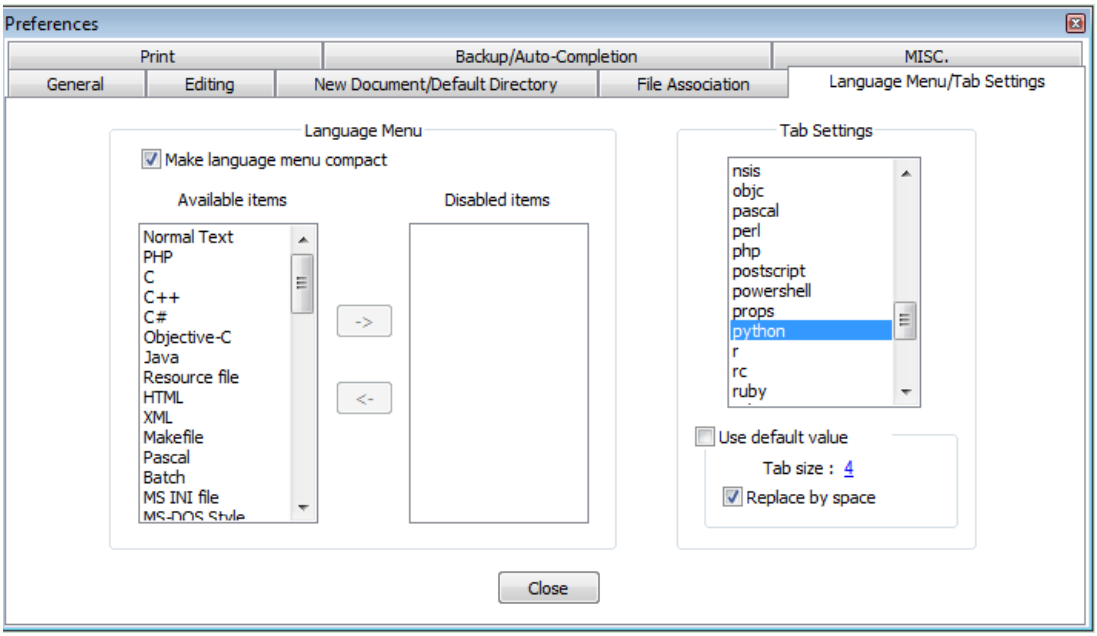
Pygame and PyBox2d Installation Instructions for Windows 7 (J-term 2013):

1. Go to this Gustavus network share from Windows Explorer: \\pascal.physics.gac.edu\classes\pygame.
   You'll be prompted for login credentials. Use the following credentials (without the quotes). Be sure to capitalize Newton:
   a. user: "newphysics\w7phys"
   b. user password: "Newton"
2. From an administrative account, run (double click, or run from a Window's command prompt) the following installation files (in this order) that are contained in the "downloaded_installables" folder. Just click through the install questions accepting all the defaults:
   a. python-2.7.3.msi
   b. setuptools-0.6c11.win32-py2.7.exe
   c. pygame-1.9.2a0.win32-py2.7.msi
   d. Box2D-2.1b1.win32-py2.7.exe

3. In the order given here, run the notepad++ installation files from the "downloaded_installables\notepad++" folder.
   a. npp.6.2.2.Installer.exe
   b. Aspell-0-50-3-3-Setup.exe
   c. Aspell-en-0.50-2-3.exe
4. Before we forget, run notepad++ and set an important editing option:
   From the notepad++ main menu, go to settings/preferences/language menu, select the python language and then set the "Tab size" to 4 and check the "Replace by space" option. It should look like this:

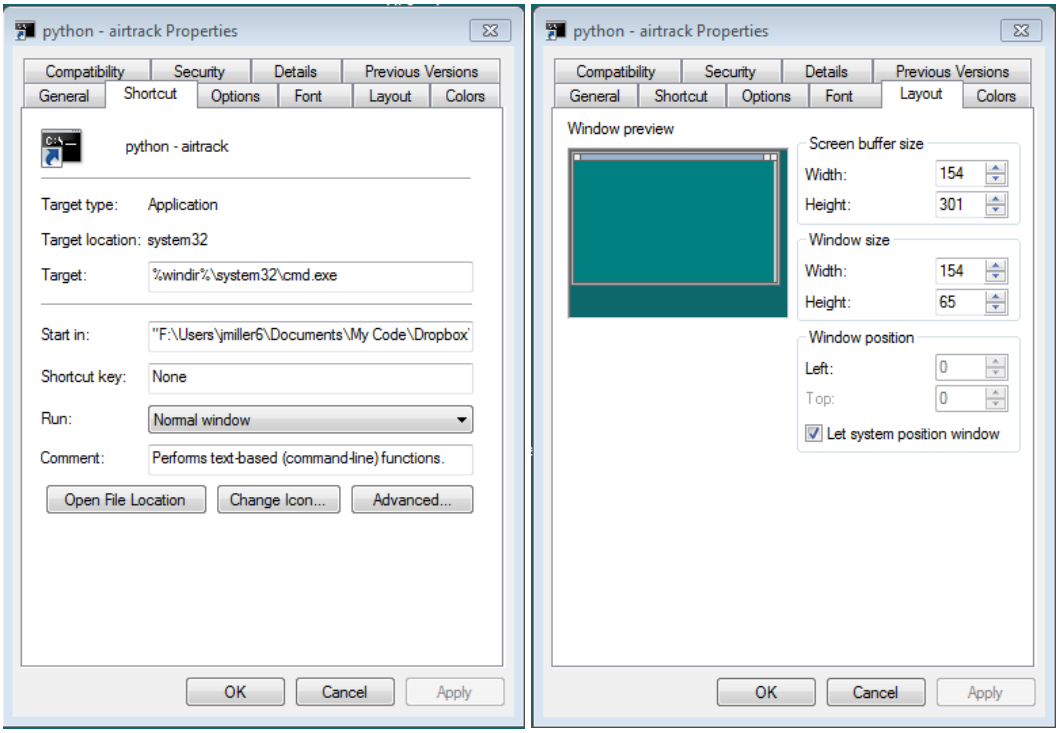


5. Next, install the python modules. In the instructions that follow you will be copying two folders to your local hard drive. One precaution: once you find a home for these folders, (and have installed the modules), don't move the folders.
   a. Copy the "python_modules" subfolder to your local hard drive from the "downloaded_installables" folder on the share.
   b. From a Windows command prompt, change to the following local subdirectory on your hard drive: "python_modules\pgu"
   c. While still in that directory, run the following command (without the quotes): "setup.py install"

d. From a Windows command prompt, change to the following local subdirectory on your hard drive: “python_modules\PodSixNet”
e. While still in that directory, run the following command (without the quotes): “setup.py install”

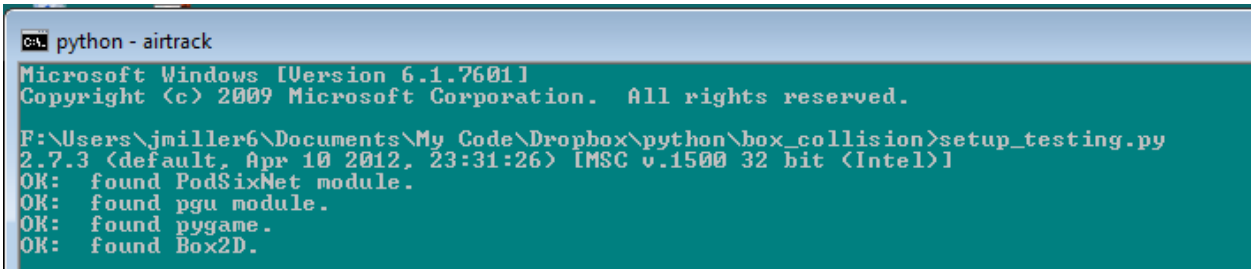
6. Create a working directory (call it “pygame” or something similar) in your documents area on your local hard drive. Copy the following test files and folders to this working directory:
   a. setup_testing.py
   b. air_track_07.pyc
   c. the “box2d_source_files” folder

7. Create a shortcut to a Windows command prompt and put it on your desktop. Right click on the shortcut, then edit the “Start in:” field on the “Shortcut” tab. Set this to the path of your working directory.

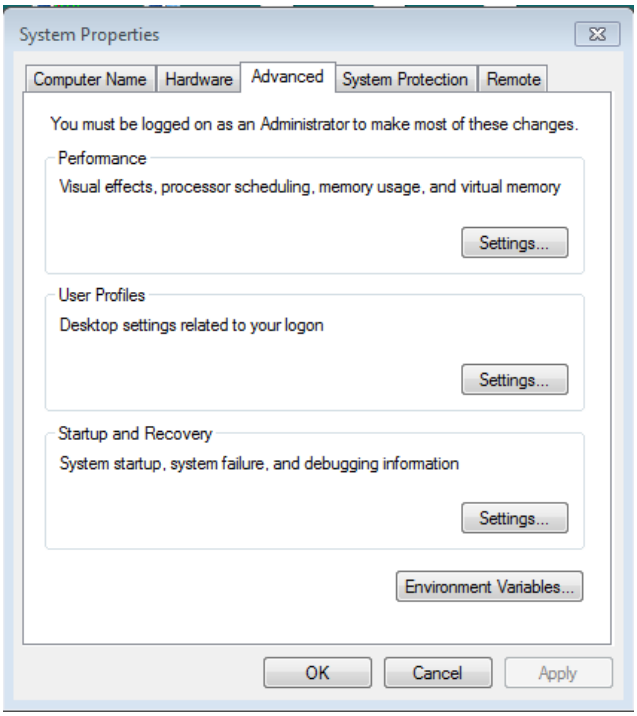


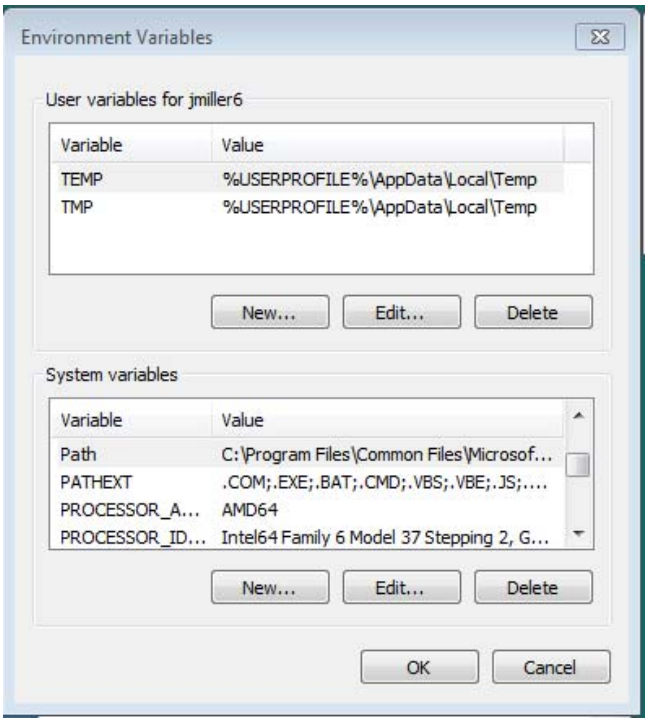
You may also wish to configure settings on the “Layout” and “Colors” tabs.

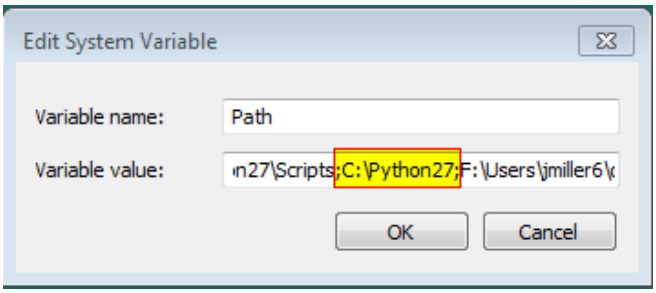
8. From a Windows command prompt, run the setup_testing.py file (just type setup_testing.py without the quotes and hit the enter key). The output from this test file should look like this:



If this file doesn’t run, Windows may be having trouble finding your Python installation. Check your “path” environment variable under system properties. You should see “C:\Python27” in there. The screen shots below show how you go from system properties to Environment variables. Select the “Path” system variable, then click edit.







If you have a previous installation of a 3.x version of Python you should edit the system path variable to only point at the 2.7 installation. Remove any referenc to the 3.x installation folder. You can put it back after J-term if you like. Once J-term starts, I can explain ways to run both a 2.7.x and a 3.x verion of Python if for some reason you need to.

9. From Windows Explorer, try double clicking the “air_track_07.pyc” file. You should see the following pygame window come up:

Try using the number keys (above the letters on your keyboard, not the number pad) 1,2,3,4,5,6,7,8,9 or 0 to see variations of the demo. The “g” key toggles gravity on and off. You can grab and drag objects with the mouse. Click (and hold the button down) on an object to select it. Or, click (and hold) anywhere and when an object moves over the cursor position, the object will get selected. The third mouse button has a stronger spring constant on the mouse tether. That one is better for positioning objects.

10. And finally, copy the “box2d_source_files” folder and paste it directly under your working directory.

11. Try running some of the following pybox2d test files in the “box2d_source_files\box2d_jdm” folder. You can run these from a Window’s command prompt or simply double-click them from Windows Explorer.

simple_01.py	6/5/2012 1:12 PM	Python File	4 KB
simple_01_airtrack.py	9/23/2012 4:09 PM	Python File	16 KB
simple_02.py	5/30/2012 5:53 PM	Python File	3 KB
simple_framework.py	5/30/2012 5:53 PM	Python File	7 KB
simple_framework.pyc	6/5/2012 1:23 PM	Compiled Python ...	8 KB
test_airtrack.py	9/11/2012 9:51 AM	Python File	8 KB
test_BodyTypes.py	9/29/2012 1:03 PM	Python File	10 KB
test_BoxCutter.py	10/25/2012 10:38 ...	Python File	10 KB
test_Bullet.py	9/14/2012 2:33 PM	Python File	3 KB
test_Chain.py	5/30/2012 5:53 PM	Python File	3 KB
test_CollisionFiltering.py	9/14/2012 10:16 PM	Python File	7 KB
test_empty.py	5/30/2012 5:53 PM	Python File	3 KB
test_GishTribute.py	6/17/2012 12:46 AM	Python File	5 KB
test_Pinball.py	5/30/2012 5:53 PM	Python File	4 KB
test_Pyramid.py	5/30/2012 5:53 PM	Python File	2 KB
test_Restitution.py	5/30/2012 5:53 PM	Python File	2 KB

If you run “test_BodyTypes.py” demo. You should see something like the following image. There are some instructions in green text displayed in the pygame window. For example, the “c” key creates a circle object; the “g” key fires bullet objects; you can aim the gun by clicking and dragging the dangling rectangle. A couple extras: the roller wheel on your mouse adjusts the zoom. Click and drag with the right mouse button to slide/pan the field of view.