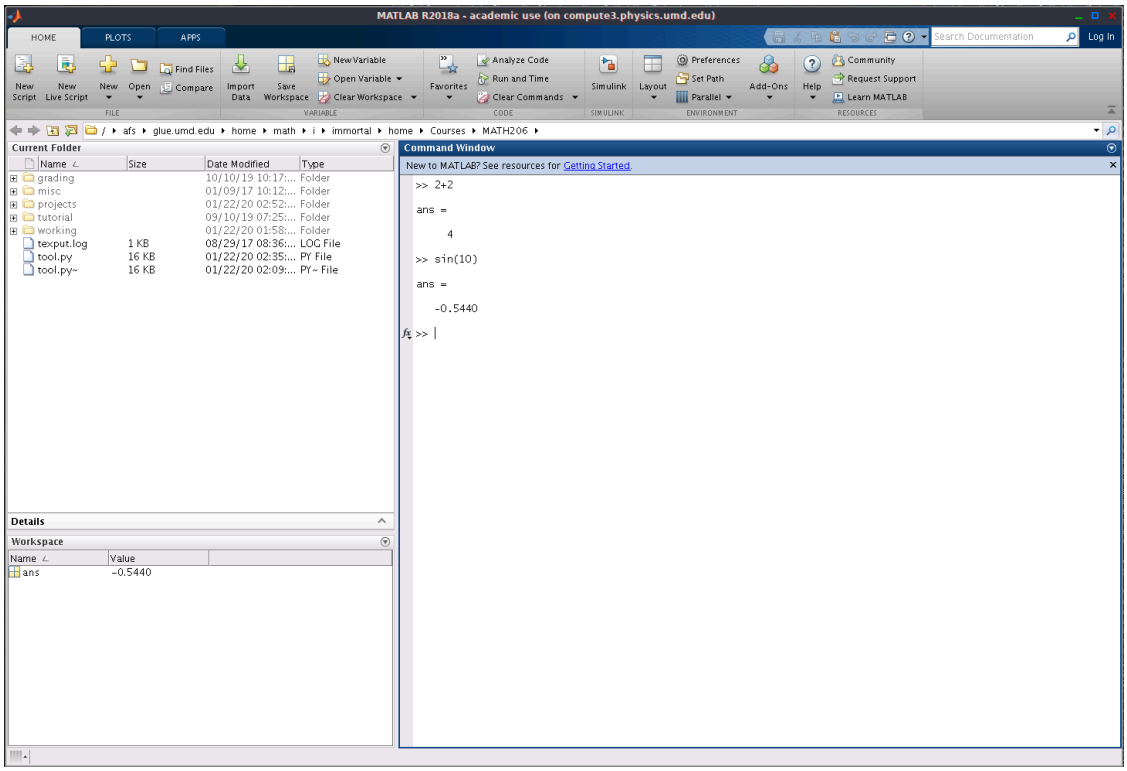
1. Free, as a student, through the university. You should do this. This is the best way: Follow the link https://terpware.umd.edu and follow the Analysis and Modeling link. We strongly recommend this way because it guarantees you your own functioning copy of Matlab on your own machine.

2. On a machine in any one of the various labs on campus that carry it. I can't keep track of which labs exist, or don't exist, or have Matlab, or don't, so I'm leaving this to you to find out.

The first time you run Matlab you'll see something like the following:



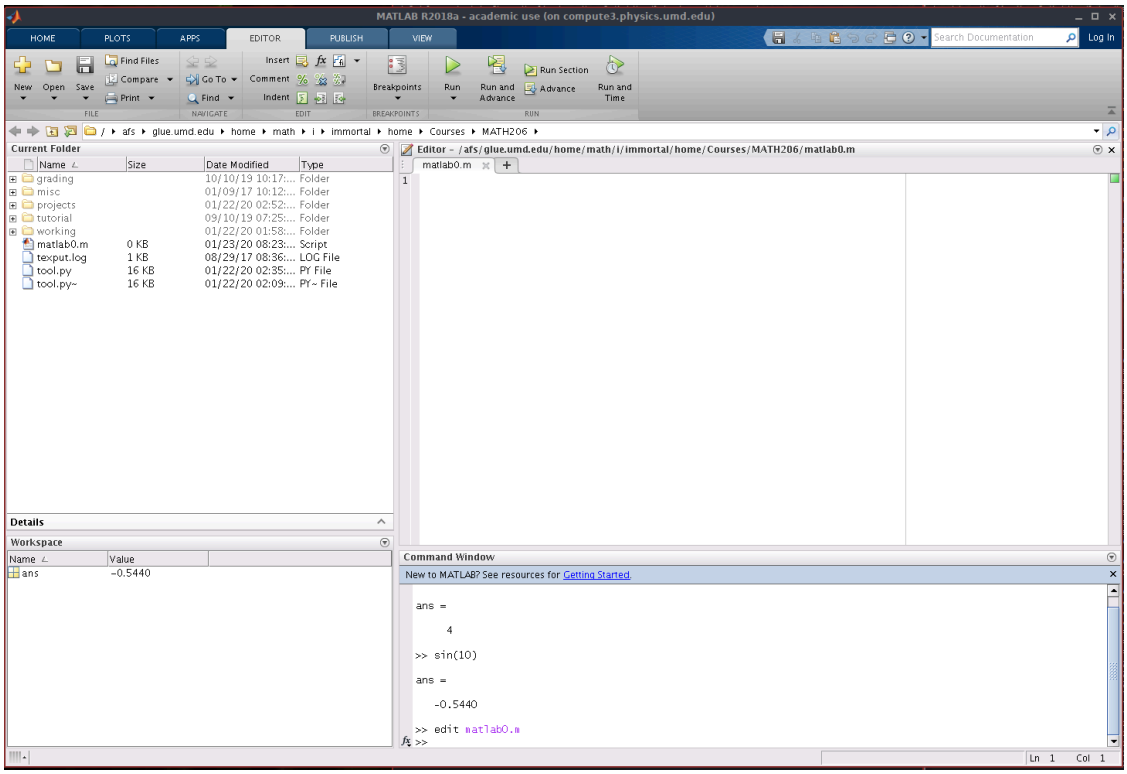
The large window you see is the command window. This window acts a bit like a calculator, you can type commands in it and they'll run when you press Enter. For example:



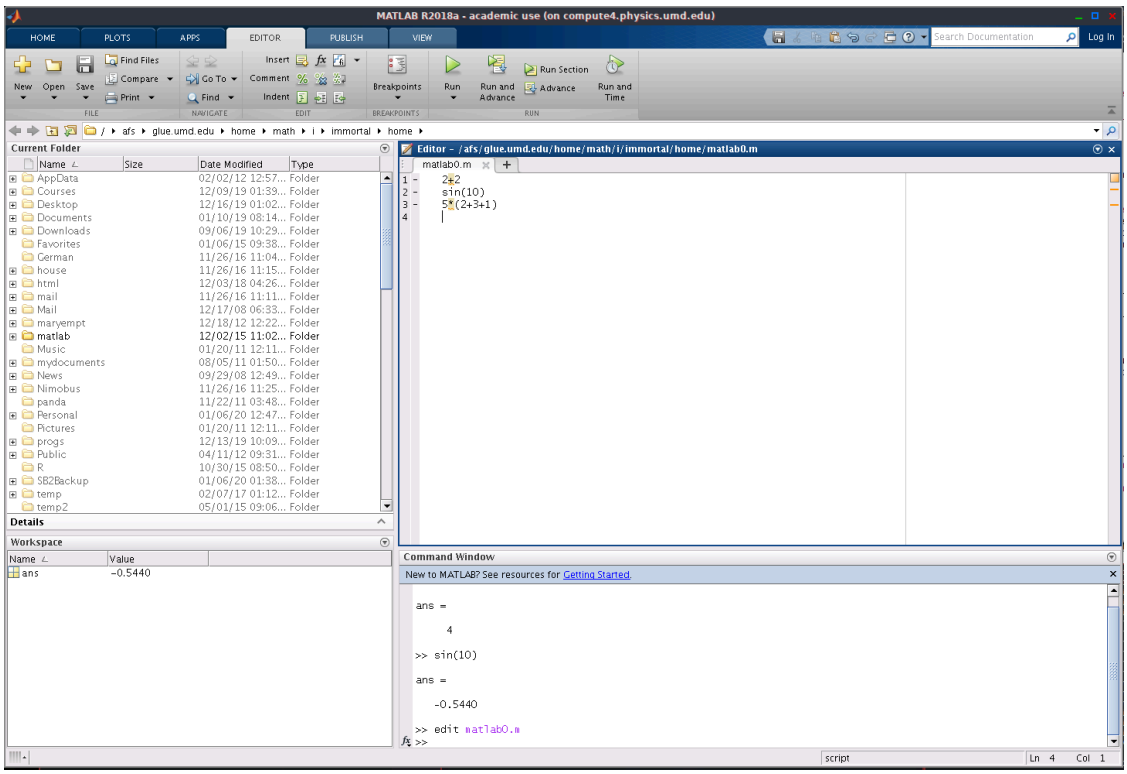
Feel free to play around in this window and try things out. You may type in things that cause errors and that's fine, just play.

In most situations however this isn't how we work. Rather we create a file called a **script m-file** and in this file we put a series of commands. These commands then run one after the other When we Run the script m-file.

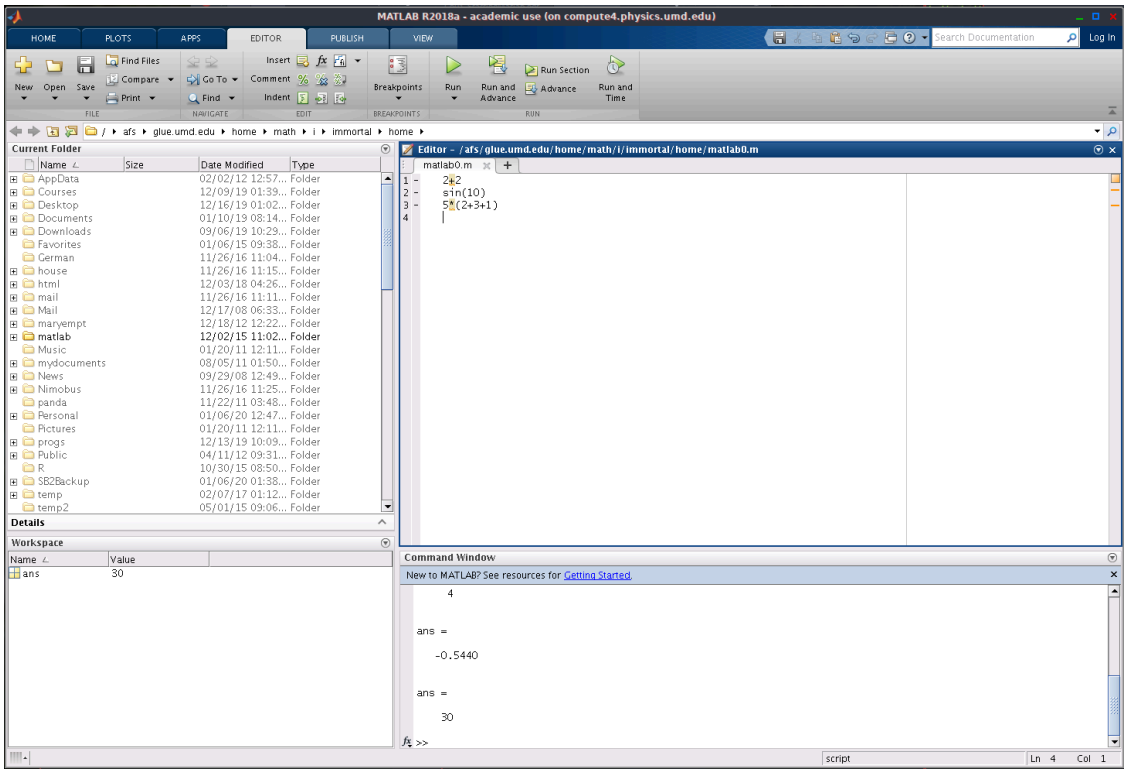
The file for the first project will be called `matlab0.m` and you can open it by typing `edit matlab0.m` in the command window and pressing Enter. When you do this a new window opens. The command window shrinks and the new edit window appears.



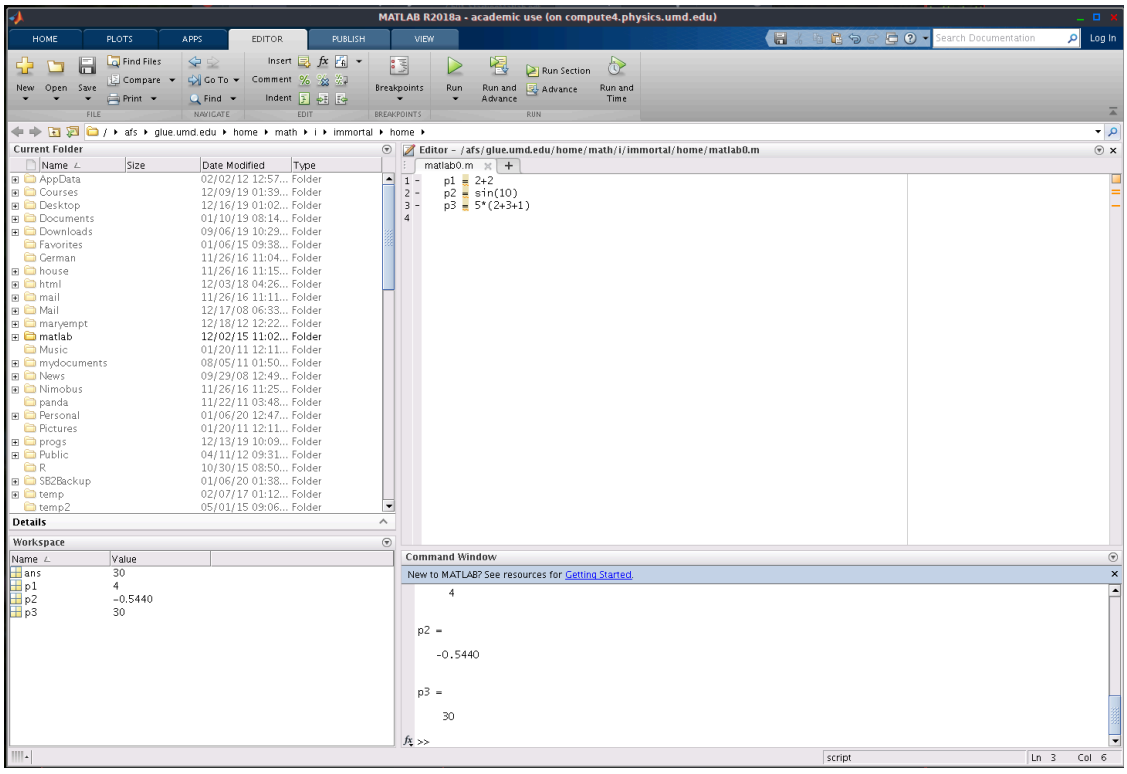
In this edit window you can now type line after line of Matlab commands which will not run immediately.



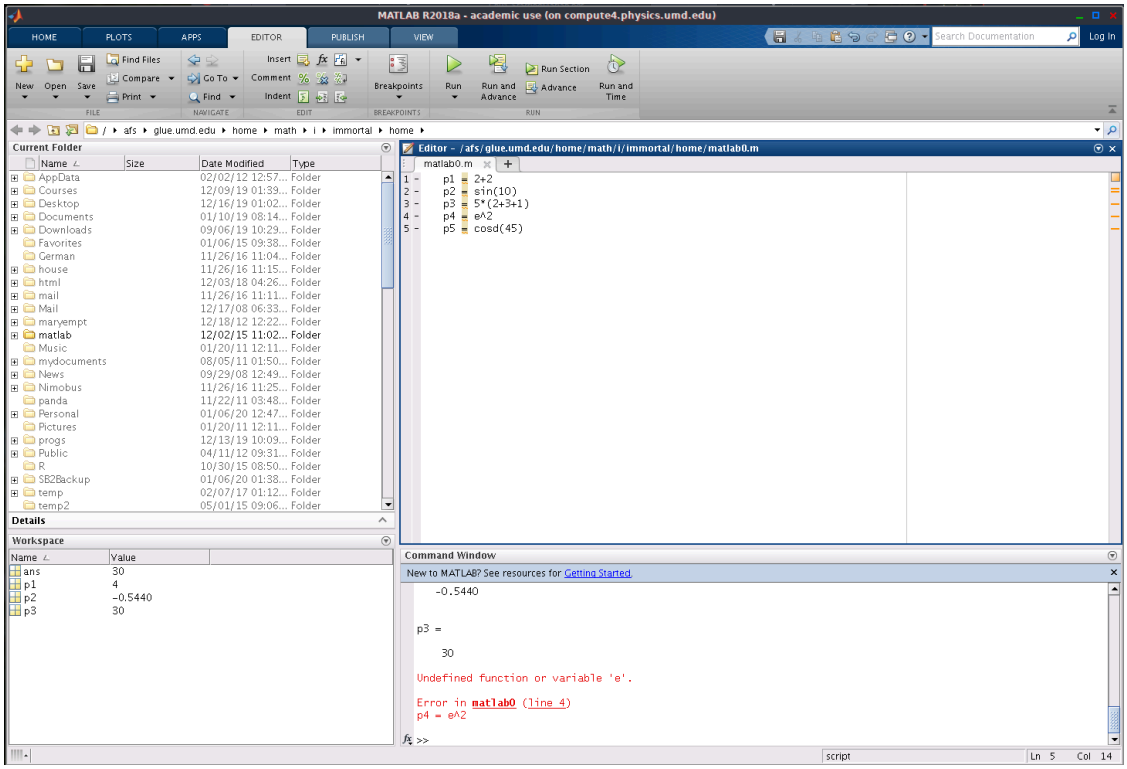
When you press the Run button these commands will run in turn and their output will appear in the command window.



Furthermore for the first few projects in this class you'll be assigning the output of your calculations to specific variables. For example to assign our three calculations to the variables `p1`, `p2` and `p3` respectively we simply change the script m-file and re-run:



One important thing to note about script m-files is that if one of your lines has an error then the script will cease running at that point and any later lines will not run. For example here's the above script extended with an error in the fourth line and then run.



After running this you can see the error show up in the command window. Since the error was in the `p4` line, any remaining lines did not run.

Now then, for this tutorial we will go through a bunch of Matlab commands that do certain things. You can test them out by simply typing them directly in the Command Window and pressing Enter, and this is usually a good approach. However keep in mind that for Projects 0,1 and 2 you'll need to write script m-files with commands in them and it's these script m-files which you will submit!

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