Task 1.1: Getting Started with Python

1. Install python:

```
→  / brew install python@3.8
```

```
Python has been installed as
  /usr/local/bin/python3.8

Unversioned and major-versioned symlinks `python`, `python3`, `python-config`, `python3-con
fig`, `pip`, `pip3`, etc. pointing to
`python3.8`, `python3.8-config`, `pip3.8`, etc., respectively, have been installed into
  /usr/local/opt/python@3.8/libexec/bin

You can install Python packages with
  pip3.8 install <package>
They will install into the site-package directory
  /usr/local/lib/python3.8/site-packages

If you do not need a specific version of Python, and always want Homebrew's `python3` in yo
ur PATH:
  brew install python3

See: https://docs.brew.sh/Homebrew-and-Python
```

2. Set up new virtual environment:

```
→  achievement-1 mkvirtualenv cf-python-base
created virtual environment CPython3.8.16.final.0-64 in 1501ms
  creator CPython3Posix(dest=/Users/sarahjenkins/.virtualenvs/cf-python-base, clear=False,
no_vcs_ignore=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy,
 app_data_dir=/Users/sarahjenkins/Library/Application Support/virtualenv)
    added seed packages: pip==22.3.1, setuptools==65.6.3, wheel==0.38.4
  activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShellActivat
or,PythonActivator
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-base/bin
/predeactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-base/bin
/postdeactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-base/bin
/preactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-base/bin
/postactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-base/bin
/get_env_details
(cf-python-base) →  achievement-1
```

3. Make a new script add.py:

```
(cf-python-base) ➜  achievement-1 touch add.py
(cf-python-base) ➜  achievement-1 code .
```

```
1  a = int(input("Choose a number: "))
2  b = int(input("Choose another number: "))
3  c = a + b
4  print(a, "+", b, "=", c)
```

```
(cf-python-base) ➜  achievement-1 python add.py
Choose a number: 4
Choose another number: 6
4 + 6 = 10
```

4. Set up an IPython shell:

```
(cf-python-base) ➜  achievement-1 pip install ipython
```

```
Successfully installed appnope-0.1.3 asttokens-2.2.1 backcall-0.2.0 decorator-5.1.1
executing-1.2.0 ipython-8.8.0 jedi-0.18.2 matplotlib-inline-0.1.6 parso-0.8.3 pexpec
t-4.8.0 pickleshare-0.7.5 prompt-toolkit-3.0.36 ptyprocess-0.7.0 pure-eval-0.2.2 pyg
ments-2.14.0 six-1.16.0 stack-data-0.6.2 traitlets-5.8.1 wcwidth-0.2.6
```

```
(cf-python-base) ➜  achievement-1 ipython
Python 3.8.16 (default, Dec  7 2022, 01:36:11)
Type 'copyright', 'credits' or 'license' for more information
IPython 8.8.0 -- An enhanced Interactive Python. Type '?' for help.

In [1]:
```

5. Export a requirements file:

```
(cf-python-base) ➜  achievement-1 pip freeze > requirements.txt
(cf-python-base) ➜  achievement-1 mkvirtualenv cf-python-copy
created virtual environment CPython3.8.16.final.0-64 in 1301ms
  creator CPython3Posix(dest=/Users/sarahjenkins/.virtualenvs/cf-python-copy, clear=
False, no_vcs_ignore=False, global=False)
  seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, vi
a=copy, app_data_dir=/Users/sarahjenkins/Library/Application Support/virtualenv)
    added seed packages: pip==22.3.1, setuptools==65.6.3, wheel==0.38.4
  activators BashActivator,CShellActivator,FishActivator,NushellActivator,PowerShell
Activator,PythonActivator
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-c
opy/bin/predeactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-c
opy/bin/postdeactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-c
opy/bin/preactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-c
opy/bin/postactivate
virtualenvwrapper.user_scripts creating /Users/sarahjenkins/.virtualenvs/cf-python-c
opy/bin/get_env_details
(cf-python-copy) ➜  achievement-1 pip install -r requirements.txt
```

```
Successfully installed Pygments-2.14.0 appnope-0.1.3 asttokens-2.2.1 backcall-0.2.0
decorator-5.1.1 executing-1.2.0 ipython-8.8.0 jedi-0.18.2 matplotlib-inline-0.1.6 pa
rso-0.8.3 pexpect-4.8.0 pickleshare-0.7.5 prompt-toolkit-3.0.36 ptyprocess-0.7.0 pur
e-eval-0.2.2 six-1.16.0 stack-data-0.6.2 traitlets-5.8.1 wcwidth-0.2.6
```

6. Create a GitHub Repo:

```
➜  python-recipe-app git init
Initialized empty Git repository in /Users/sarahjenkins/Dropbox/Coding/Python Specia
lization/python-recipe-app/.git/
➜  python-recipe-app git:(master) ✗ gh repo create --public --source=.
✓ Created repository sarahmjenkins/python-recipe-app on GitHub
✓ Added remote git@github.com:sarahmjenkins/python-recipe-app.git
➜  python-recipe-app git:(master) ✗ mkdir "Exercise 1.1"
➜  python-recipe-app git:(master) ✗ git add .
➜  python-recipe-app git:(master) ✗ git commit -m "initial commit"
[master (root-commit) 3043d49] initial commit
 2 files changed, 23 insertions(+)
 create mode 100644 Exercise 1.1/add.py
 create mode 100644 Exercise 1.1/requirements.txt
```

```
→  python-recipe-app git:(master) git push --set-upstream origin master
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 595 bytes | 595.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0)
To github.com:sarahmjenkins/python-recipe-app.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
```