

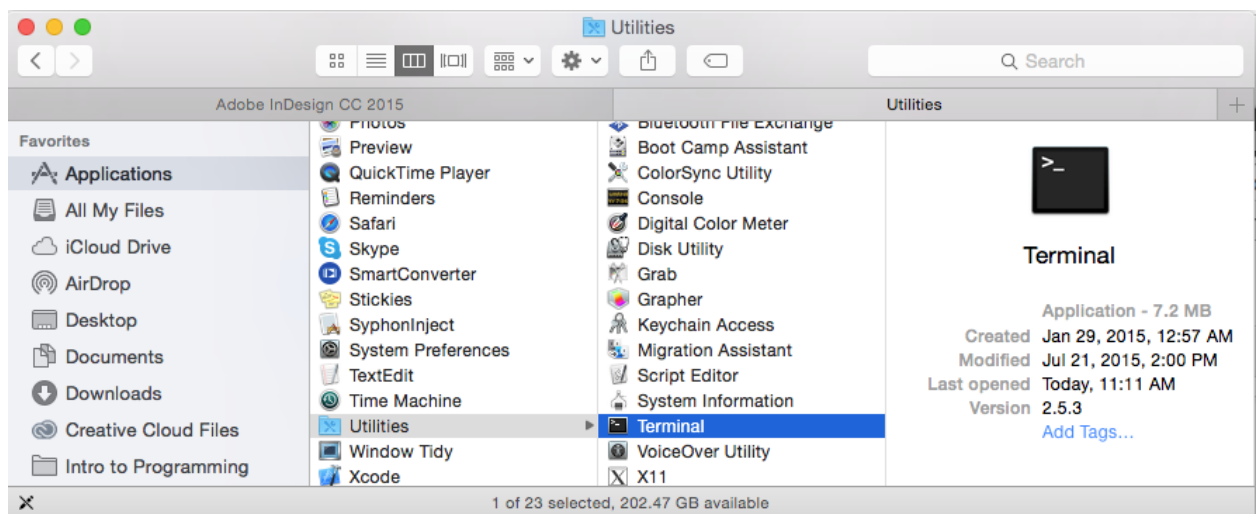
## Activity 9.5 First Python Program

### Mac Version

In this lab activity we're going to go over the process for writing and running your first Python program. Don't pay too much attention to the meaning of the code at this point— That will all be explained in later sections of the course. Instead, focus on the process of writing a program using IDLE as your development environment and running it using the command line.

Remember that this process varies slightly from Mac to PC. Make sure you are looking at the correct version of the lab exercise.

- 1) Open your command line program. On Macs the program is called "Terminal." You can find Terminal by first clicking your Applications Folder, and looking inside the Utilities Folder.



- 2) When your command line window opens, you'll see a prompt similar to this one:

**Marks-MacBook-Pro:Python: ~marklassoff\$**

The command line is where you issue commands. Your prompt will be different depending on the name of the computer you are using and the user account. We'll abbreviate the command line prompt in the future like this: **prompt\$**

After your prompt type "idle" which will load the idle development environment for Python.

```
Python 2.7.6 Shell
Python 2.7.6 (default, Sep  9 2014, 15:04:36)
[GCC 4.2.1 Compatible Apple LLVM 6.0 (clang-600.0.39)] on darwin
Type "copyright", "credits" or "license()" for more information.
>>>
```

- 3) Type **copyright** in to the shell and press return. You'll see the copyright information for Python listed in the shell window.

```
Python 2.7.6 (default, Sep  9 2014, 15:04:36)
[GCC 4.2.1 Compatible Apple LLVM 6.0 (clang-600.0.39)] on darwin
Type "copyright", "credits" or "license()" for more information.
>>> copyright
Copyright (c) 2001-2013 Python Software Foundation.
All Rights Reserved.

Copyright (c) 2000 BeOpen.com.
All Rights Reserved.

Copyright (c) 1995-2001 Corporation for National Research Initiatives.
All Rights Reserved.

Copyright (c) 1991-1995 Stichting Mathematisch Centrum, Amsterdam.
All Rights Reserved.
>>>
```

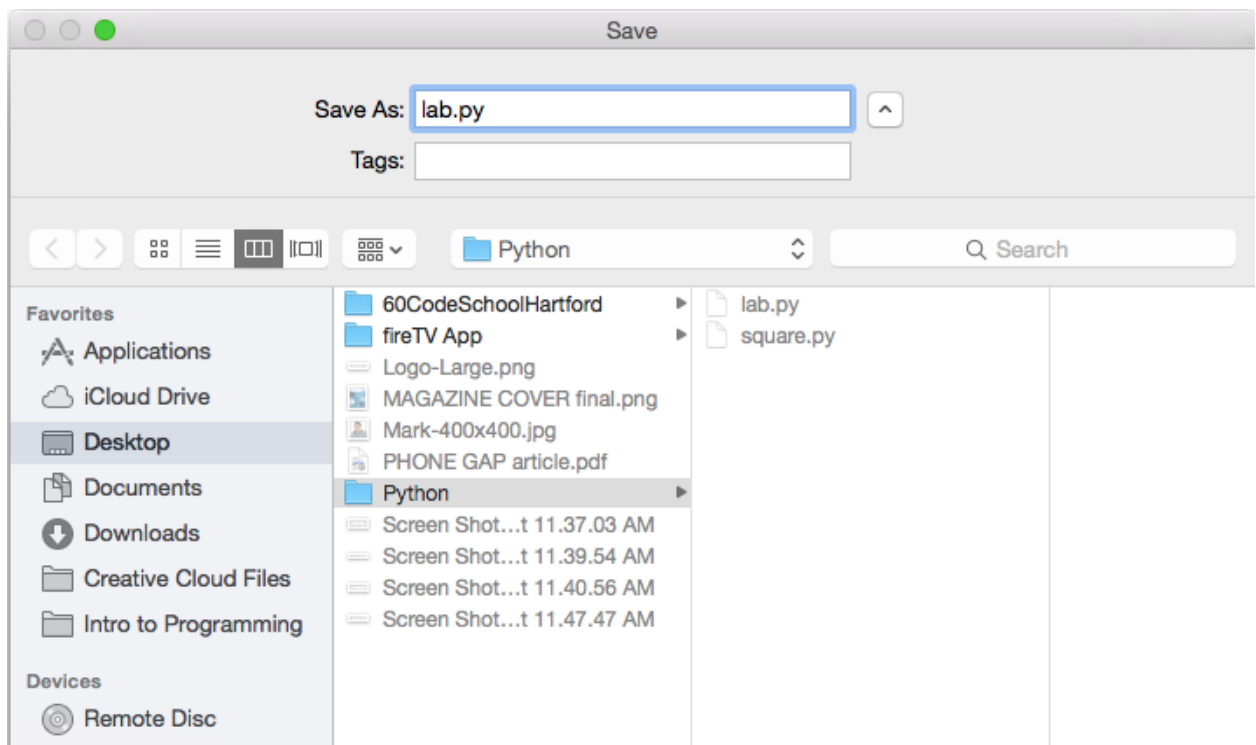
- 4) Make sure your shell window is active, click File —> New File from the drop down menus at the top of the screen. A new untitled window will open. This is where we will write our Python code.
- 5) Type the Python code below *carefully!* A single mistake will make your code break. This can be frustrating for even experienced programmers, however, as you learn more you'll understand better where to look for mistakes you might make while keying in code.

```
age = input("How old are you? ")
print "In 10 years you will be", (age + 10)
print "In 20 years you will be", (age + 20)
print "Half a lifetime ago you were", (age / 2)
if age >= 18:
    print "You are eligible to vote in the US"
else:
    print "You are too young to vote in the US"
```

- 6) Note that idle will color code your program. In idle the code will appear similar to the screenshot below:

```
lab.py - /Users/marklassoff/Desktop/Python/lab.py
age = input("How old are you? ")
print "In 10 years you will be", (age + 10)
print "In 20 years you will be", (age + 20)
print "Half a lifetime ago you were", (age / 2)
if age >= 18:
    print "You are eligible to vote in the US"
else:
    print "You are too young to vote in the US"
```

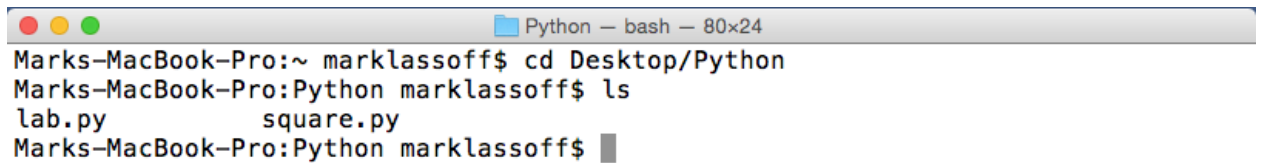
- 7) Making sure your code window is active click the File drop down menu and select the save option. Navigate to where you want to save your Python file and name it "lab.py".



- 8) In idle click File and Exit to exit the development environment. In your command line navigate to the folder that holds your lab.py file. I have mine in a folder on my desktop. So to navigate to the folder I typed the following into a new Terminal window:

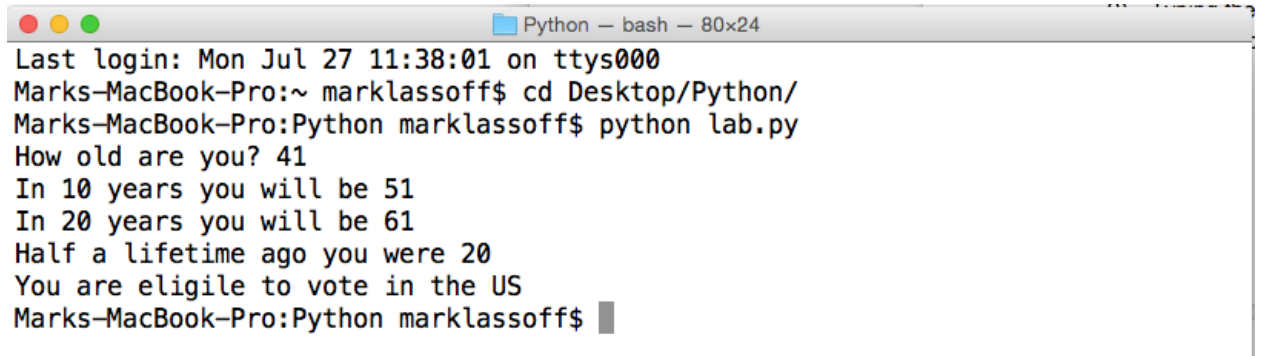
**cd Desktop/Python**

- 9) Typing the **ls** command in to the terminal should allow you to verify if you're in the right place. If you are, you'll see the lab.py file.



```
Python — bash — 80x24
Marks-MacBook-Pro:~ marklassoff$ cd Desktop/Python
Marks-MacBook-Pro:Python marklassoff$ ls
lab.py          square.py
Marks-MacBook-Pro:Python marklassoff$
```

- 10) To run the file type **python lab.py**. The program should ask your age and then provide with output similar to the following screenshot.



```
Python — bash — 80x24
Last login: Mon Jul 27 11:38:01 on ttys000
Marks-MacBook-Pro:~ marklassoff$ cd Desktop/Python/
Marks-MacBook-Pro:Python marklassoff$ python lab.py
How old are you? 41
In 10 years you will be 51
In 20 years you will be 61
Half a lifetime ago you were 20
You are eligile to vote in the US
Marks-MacBook-Pro:Python marklassoff$
```