Python Install Instructions for Mac OS

If you are a Beginner, then use the Anaconda Install document!

```
micl-pc:~ micl$ █
```

The first step in installing python is to download the Homebrew software which will manage the python package. Type the following into the command prompt:

/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"

Or

/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install.sh)"

```
micl-pc:~ micl$ /usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com
/Homebrew/install/master/install)"
```

```
Warning: The Ruby Homebrew installer is now deprecated and has been rewritten in
Bash. Please migrate to the following command:
  /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/
master/install.sh)"

==> This script will install:
/usr/local/bin/brew
/usr/local/share/doc/homebrew
/usr/local/share/man/man1/brew.1
/usr/local/share/zsh/site-functions/_brew
/usr/local/etc/bash_completion.d/brew
/usr/local/Homebrew
==> The following new directories will be created:
/usr/local/bin
/usr/local/etc
/usr/local/include
/usr/local/lib
/usr/local/sbin
/usr/local/share
/usr/local/var
/usr/local/opt
/usr/local/share/zsh
/usr/local/share/zsh/site-functions
/usr/local/var/homebrew
/usr/local/var/homebrew/linked
/usr/local/Cellar
/usr/local/Caskroom
/usr/local/Homebrew
/usr/local/Frameworks
==> The Xcode Command Line Tools will be installed.

Press RETURN to continue or any other key to abort
[Password:
```

The installation should proceed with commands such as the below appearing in succession.

```
==> Tapping homebrew/core
Cloning into '/usr/local/Homebrew/Library/Taps/homebrew/homebrew-core'...
remote: Enumerating objects: 27, done.
remote: Counting objects: 100% (27/27), done.
remote: Compressing objects: 100% (19/19), done.
Receiving objects:  60% (434616/716856), 180.94 MiB | 3.70 MiB/s
```

```
remote: Enumerating objects: 99, done.
remote: Counting objects: 100% (99/99), done.
remote: Compressing objects: 100% (82/82), done.
remote: Total 135862 (delta 26), reused 76 (delta 17), pack-reused 135763
Receiving objects: 100% (135862/135862), 32.80 MiB | 3.82 MiB/s, done.
Resolving deltas: 100% (99832/99832), done.
From https://github.com/Homebrew/brew
```

Don't interrupt the installation and wait until you see an 'installation successful!" note in the terminal and the prompt returns (see next page).

```
==> Tapping homebrew/core
Cloning into '/usr/local/Homebrew/Library/Taps/homebrew/homebrew-core'...
remote: Enumerating objects: 27, done.
remote: Counting objects: 100% (27/27), done.
remote: Compressing objects: 100% (19/19), done.
remote: Total 716856 (delta 14), reused 18 (delta 8), pack-reused 716829
Receiving objects: 100% (716856/716856), 290.37 MiB | 3.74 MiB/s, done.
Resolving deltas: 100% (472766/472766), done.
Checking out files: 100% (5223/5223), done.
Tapped 2 commands and 4982 formulae (5,247 files, 318.3MB).
Already up-to-date.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
    https://docs.brew.sh/Analytics
No analytics data has been sent yet (or will be during this `install` run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
    https://github.com/Homebrew/brew#donations

==> Next steps:
- Run `brew help` to get started
- Further documentation:
    https://docs.brew.sh
micl-pc:~ micl$
```

Next, type "brew update" and hit enter (return) to update homebrew.
With homebrew up-to-date, we can install python with the simple command "brew install python3"

```
[micl-pc:~ micl$ brew install python3
```

Hit enter and the installation should follow:

```
==> python
Python has been installed as
  /usr/local/bin/python3

Unversioned symlinks `python`, `python-config`, `pip` etc. pointing to
`python3`, `python3-config`, `pip3` etc., respectively, have been installed into
  /usr/local/opt/python/libexec/bin

You can install Python packages with
  pip3 install <package>
They will install into the site-package directory
  /usr/local/lib/python3.7/site-packages

See: https://docs.brew.sh/Homebrew-and-Python
micl-pc:~ micl$
```

Next we need to install some python libraries which will make coding easier in the future.
Install the following three libraries: NumPy, MatPlotLib, and AstroPy using the command
"pip3 install LIBRARY" where you should replace LIBRARY with numpy, matplotlib, and
astropy in succession.