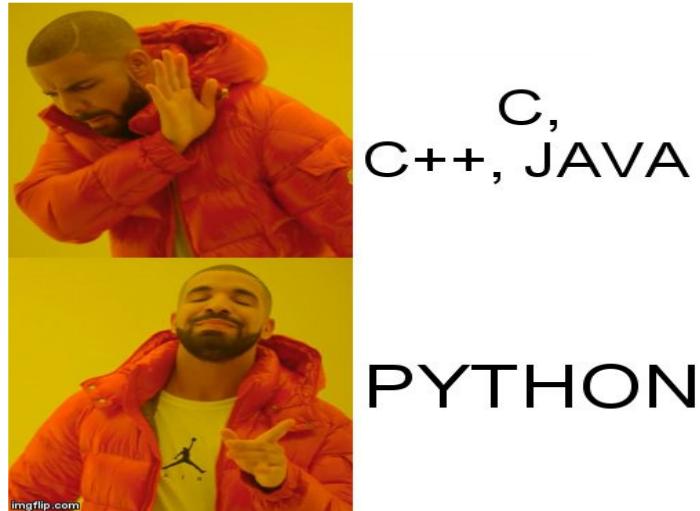


Lab 1: Assignment Setup

We will be using Python as the programming language in all assignments and labs



Install VS Code

In this tutorial we will be installing vs code but you can select any editor whichever you prefer for assignments

Go to the following website:

<https://visualstudio.microsoft.com/downloads/>



Visual Studio 2019 for Mac

Version 8.10
A comprehensive IDE for .NET developers that's native to macOS. Includes top-notch support for web, cloud, and game development —plus ridiculously good tools for making cross-platform mobile apps.

[Read more about activating your license](#)

[Free download](#)

[Release notes >](#)



Next release candidate

Experience a fast and fluid, modern .NET IDE hand-tailored for the Mac. The new RC release of Visual Studio 2022 for Mac is available now.

[About Visual Studio 2022 for Mac RC >](#)



Visual Studio Code

| Version 1.67
A standalone source code editor that runs on Windows, macOS, and Linux. The top pick for Java and web developers, with tons of extensions to support just about any programming language.

By using Visual Studio Code you agree to its [license](#) & [privacy statement](#).

[Free download](#)

[Release notes >](#)

Feedback

Still not sure which tool is best for you? We can help

Developer machine OS

Windows macOS Linux

For Windows:

Click on **Free Download > Windowsx64**

For MacOS:

Select **Free Download > macOS Universal**



Visual Studio 2019 for Mac

Version 8.10
A comprehensive IDE for .NET developers that's native to macOS. Includes top-notch support for web, cloud, and game development —plus ridiculously good tools for making cross-platform mobile apps.

[Read more about activating your license](#)

[Free download](#)

[Release notes >](#)



Next release candidate

Experience a fast and fluid, modern .NET IDE hand-tailored for the Mac. The new RC release of Visual Studio 2022 for Mac is available now.

[About Visual Studio 2022 for Mac RC >](#)



Visual Studio Code

| Version 1.67
A standalone source code editor that runs on Windows, macOS, and Linux. The top pick for Java and web developers, with tons of extensions to support just about any programming language.

By using Visual Studio Code you agree to its [license](#) & [privacy statement](#).

[Free download](#)

Windows x64	User Installer
macOS Universal	Package
Linux x64	.deb
Linux x64	.rpm
More	

Feedback

Still not sure which tool is best for you? We can help

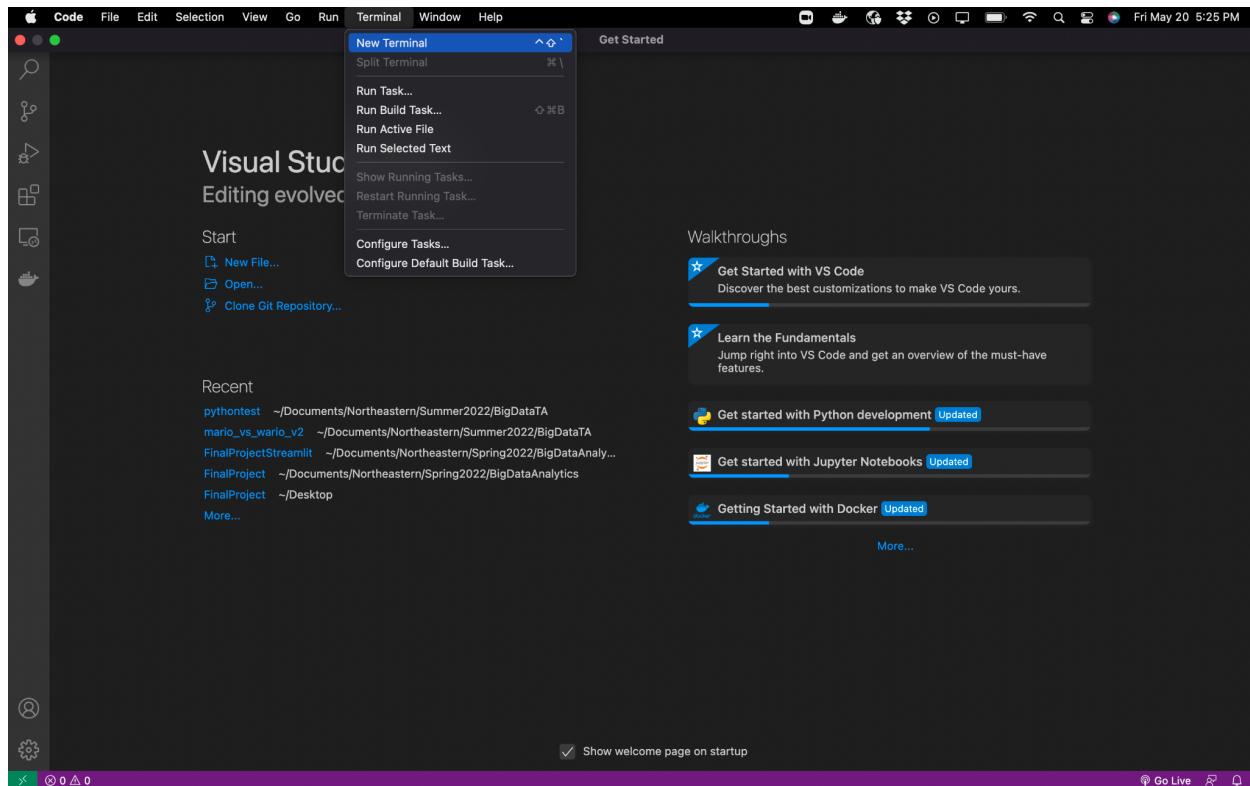
Developer machine OS

Windows macOS Linux

Python Installation

Once your VS Code is installed check if you have python installed on your laptop.

Open terminal from VS Code:



Check whether you have python installed:

Type: `python -version`

```
(base) parthshah@parths-MacBook-Air ~ % python --version  
Python 2.7.18  
(base) parthshah@parths-MacBook-Air ~ % █
```

If you don't have python, you can install it from
<https://www.python.org/downloads/>

Note: We will not be using the system's python for any of the assignments. The main goal of building a component is that it should be reproducible. so we will be using virtual environments for all the assignments so it becomes easy to share the codebase with various OS users.

CookieCutter

A well-defined, standard project structure means that anyone can understand your project and where all the files are stored

So we will be using CookieCutter Data Science Template for all the assignment

More can be found here:

<https://drivendata.github.io/cookiecutter-data-science/>

Steps to make this:

Open your VS Code Terminal and Install CookieCutter with pip
pip3 install cookiecutter

Then run

```
cookiecutter https://github.com/drivendata/cookiecutter-data-science
```

You will get a prompt on the terminal, fill in accordingly and proceed

```
project_name [project_name]: Assignment1
repo_name [assignment1]:
author_name [Your name (or your organization/company/team)]: Parth Shah
description [A short description of the project.]:
Select open_source_license:
1 - MIT
2 - BSD-3-Clause
3 - No license file
Choose from 1, 2, 3 [1]: 1
s3_bucket [[OPTIONAL] your-bucket-for-syncing-data (do not include 's3://')]:
aws_profile [default]:
Select python_interpreter:
1 - python3
2 - python
Choose from 1, 2 [1]: 1

=====
*** DEPRECATION WARNING ***
Cookiecutter data science is moving to v2 soon, which will entail using
the command `ccds ...` rather than `cookiecutter ...`. The cookiecutter command
will continue to work, and this version of the template will still be available.
To use the legacy template, you will need to explicitly use `--c v1` to select it.
Please update any scripts/automation you have to append the `--c v1` option,
which is available now.
```

Ln 6, Col 1 Spaces: 4 UTF-8 LF pip requirements ⚡ Go Live ⌂ ⌂

This will create a new folder named assignment1 in your working directory

Virtual Env

Lets create a virtual environment

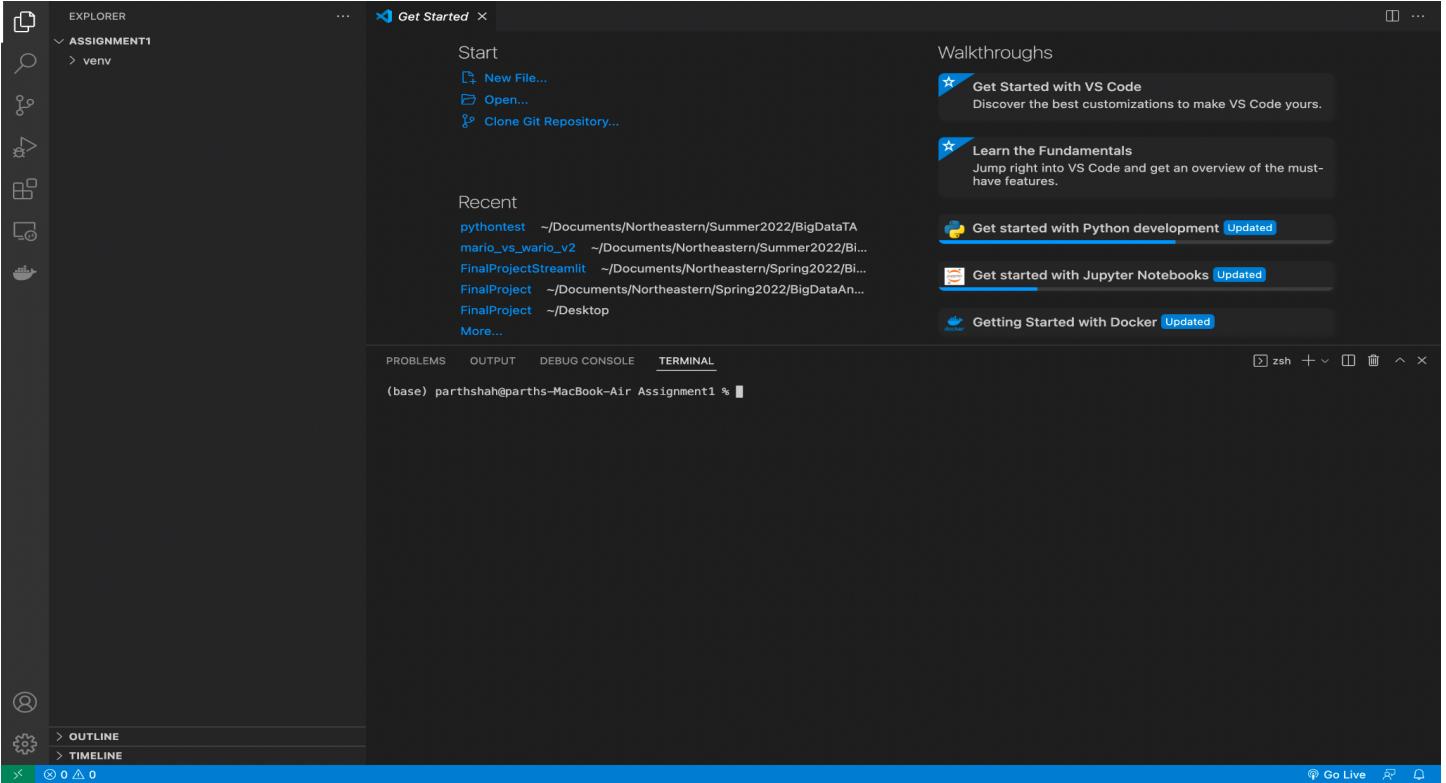
Go to the folder which was created in above step from cookiecutter

Run following command

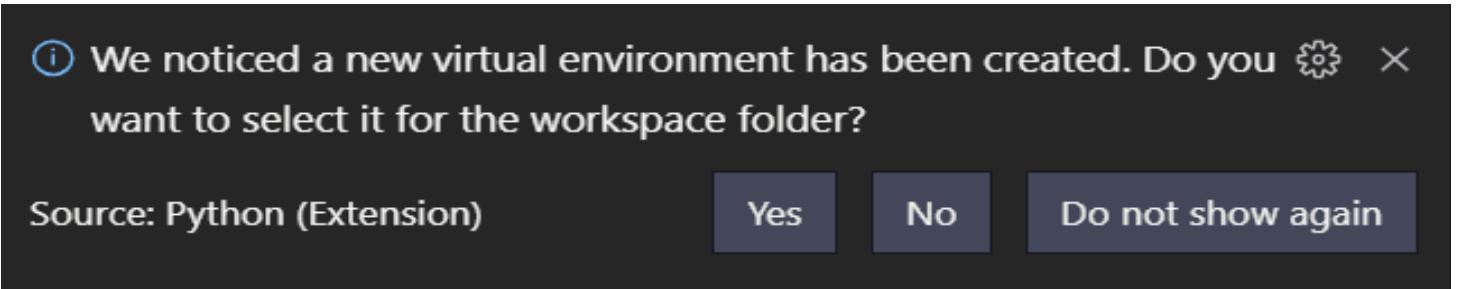
```
python3 -m venv venv # This command will create a Virtual env for you
```

```
(base) parthshah@parths-MacBook-Air:~/bigdataAnalytics% cd Assignment1
(base) parthshah@parths-MacBook-Air:~/Assignment1% python3 -m venv venv
(base) parthshah@parths-MacBook-Air:~/Assignment1% █
```

You will see a venv folder, which means you successfully created a virtual env



To activate the Virtual env, you will get a popup in button right



select “Yes” and open a new terminal.

If for Mac users popup does not show up
Type “source venv/bin/activate” to activate.

```
(base) parthshah@parths-MacBook-Air Assignment1 % source venv/bin/activate  
(venv) (base) parthshah@parths-MacBook-Air Assignment1 % █
```

You can see (venv) in your terminal which means you have activated it successfully.

Requirements.txt

Once you have virtual env running one of the most important part of reproducibility is storing all the packages at one place which where used in our project

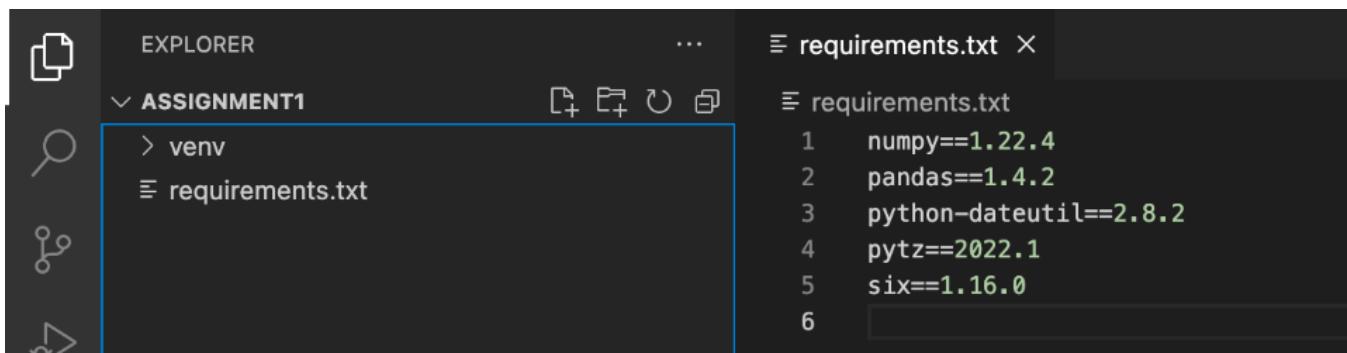
So we will have a Requirements.txt file which stores all of them!

CookieCutter template will create a requirements.txt file for you!

Whenever you install a package run

```
pip freeze > requirements.txt
```

This will save package name in the requirements.txt file



And you will see packages in requirements.txt
You are ready with the setup and can start crushing your assignments!
Next: We will also push this to Github