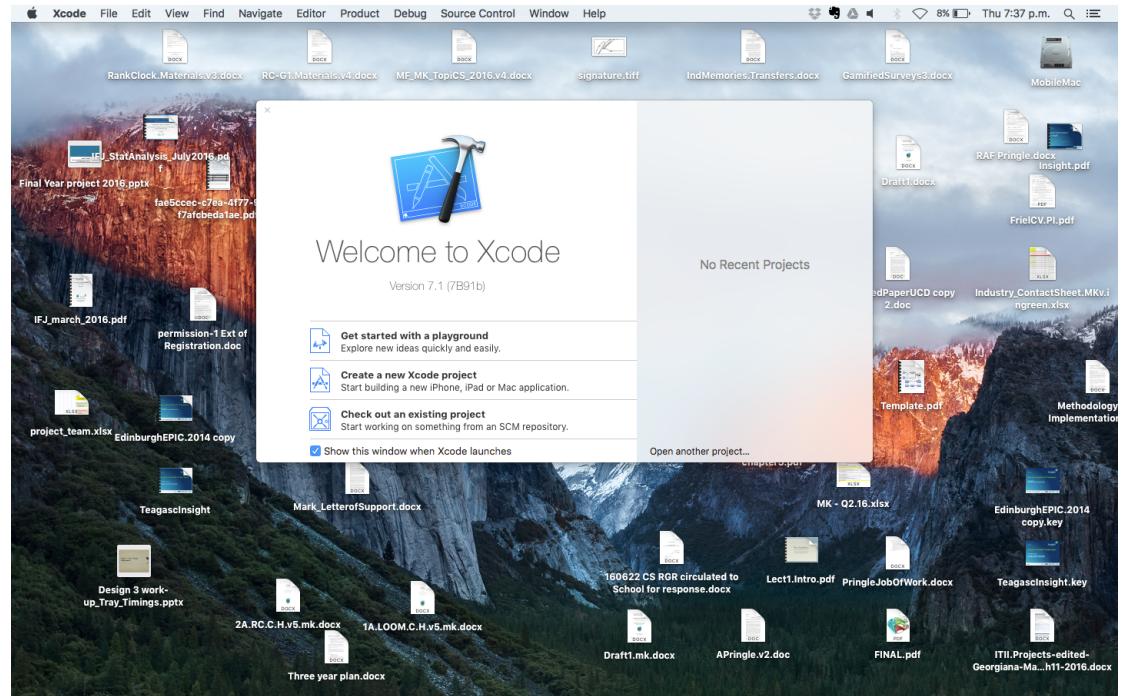
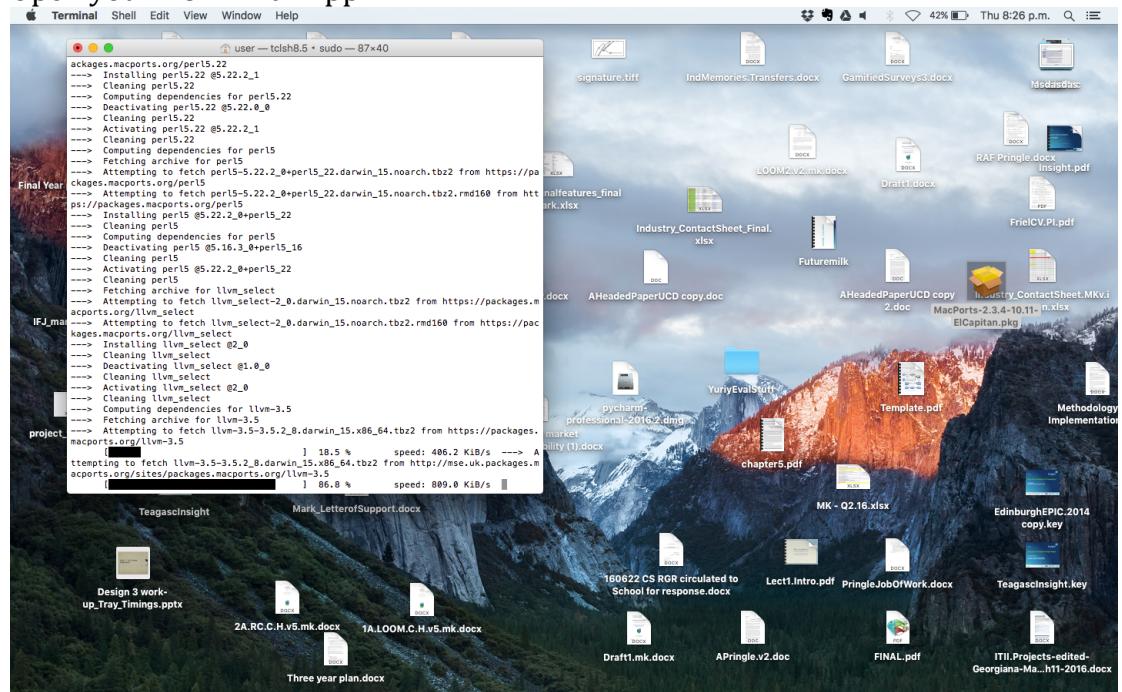


Installing Python 3.4 on a Mac: Simple Method (using OSX 10.11)

- 1) Make sure you have **XCode** 7.0 or greater; find it in Applications and double click on it; when it opens; click on “Create Project” and save a project with some rubbish name (like test). Quit out of Xcode.



- 2) Open your **Terminal** App:



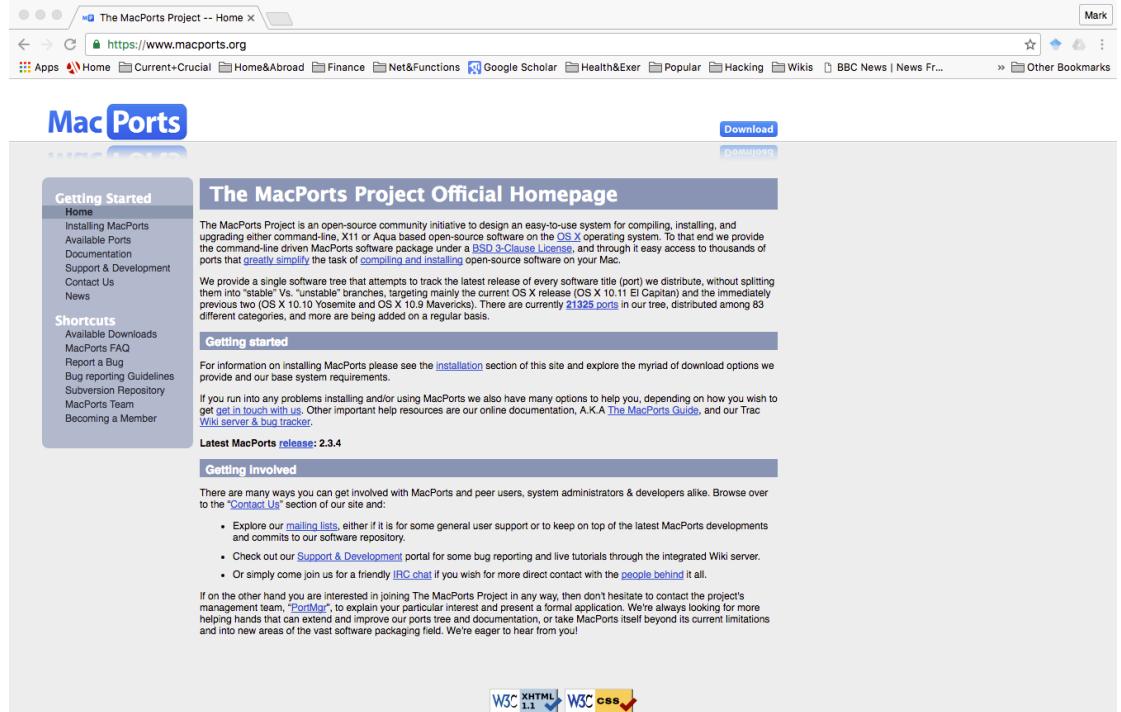
- 3) Make sure “Xcode Command Line Tools” are installed; in your **Terminal** App and write the following (note do not type <cr> this means press carriage return):

```
$ sudo xcode-select --install <cr>
```

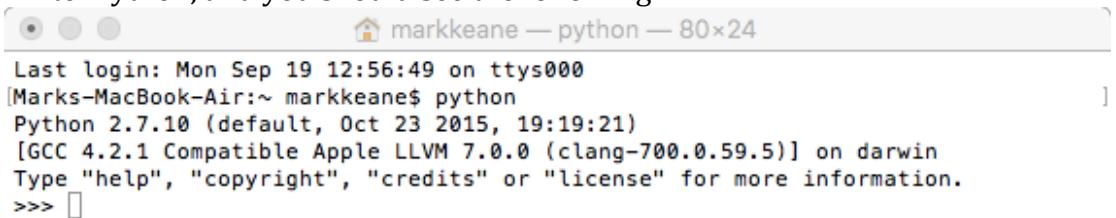
[nb **sudo** may be required to ensure you have root priviledges]

[if you are not the root-user/adminstrator then you need to become it]

- 4) Go to the MacPorts Site: www.macports.org and download the Macports App (as .dmg) that is appropiate to your MacOS X (in this case MacPorts El Capitan); Install this application via the dialoue boxes.



- 5) Open your Terminal App again and get a Basic Window; after the prompt write: Python, and you should see the following:



```
Last login: Mon Sep 19 12:56:49 on ttys000
[Mark-MacBook-Air:~ markkeane$ python
Python 2.7.10 (default, Oct 23 2015, 19:19:21)
[GCC 4.2.1 Compatible Apple LLVM 7.0.0 (clang-700.0.59.5)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> ]
```

This is showing you that you have the pre-loaded version of python 2.7. But, we want Python 3.4. So, we will use macports to install this.

so, now do this:

```
$ port search ruby34 <cr>
Password: <enter your password>
dbus-python31 @1.2.0_2
    Obsolete port, replaced by dbus-python34

dbus-python32 @1.2.0_2
    Obsolete port, replaced by dbus-python34

dbus-python33 @1.2.0_2
    Obsolete port, replaced by dbus-python34

dbus-python34 @1.2.0_2 (devel, python)
    Python bindings for the dbus message bus system.

python34 @3.4.5 (lang)
    An interpreted, object-oriented programming
    language

$ sudo port install python34 <cr>
Password: <enter your password>
```

---> Fetching ...

So, now do this to change the python command from pointing to python 2.7 to python 3.4:

```
$ alias python='/opt/local/bin/python3.4<cr>
$python
Python 3.4.5 (default, Jun 27 2016, 04:57:21)
[GCC 4.2.1 Compatible Apple LLVM 7.0.2 (clang-700.1.81)]
on darwin
```

So, now we can check if we can use the simple IDE called IDLE. It should throw an error based on a problem with tkinter.

```
$idle
*** IDLE can't import Tkinter for Tk ***
Your Python may not be configured for Tk
```

So, do the following:

```
$ sudo port install py34-tkinter
---> Fetching ...
```

- 6) However, IDLE still may not work without installing Xquartz; go to xquartz.org; download the .dmg and install it. [note: not all tkinter installations require X11 or Xquartz but the macports one does].

The screenshot shows the XQuartz project website. The header features the XQuartz logo. On the left, there's a sidebar with links: Home, Releases, Support, Contributing, Bug Reporting, and GitHub. The main content area has a "Quick Download" section with a table showing a download link for "XQuartz-2.7.9.dmg", version 2.7.9, released on 2016-05-05, and info for OS X 10.6.3 or later. Below this is a "License Info" section with a note about the software's licensing and a link to the X.Org Foundation Licenses page. At the bottom, there's footer text about the design and distribution, and a link to JFrog Bintray.

The XQuartz project is an open-source effort to develop a version of the [X.Org X Window System](#) that runs on OS X. Together with supporting libraries and applications, it forms the X11.app that Apple shipped with OS X versions 10.5 through 10.7.

Quick Download

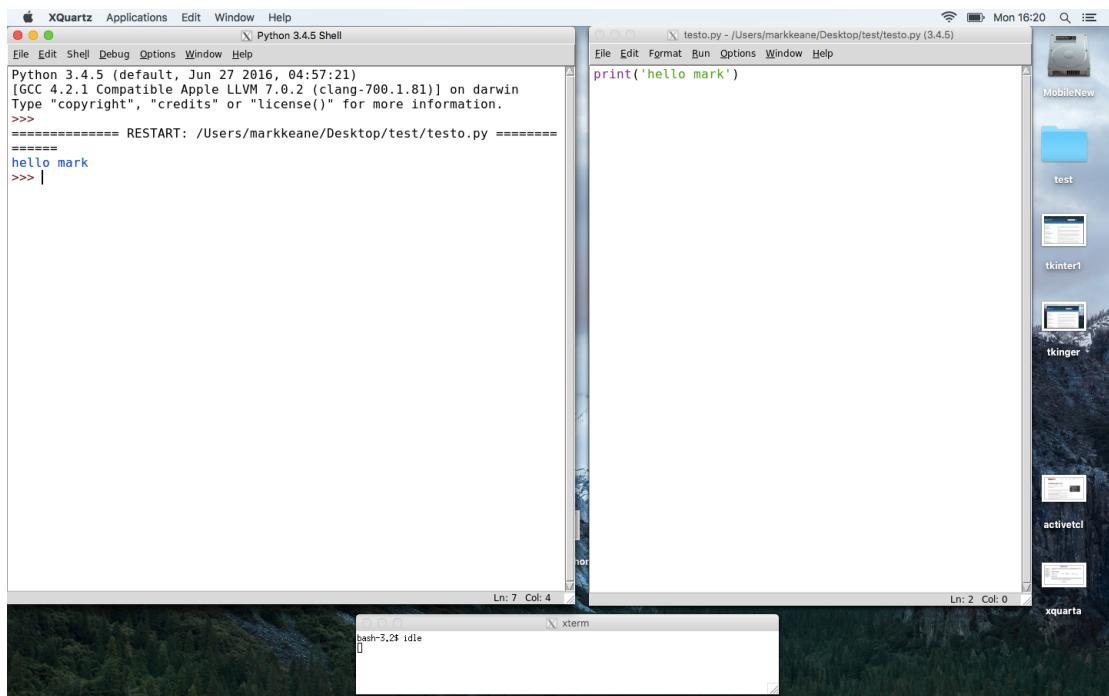
Download	Version	Released	Info
XQuartz-2.7.9.dmg	2.7.9	2016-05-05	For OS X 10.6.3 or later

License Info

An XQuartz installation consists of many individual pieces of software which have various licenses. The X.Org software components' licenses are discussed on the [X.Org Foundation Licenses page](#). The quartz-wm window manager included with the XQuartz distribution uses the [Apple Public Source License Version 2](#).

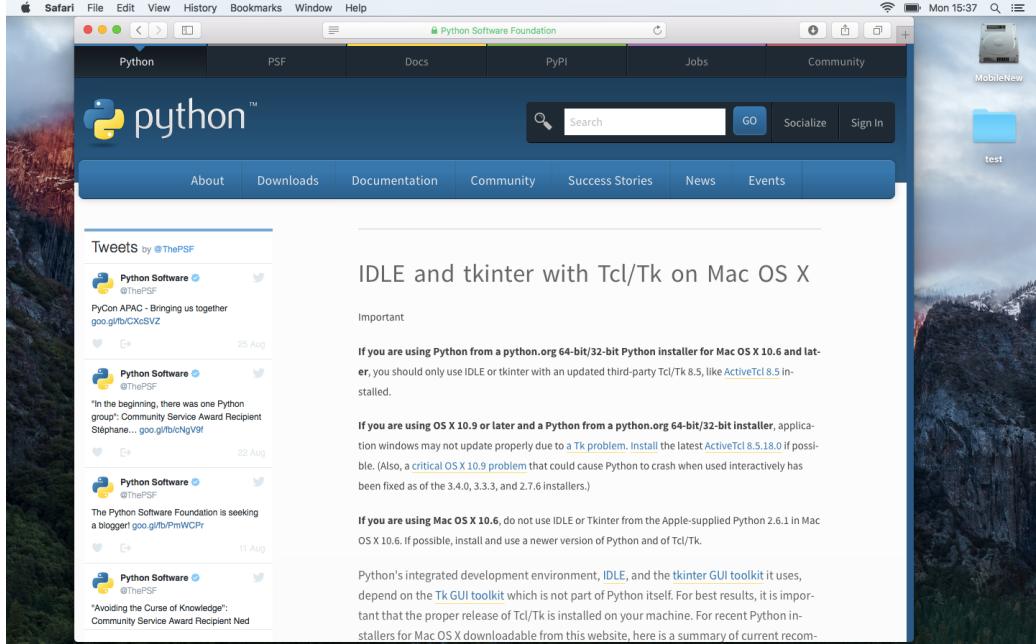
Web site based on a design by Kyle J. McKay for the XQuartz project.
Web site content distribution services provided by CloudFlare.
Distributed by
 JFrog Bintray

- 7) NB after you ave done this you need to logout out of your mac and log back in for Xquartz to take over from X11 as the interface App. Note, also that Xquartz interface is a bit different from the X11 one.



Installing Tkinter Independently.

If all the above still does not work you may need to also install Tkinter independently. This can be done by going to www.python.org



Install ActiveTcl-8.6 from the site (NB. If opening blocked, do ctrl-open); and follow through Installation Instructions.

If this has been done right, you will see a little tree-frog App in the launcher and a folder called ActiveState ActiveTcl in Applications.

The screenshot shows the ActiveState website with a navigation bar at the top featuring links for Store, My Account, and a phone number (1.866.631.4581). Below the navigation is a search bar. The main content area has a heading 'DOWNLOAD TCL' in large, bold, dark letters. Underneath it is a red button labeled 'ACTIVETCL COMMUNITY EDITION DOWNLOAD'. To the right of this button is a dark call-to-action box containing a download icon and the text 'Download ActiveTcl 8.6.4 for Mac OS X (10.5+, x86_64/x86)'. Below the main heading, there is a paragraph about ActiveTcl being the leading commercial-grade distribution of the open source Tcl programming language. At the bottom, there is a section for 'Do you need an older version of ActiveTcl or want to use it on production or on Big Iron servers?' followed by a paragraph of smaller text.