

Editing and Running a Python Program With TextWrangler on a Macintosh

Note: This handout is under development – please send suggestions to Chuck Severance (csev@umich.edu)

Screen Cast for This Material

<http://tinyurl.com/nmkfuy>

You will need Apple QuickTime installed to view this video.

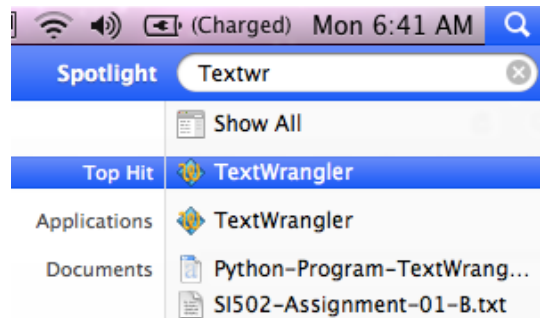
Pre-Requisites

Please download and install TextWrangler from

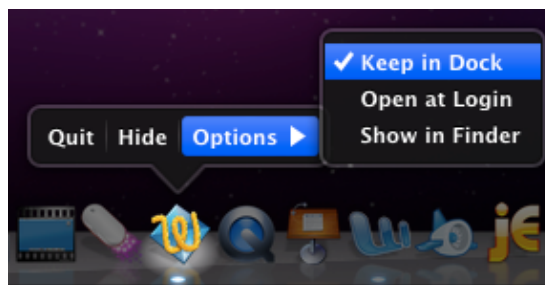
<http://www.barebones.com/products/TextWrangler/>

Starting TextWrangler

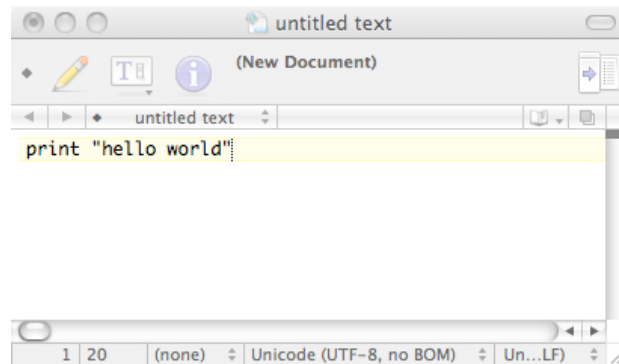
Go into the upper-right of your screen and click on the Spotlight search button and type **textwrangler** – in a few seconds, it will bring up a screen that looks like this:



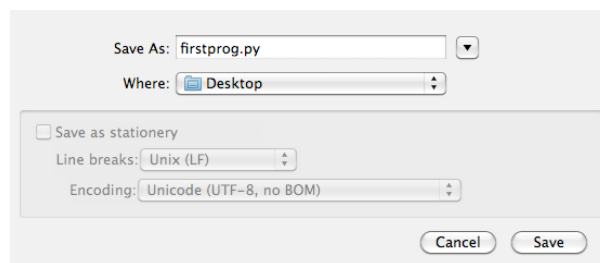
Select and launch **TextWrangler**. You may want to click and hold the **TextWrangler** icon in the dock to bring up the menu to allow you to keep **TextWrangler** in the dock so you can quickly re-launch **TextWrangler**.



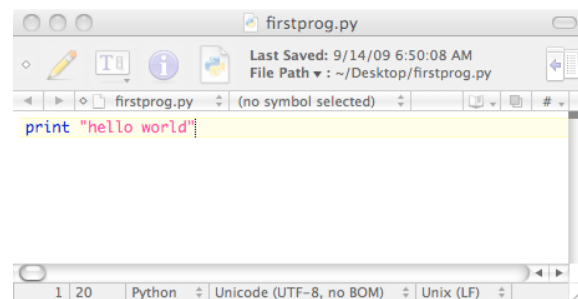
Enter your first Python into **TextWrangler**:



Save your program as **firstprog.py** onto your Desktop.



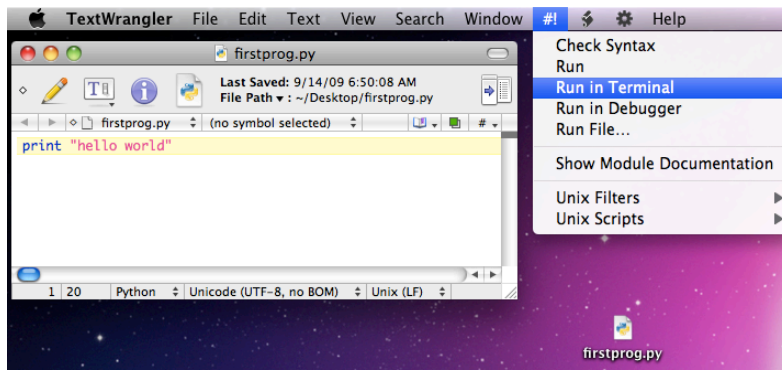
You will notice that after you save the file, **TextWrangler** will color your code based on the Python syntax rules.



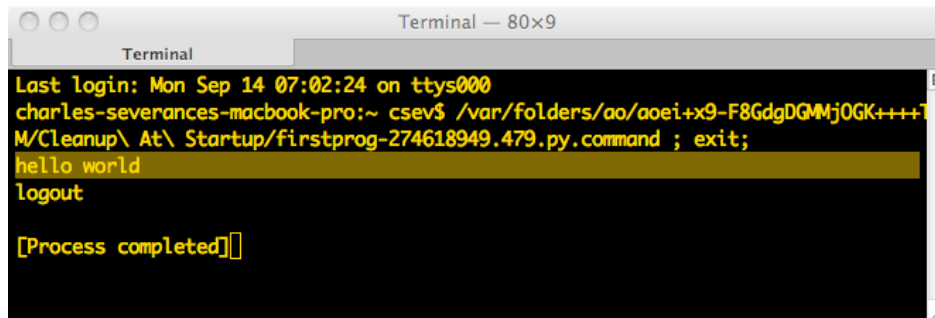
This is a very helpful feature. **TextWrangler** only knows that your file is a Python file after you save it with a ".py" suffix.

Running Python Using the Built-In TextWrangler Shortcut

TextWrangler has a built-in way to run a Python program directly from the **TextWrangler** user interface. In **TextWrangler** go to **#! -> Run in Terminal**



TextWrangler will bring up a terminal window and automatically execute Python on your program:



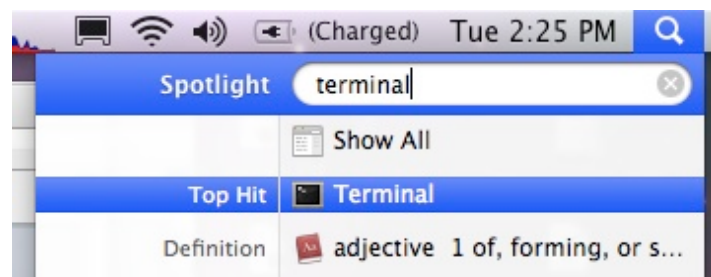
You will have to look closely to pick out the output from your program amongst the rest of the output in the terminal window.

In general, you can use the **TextWrangler** shortcut for very simple programs – but once you start reading and writing files in your Python programs you should open and use the terminal program so you know what directory your program is running in – so you can open and read files.

Starting Terminal on Macintosh OS/X

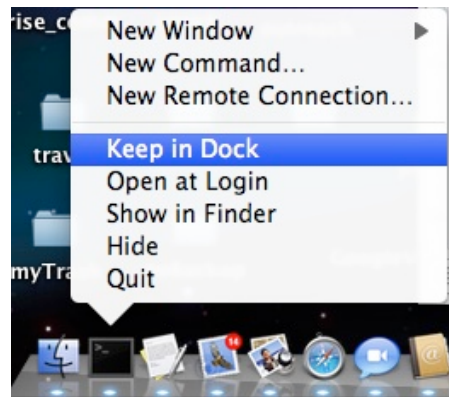
The terminal program on Macintosh is kind of buried under **Macintosh HD -> Applications -> Utilities -> Terminal**.

There are several shortcuts that you might find helpful. You can go into the upper-right of your screen and click on the Spotlight search button and type terminal – in a few seconds, it will bring up a screen that looks like this:



Click on the Terminal icon (highlighted in this example) to launch terminal.

Also you can get Terminal to stay in your dock once terminal is launched by clicking and holding on the Terminal icon in the dock and then selecting Keep in Dock.



Then you can quickly launch Terminal by clicking on the icon.

Note: This is a good time to re-affirm the non-use of spaces in file names and directories. It makes life in the Command Line much easier. If not, you can simply put the folder/directory or file name in double quotes.

Where Are You?

When the command line starts up, you are in your “home” directory. In each of these examples, your logged in account should be used instead of **csev**.

Macintosh Home Directory: /Users/csev

The command line prompt usually includes some clue as to where you are “at” in the folder structure on your hard drive.

If you want to really figure out where you are, on Macintosh use the **pwd** command .

```
udhcp-macvpn-624:~ csev$ pwd
/Users/csev
udhcp-macvpn-624:~ csev$
```

For Windows:

```
C:\Documents and Settings\csev> cd
C:\Documents and Settings\csev
```

Where can you go?

Generally the first thing you want to do when you open a command line interface is to navigate to the right folder. Say you wanted to run a file from your desktop. The command is **cd Desktop**

```
udhcp-macvpn-624:~ csev$ pwd
/Users/csev
udhcp-macvpn-624:~ csev$ cd Desktop
udhcp-macvpn-624:Desktop csev$ pwd
/Users/csev/Desktop
udhcp-macvpn-624:Desktop csev$
```

Nifty Trick: On the **cd** command, you can partially type a folder name like **Desktop** and then press the **TAB** key – the system will auto-complete the folder name if you have typed enough that the system can accurately guess what you mean to type.

Going Backwards (or Upwards)

You can change directory to the parent folder (the folder “above” the folder you are in using the **cd ..** command. It just says “go up one”.

```
udhcp-macvpn-624:Desktop csev$ pwd
/Users/csev/Desktop
udhcp-macvpn-624:Desktop csev$ cd ..
udhcp-macvpn-624:~ csev$ pwd
/Users/csev
udhcp-macvpn-624:~ csev$
```

If you get Lost...

If you can't figure out what folder you are in and/or cannot figure out how to get to the folder you want to get to – simply close and re-open the Command Line / Terminal window. You will be back to your “home” directory – so you can start from a known location.

What Files/Folders are Here?

You can list the contents of the current directory using the **ls -l** command.

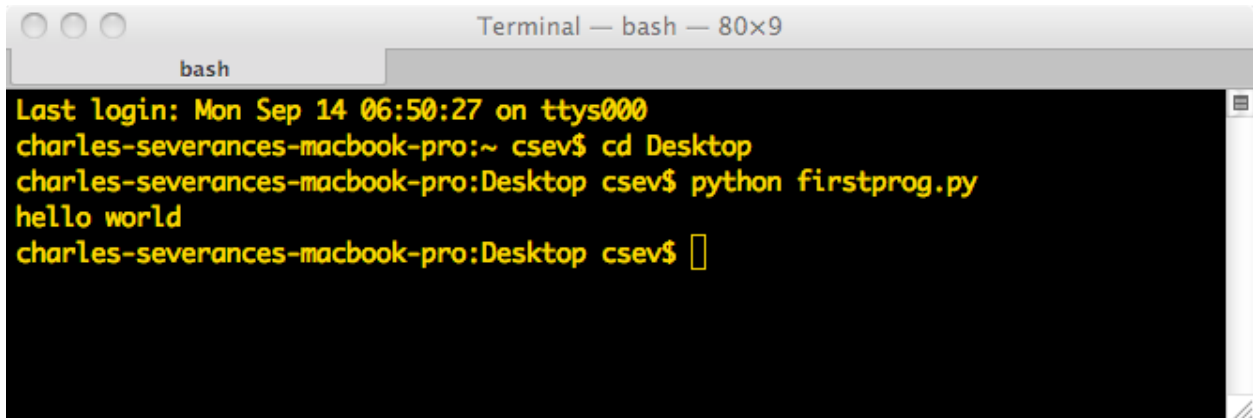
```
udhcp-macvpn-624:si100 csev$ pwd
/Users/csev/Desktop/si100
udhcp-macvpn-624:si100 csev$ ls -l
total 8
-rw-r--r--  1 csev  staff   15 Sep 16 15:17 abc.py
drwxr-xr-x  6 csev  staff  204 Sep 16 15:13 assn2
drwxr-xr-x  2 csev  staff   68 Sep 16 15:17 assn3
udhcp-macvpn-624:si100 csev$
```

Some Cool Hints on The Macintosh Terminal Program

You can clear the scroll back buffer by pressing the **Command** key and the **K** key at the same time.

Running Your Python Program in the Terminal

Start the **Terminal** program and type the following commands:

A screenshot of a macOS Terminal window. The title bar reads "Terminal — bash — 80x9". The terminal content shows a login message, a directory change to Desktop, the execution of a Python script named firstprog.py which outputs "hello world", and the terminal prompt returning to the Desktop directory.

```
bash
Last login: Mon Sep 14 06:50:27 on ttys000
charles-severances-macbook-pro:~ csev$ cd Desktop
charles-severances-macbook-pro:Desktop csev$ python firstprog.py
hello world
charles-severances-macbook-pro:Desktop csev$
```

Using the **Terminal**, you can repeatedly edit the program, save it and run your program over and over.