1.2   Obtaining and Installing Python

Python is a free, open source language whose interpreter runs in MS Windows, Mac OS X and Linux environments. Python is built into the Macintosh operating system, but you should install it even if you use Macs because the operating system does not have a full implementation, and what it does have is probably not current. The language is maintained (programming lanugages evolve just like human languages) by the Python Software Foundation. Guido van Rossum, the inventor of Python is the President (also known as "Benevolent Dictator for Life") of the Foundation but its board of directors also includes other prominent computer scientists and representatives of major computing organizations and corporations.

Installing Python is easy. The website for the software maintained by the Python Software Foundation is http://www.python.org. Go to this site, then to the Download tab (the tabs at present are in the upper left corner of the page). There are two dialects of Python – Python2 and Python3. These are not quite compatible, so it is important to know which one you are downloading. These notes all refer to Python3, which is referenced on the Python website as Python3.x.y, where x and y are release numbers. The current version is Python3.4.3. For these notes, any Python3 release after Python3.2.0 will suffice.

On the Downloads page for Python you are presented with options for many old versions; you should click on the Python3.4.3 link. Scroll down to the *Files* section of the Release3.4.3 page. This has about 10 different options, only a few of which are pertinent for most students:

- `Mac OS X 32-bit i386/PPC installer`

- `Mac OS X 64-bit/32-bit installer`

- `Windows x86-64 MSI installer`

- `Windows x86 MSI installer`

You may see different options when you go to this page. Making sense of this is easier than you might think. If you run Windows the last two choices are for you. You almost certainly want the last of these; the previous one is for those few machines that run a 64-bit version of Windows; you would know if this is you. So choose your link and click on it. After a few seconds this downloads the installer into your Downloads folder. Once it is downloaded, click on the installer and do what it says. There will be some questions about where to install things; the defaults are almost always good options. You will need to accept the license agreement. The whole process takes about 5 minutes if you have a good Internet connection.

If you have a Mac, you need to find out which version of OS X is installed on it. Go to the Apple menu (its icon is a picture of an apple) at the top left of the menu bar. One of the menu items is "About this Mac". Select this and a window will pop up with lots of information about the system, including which version of OS X is installed. Most likely you have 10.6 (also called "Snow

Leopard) or one of the more recent versions. Every Mac produced after August of 2009 has OS X 10.6 or higher. If this is the case with your machine, click on the second Mac link ("`Mac OS X 64-bit/32-bit installer`") If your machine is older, click on the first Mac link. If somehow neither of these seems right, ask for help.

Just as with Windows, once you have selected the correct link, click on it to download the installer, then run the installer to install Python. There will be a few questions, and you must accept the license agreement. As with Windows, the installation process should only take a few minutes if you have a good connection.

Now that you have installed Python, you need to be able to find it. On a Mac there should be a Python folder in the Applications section of the Finder. This has several programs in it, the two most important of which are called IDLE and Python Launcher. On Windows, go to the Start window. The installer may have left an icon for Python in the Start window. If not, follow the All Programs link to a list of all of your installed programs. This should have a link to Python, again with several programs including IDLE. In the next section we will look at the ways the various Python programs can be used.