

APS106: Getting Started with Jupyter Notebook on Windows

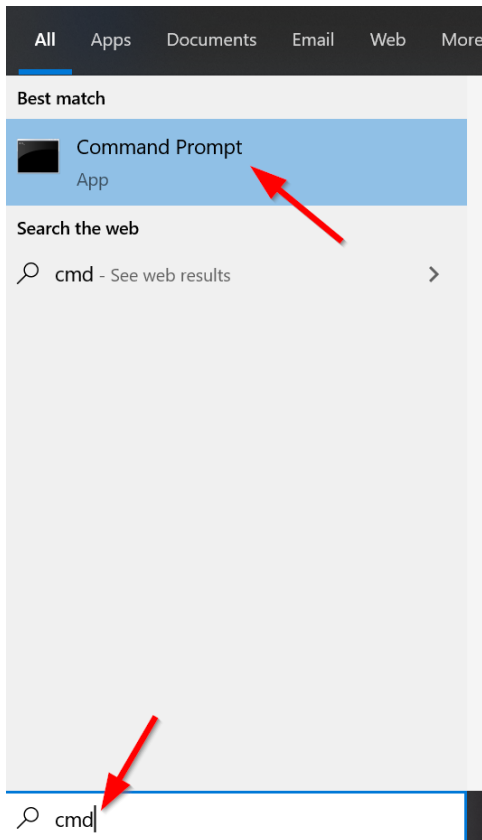
* The instructions are designed based on Windows 10 and Google Chrome, but should be applicable for other versions of Windows and other browsers

Prerequisite: Python is installed on your computer

Follow the instructions included in the Wing101 installation guide to install Python.

Install Jupyter Notebook

- 1 From the start menu, open the command prompt by searching “cmd”

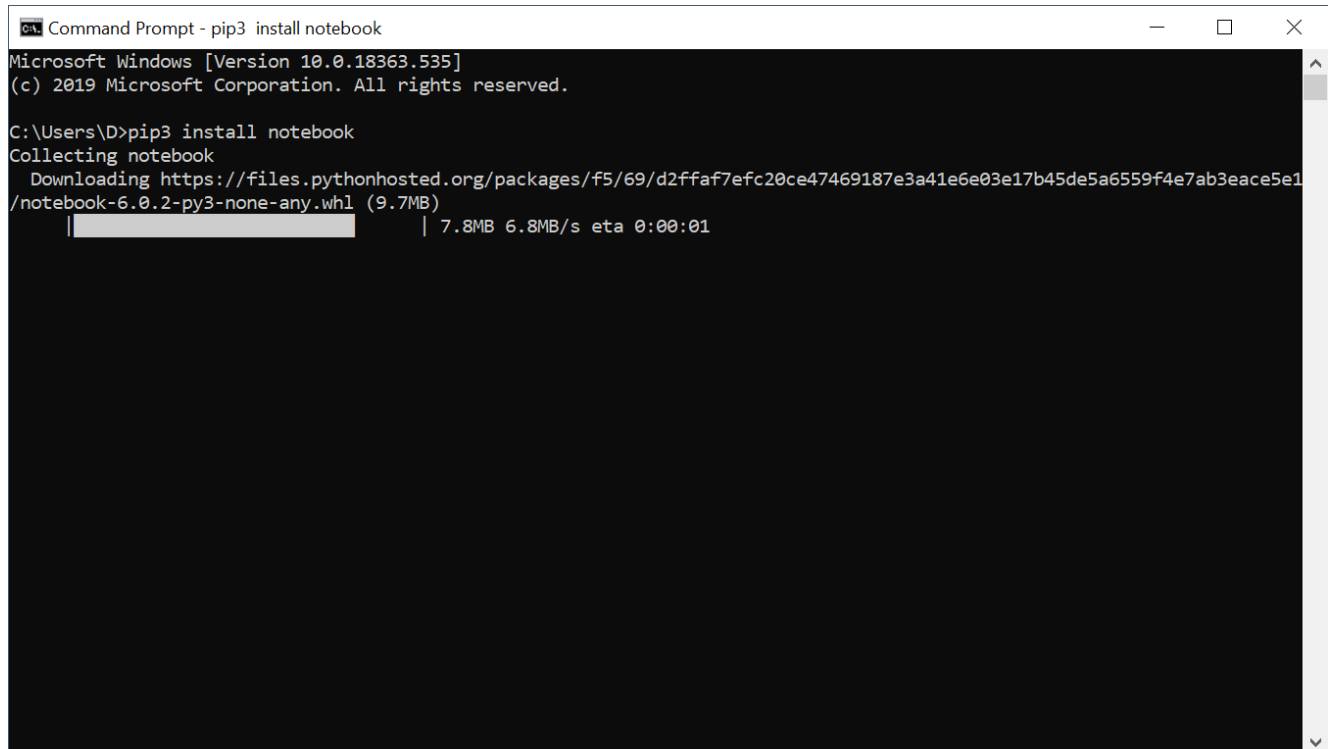


- 2 To install Jupyter notebook type the command “pip3 install notebook” into the command prompt and press enter
- Note: pip is the standard package manager for Python and with a minimum Python version of 3.4, pip is installed by default.

```
Command Prompt
Microsoft Windows [Version 10.0.18363.535]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\D>pip3 install notebook
```

3 Jupyter notebook will begin to install:



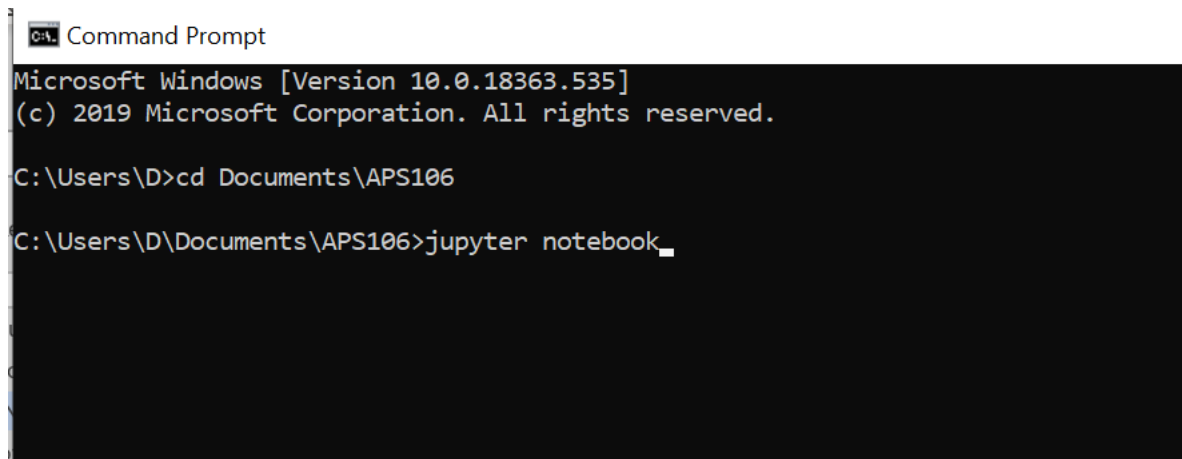
```
Command Prompt - pip3 install notebook
Microsoft Windows [Version 10.0.18363.535]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\D>pip3 install notebook
Collecting notebook
  Downloading https://files.pythonhosted.org/packages/f5/69/d2ffaf7efc20ce47469187e3a41e6e03e17b45de5a6559f4e7ab3eace5e1/notebook-6.0.2-py3-none-any.whl (9.7MB)
    | 7.8MB 6.8MB/s eta 0:00:01
```

- 4 Wait a few minutes while Notebook installs, once the command stops executing you have installed Notebook!

Launch Jupyter Notebook

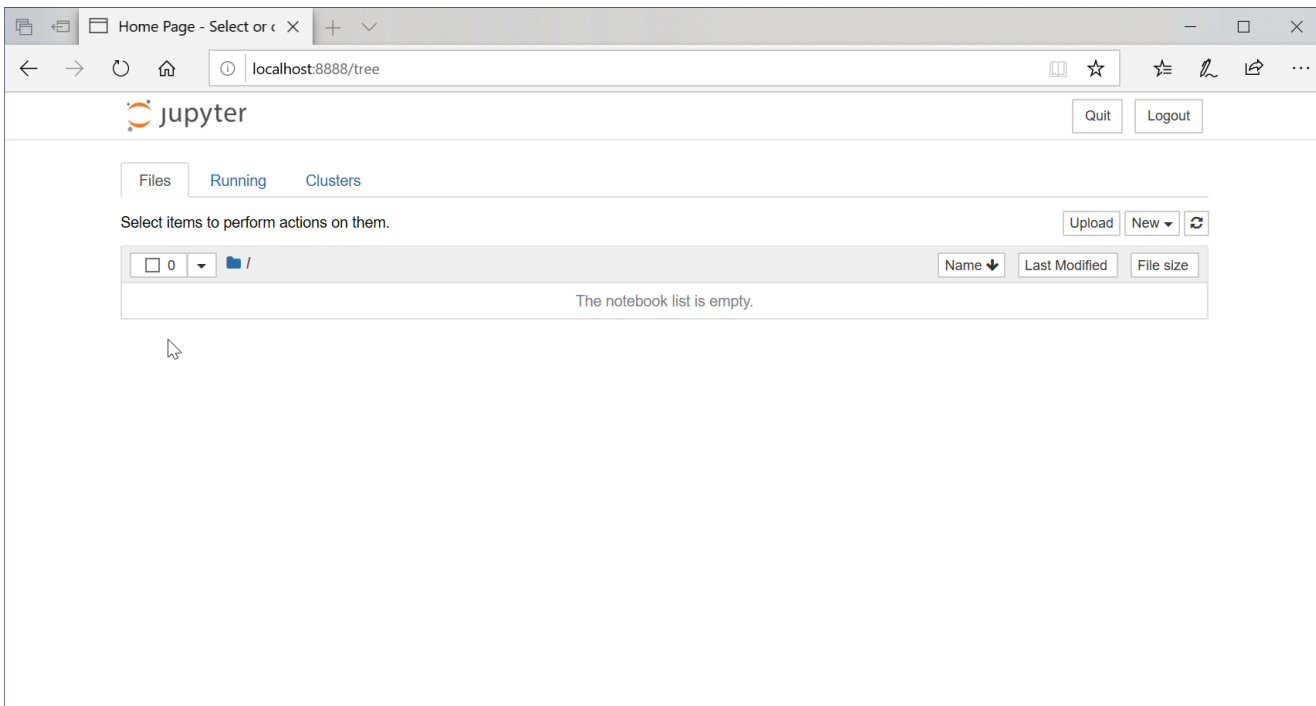
- 1 From the command line enter the following command “jupyter notebook” and press enter



```
Command Prompt
Microsoft Windows [Version 10.0.18363.535]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\D>cd Documents\APS106
C:\Users\D\Documents\APS106>jupyter notebook_
```

- 2 Notebook Dashboard will open in your default browser.
 - In Notebook Dashboard, you will see a list of the notebooks, files, and subdirectories in the directory where the notebook server was started
 - Notebook was opened from my APS106 directory (which doesn't contain any files or folders yet), so the Notebook Dashboard below is empty:



- 3 If Notebook does not open in your browser, you can copy and paste the URL listed in the command prompt:

```
Command Prompt - jupyter notebook
Microsoft Windows [Version 10.0.18363.535]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\D>cd Documents\APS106

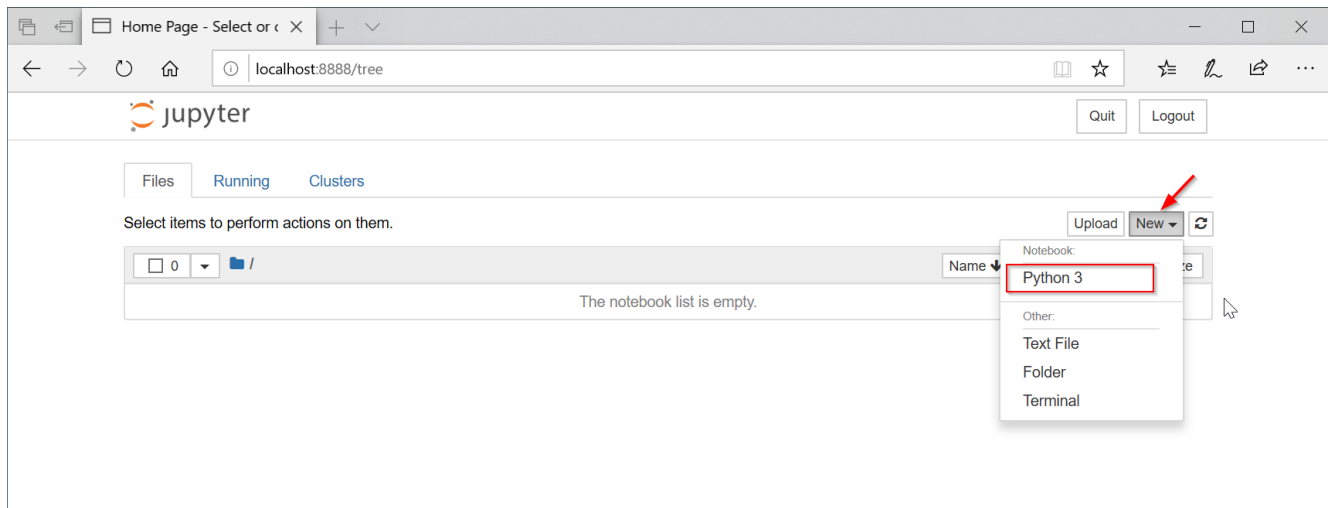
C:\Users\D\Documents\APS106>jupyter notebook
[I 13:28:41.363 NotebookApp] Serving notebooks from local directory: C:\Users\D\Documents\APS106
[I 13:28:41.363 NotebookApp] The Jupyter Notebook is running at:
[I 13:28:41.363 NotebookApp] http://localhost:8888/?token=bf40390ffc2a86f63f6d7530d6d77f622169ebb32de8705b
[I 13:28:41.363 NotebookApp] or http://127.0.0.1:8888/?token=bf40390ffc2a86f63f6d7530d6d77f622169ebb32de8705b
[I 13:28:41.363 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 13:28:41.410 NotebookApp]

To access the notebook, open this file in a browser:
file:///C:/Users/D/AppData/Roaming/jupyter/runtime/nbserver-24636-open.html
Or copy and paste one of these URLs:
http://localhost:8888/?token=bf40390ffc2a86f63f6d7530d6d77f622169ebb32de8705b
or http://127.0.0.1:8888/?token=bf40390ffc2a86f63f6d7530d6d77f622169ebb32de8705b
```

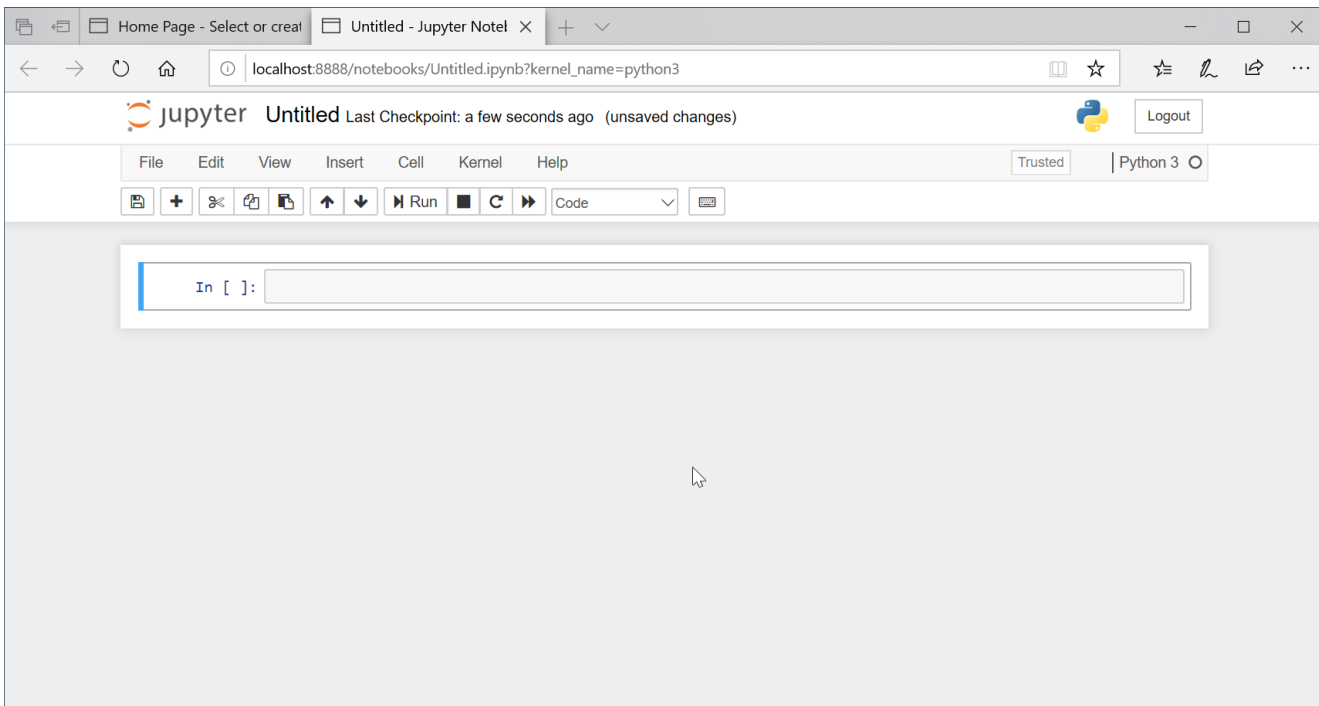
- 4 Make sure to leave the command prompt open while using Notebook, as it used to run the Notebook Server.

Create a new Notebook

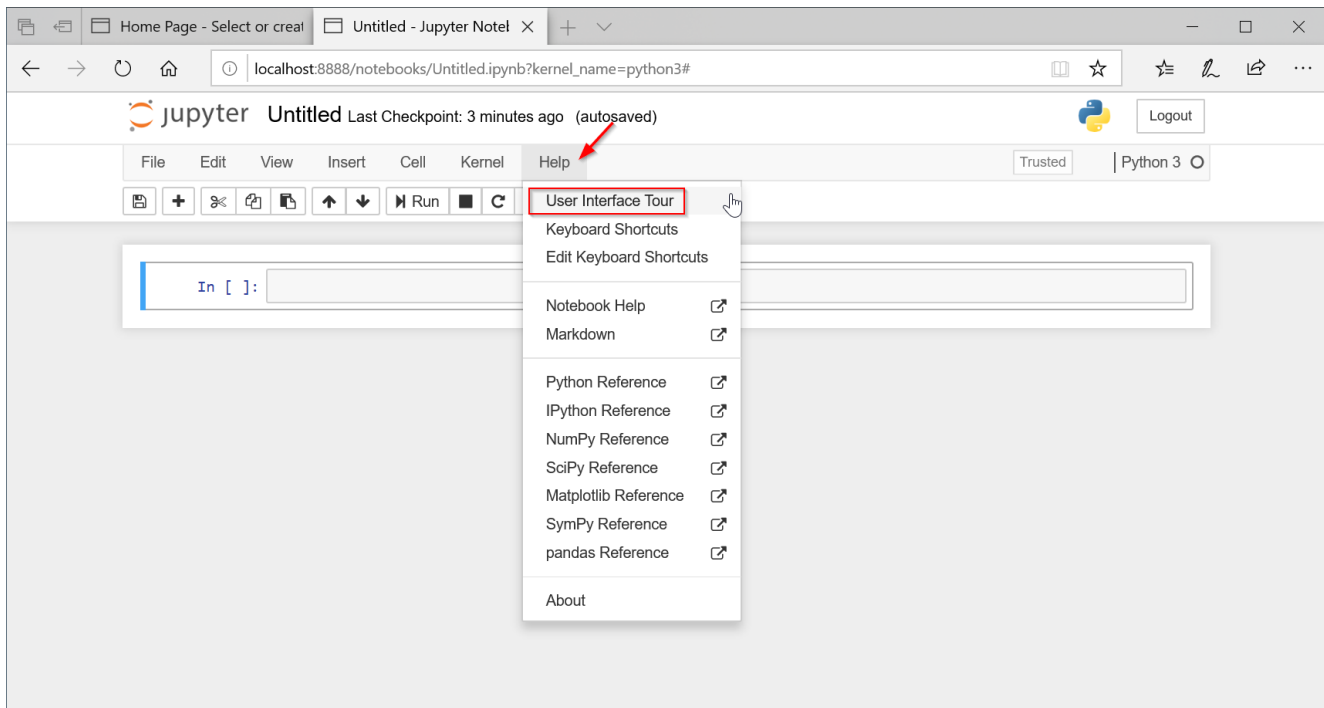
- 1 From the Notebook Dashboard click New → Python3



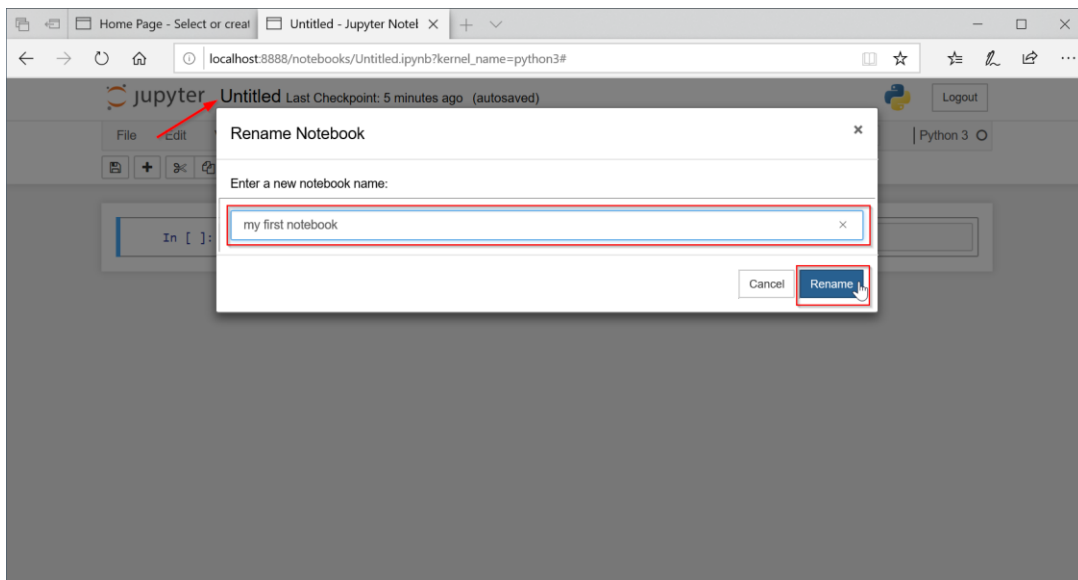
2 See a blank Notebook open:



3 For a quick tour of Notebook, click "Help" → "User Interface Tour"

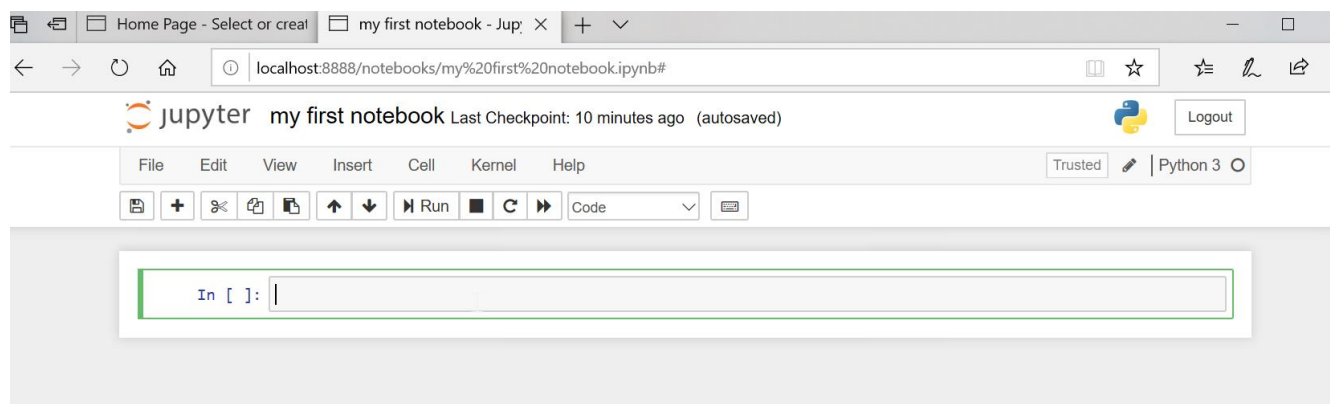


- 4 To rename your Notebook, click on untitled at the top of the page and rename your Notebook

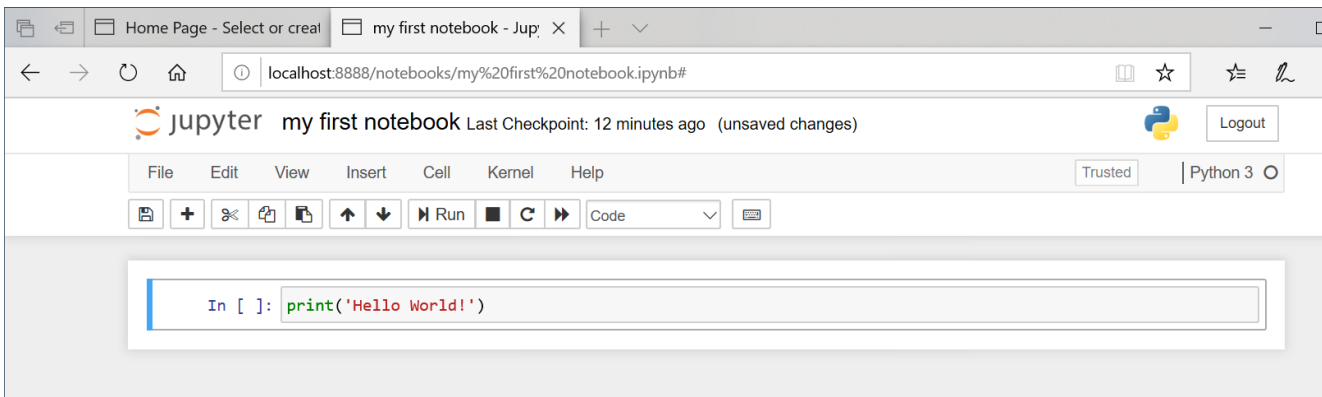


Add Code to your Notebook

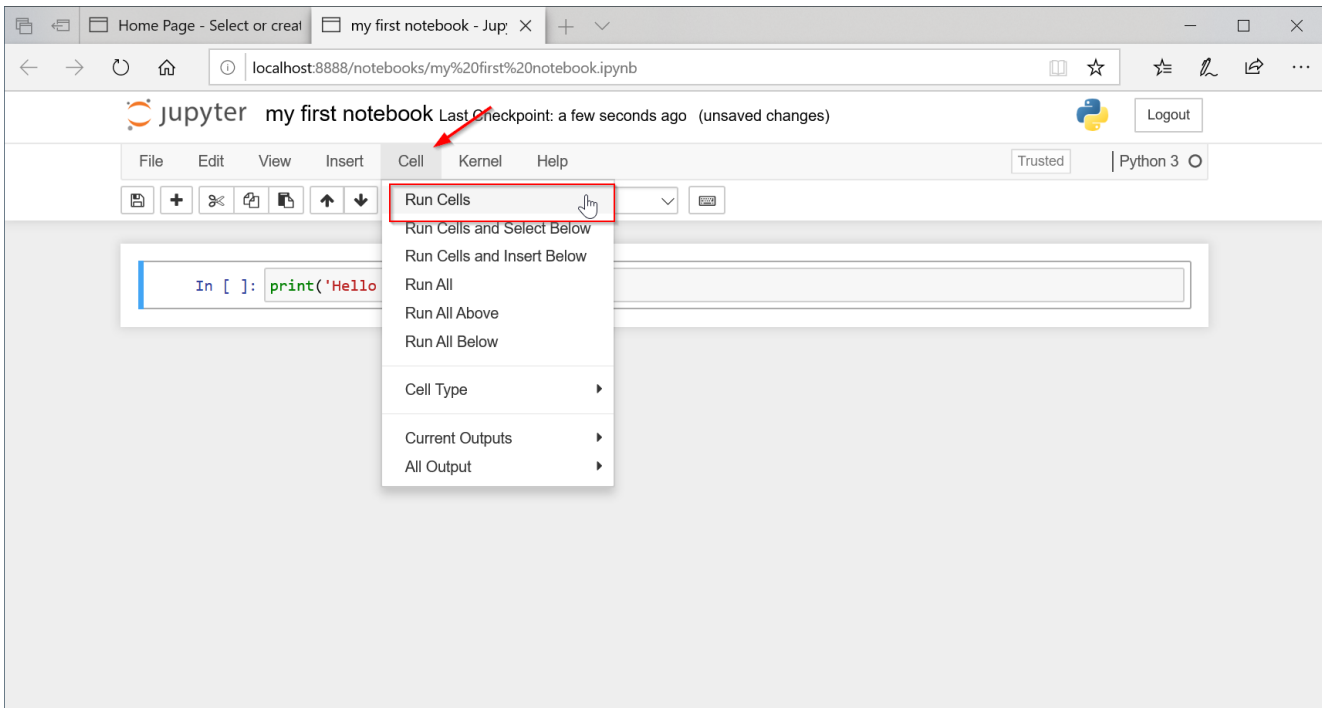
- 1 Press Enter or click on the first cell to enter Edit Mode and begin editing your Notebook



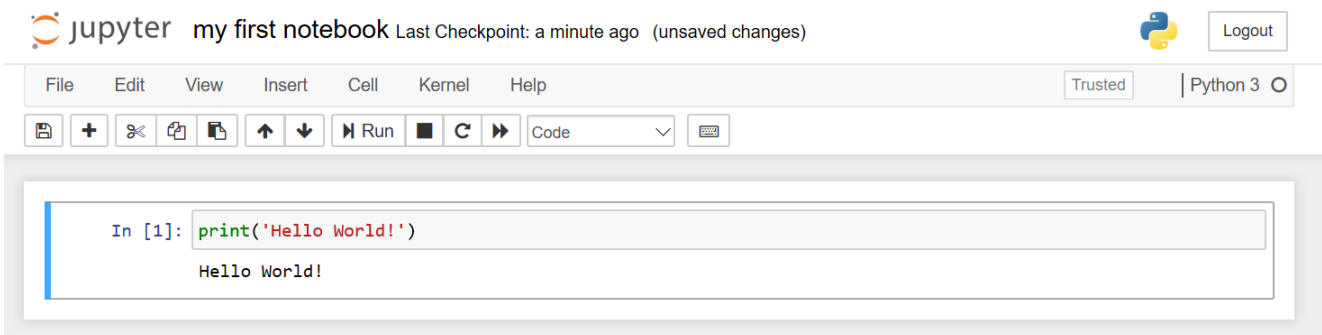
2 Add in code: print('Hello World!')



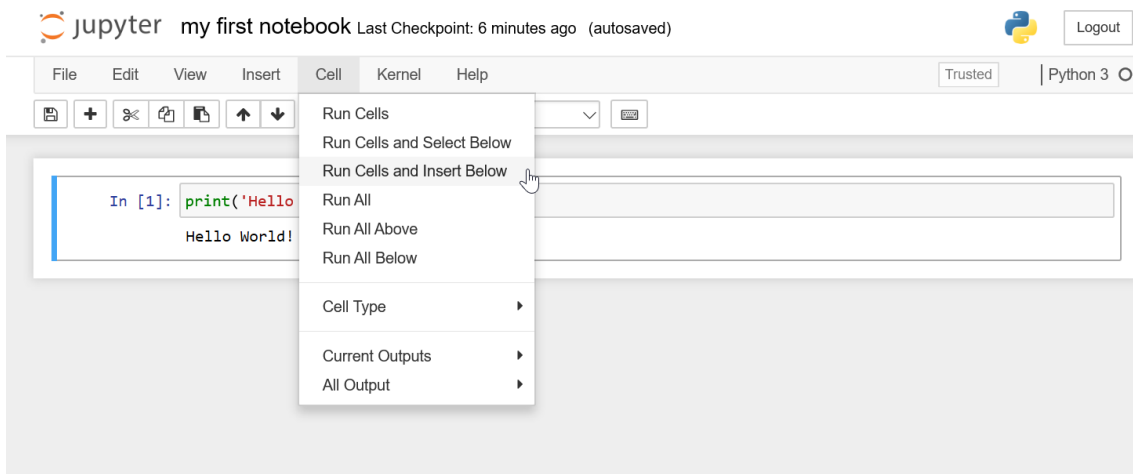
3 To run this code, click “Cell” → “Run Cells”



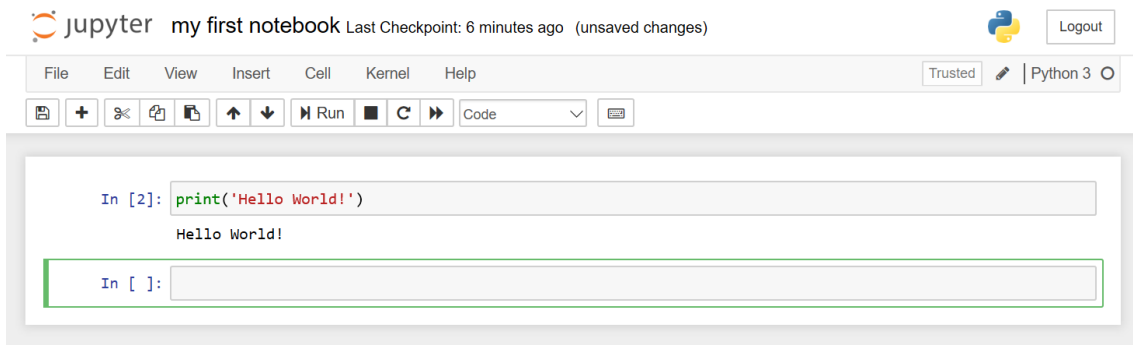
Output:



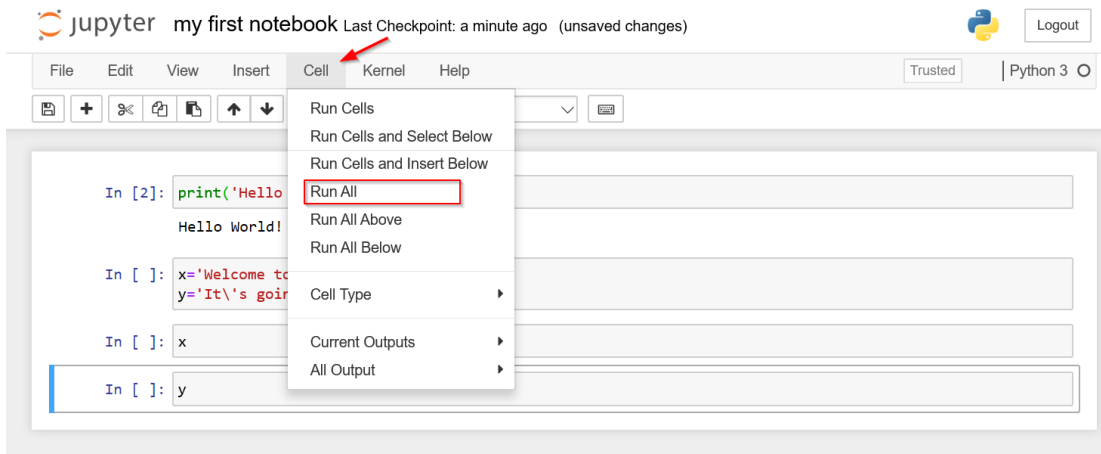
4 To run the code and an insert a new cell below, click “Cells” → “Run Cells and Insert Below”



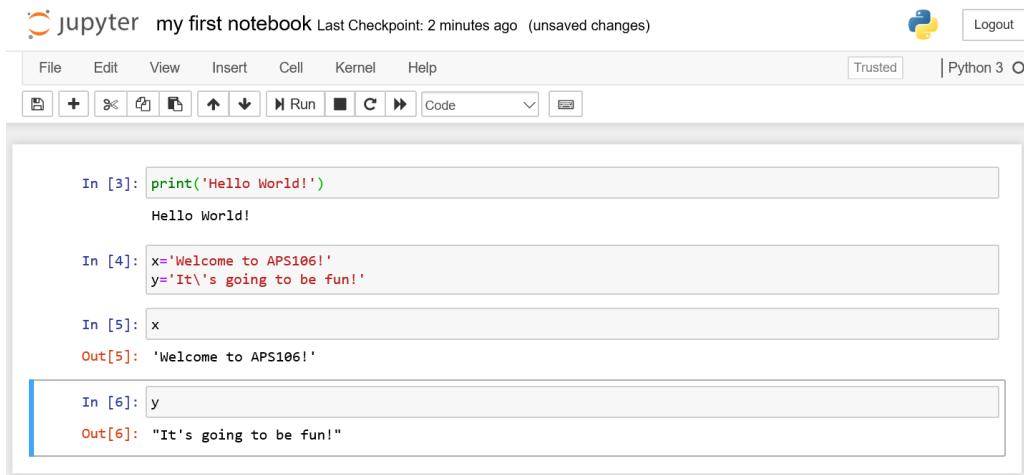
See how a new cell was inserted below:



5 To run all the cells in your Notebook, click "Cell" → "Run All"

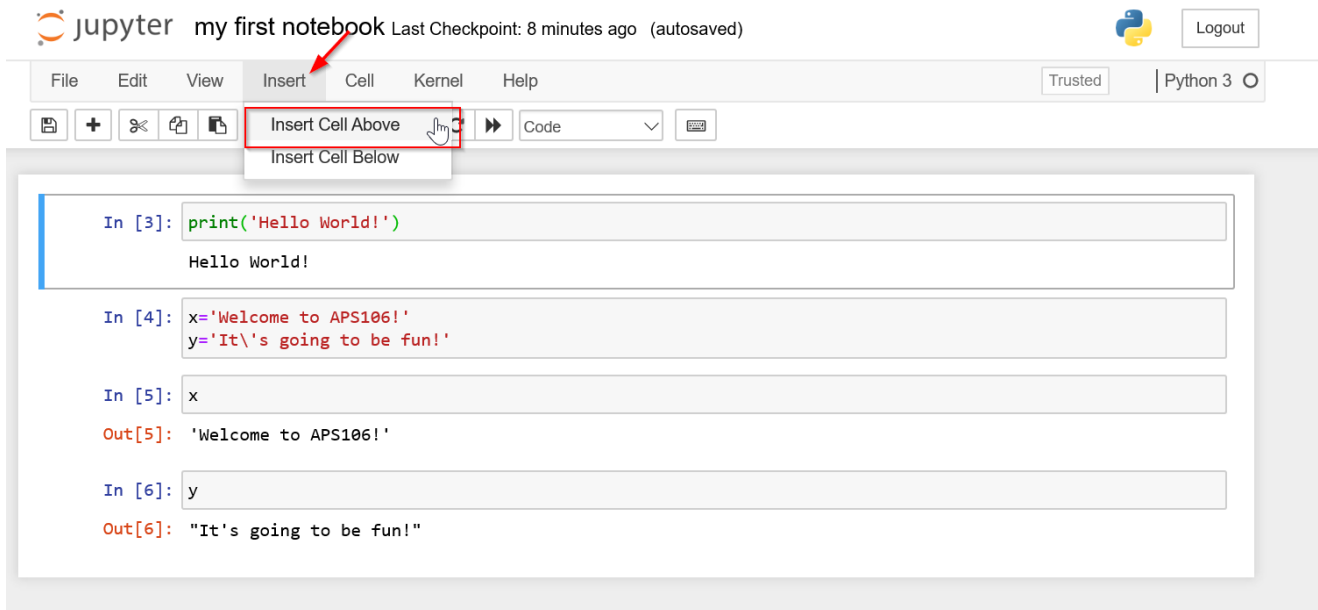


Output:

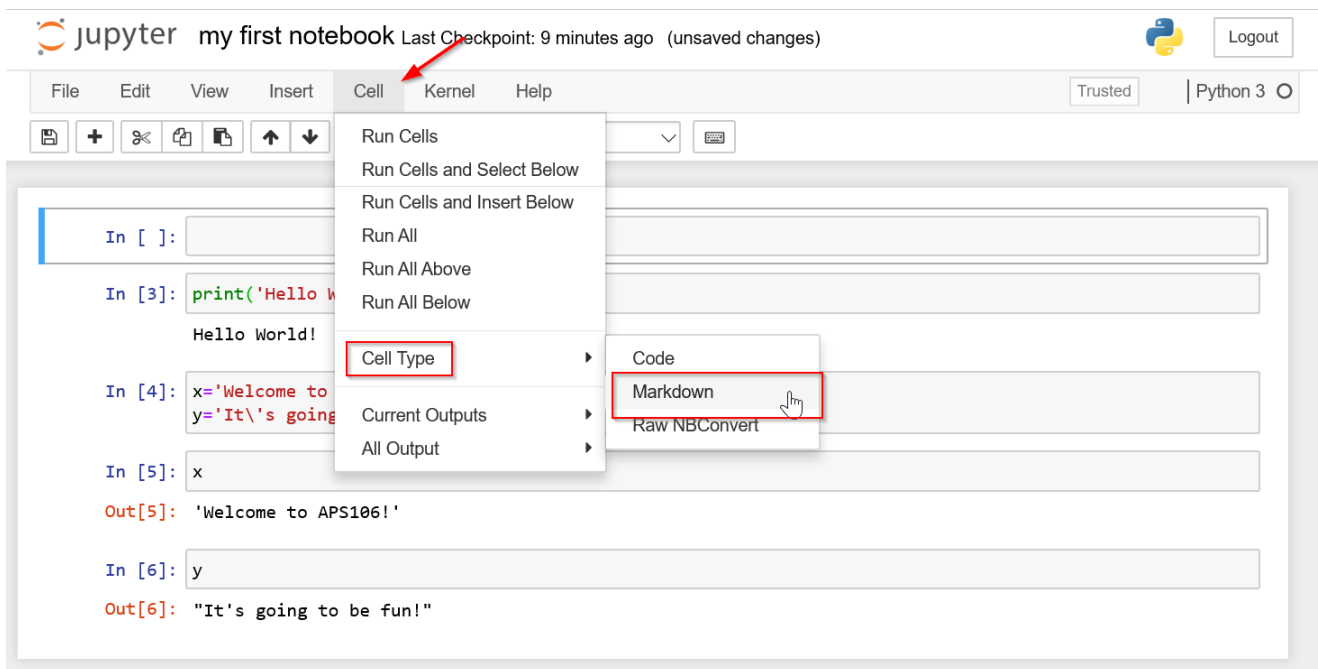


Add Markdown Cells to your Notebook

- 1 Text can be added into Jupyter using Markdown cells.
- 2 To add in a markdown cell, insert a new cell by clicking “Insert” → “Insert Cell Above” or “Insert Cell Below”

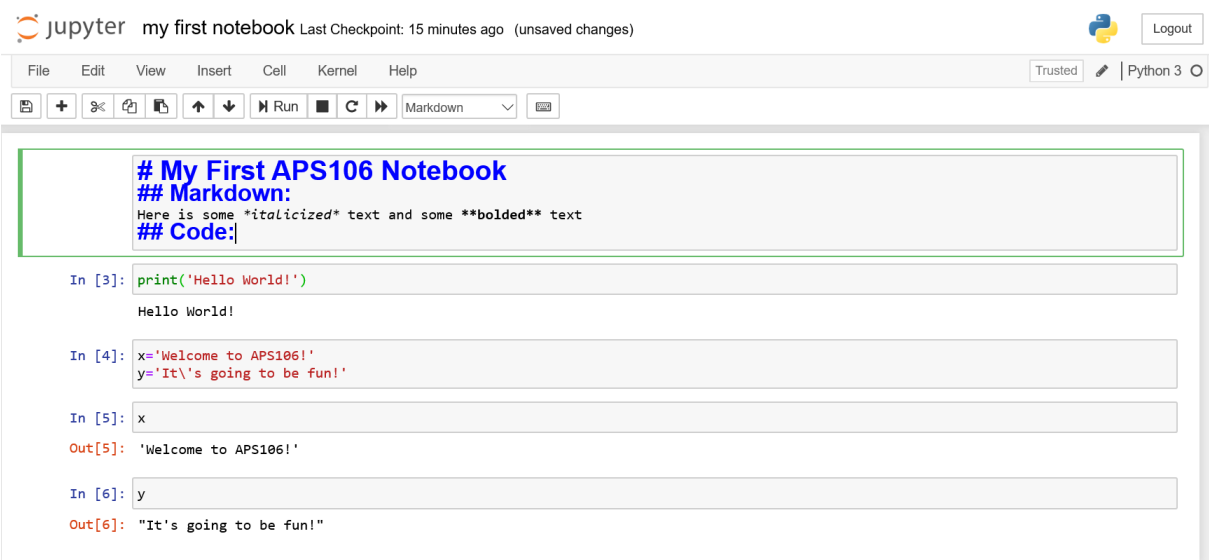


- 3 Once a cell has been inserted, click “Cells” → “Cell Type” → “Markdown” to change it to a Markdown Cell

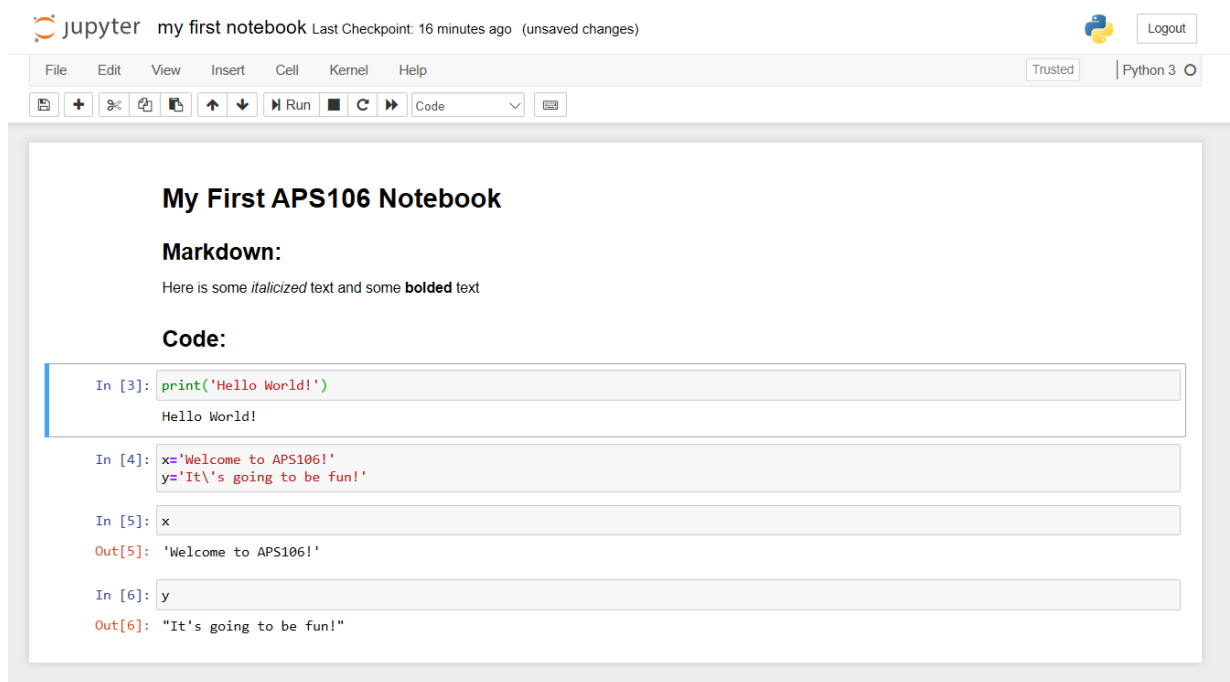


- 4 Now add in Markdown text:
 - For details on markdown cells visit:

<https://jupyter-notebook.readthedocs.io/en/stable/examples/Notebook/Working%20With%20Markdown%20Cells.html>



5 Run the Markdown cell



Edit an Existing Notebook

- 1 An existing notebook can be edited, by visiting the Notebook Dashboard and clicking the Notebook file to edit:

