

FIT1043 Introduction to Data Science

Week 1: Introduction to Jupyter

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Installation

Detailed installation information can be found on the following links:

- Installing on Windows (Steps 1 to 15)
[<https://docs.anaconda.com/anaconda/install/windows.html>]
- Installing on macOS (Steps 1 to 10)
[<https://docs.anaconda.com/anaconda/install/mac-os.html>]

Note: You can *skip* the installation steps marked as “*Optional*” as we will not use those features of Anaconda during this course.

Some other useful installation videos:

- <https://youtu.be/2JeoNICcLOM> (MacOS)
- <https://youtu.be/a7Ylbn1ikF0> (Windows)

Jupyter Introduction



Your Notebook Dashboard

Managing your Jupyter Notebooks



The screenshot shows the Jupyter Notebook Dashboard interface. At the top left is the Jupyter logo. At the top right are 'Quit' and 'Logout' buttons. Below the logo are three tabs: 'Files' (selected), 'Running', and 'Clusters'. A message says 'Select items to perform actions on them.' To the right of this message are 'Upload', 'New' (with a dropdown arrow), and a refresh icon. Below this is a table of files and folders. The table has columns for 'Name', 'Last Modified', and 'File size'. The first row shows a folder named 'anaconda3' with a checkbox on the left and '4 hours ago' in the 'Last Modified' column. The second row shows a folder named 'Applications' with a checkbox on the left and 'a year ago' in the 'Last Modified' column. The third row shows a folder named 'Desktop' with a checkbox on the left and '26 minutes ago' in the 'Last Modified' column.

jupyter

Quit Logout

Files Running Clusters

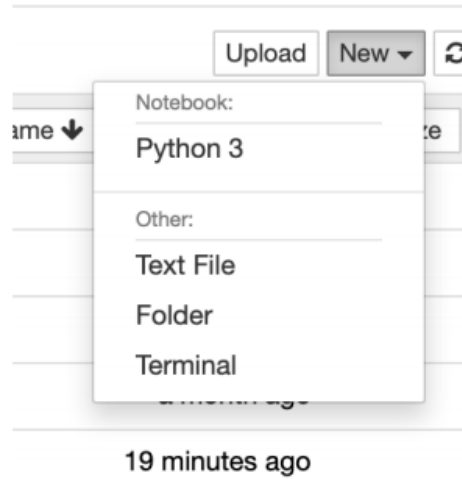
Select items to perform actions on them.

Upload New ↕

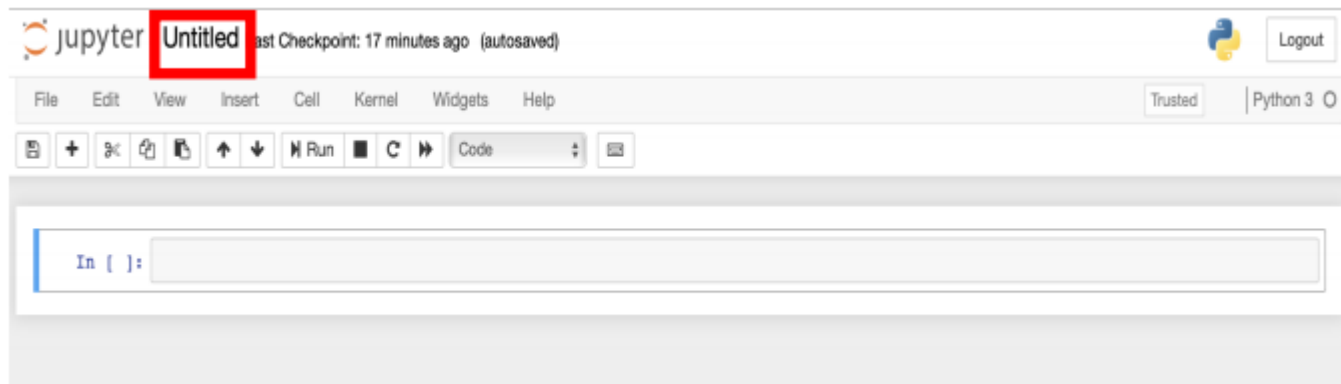
	Name ↓	Last Modified	File size
<input type="checkbox"/> 0	/		
<input type="checkbox"/>	anaconda3	4 hours ago	
<input type="checkbox"/>	Applications	a year ago	
<input type="checkbox"/>	Desktop	26 minutes ago	

Create Your First Notebook

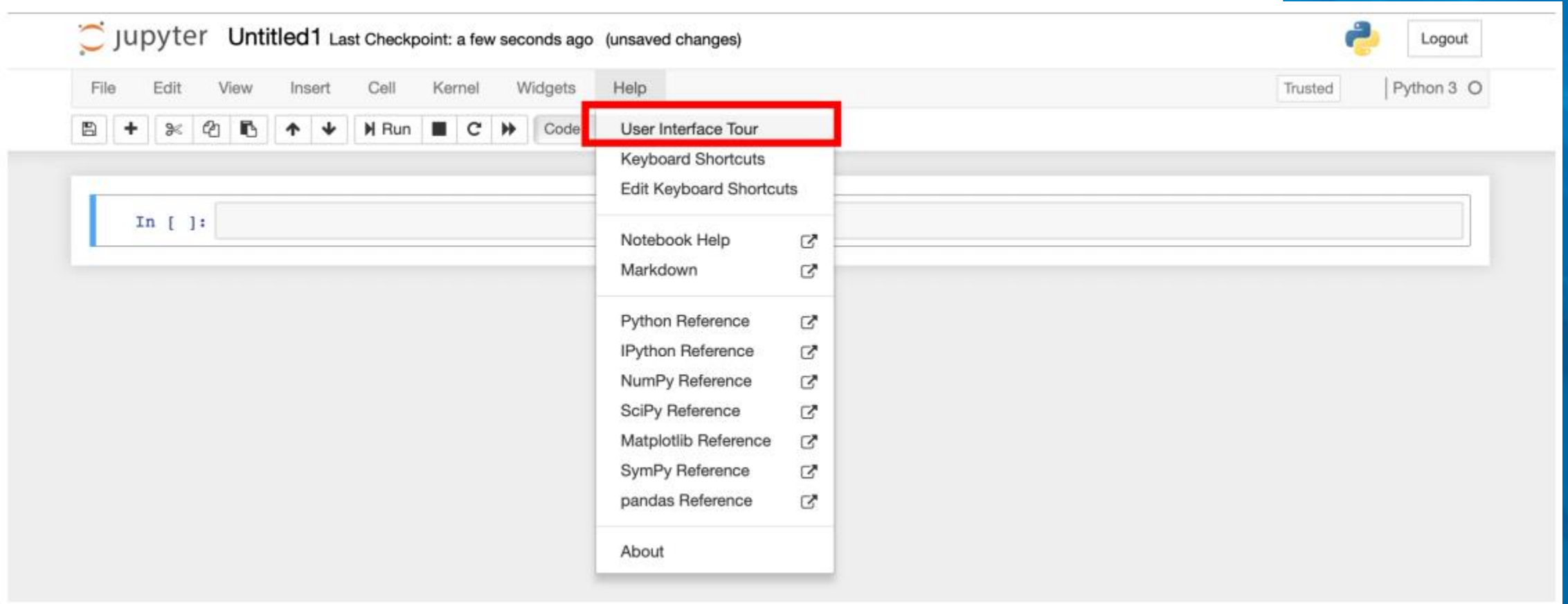
You can create a new iPython Notebook file:



Your new iPython Notebook (default file extension is ipynb and you can rename it).



User Interface Tour



Jupyter Notebook Terms

A **kernel** is a “computational engine” that executes the code contained in a notebook document.

A **cell** is a container for text to be displayed in the notebook or code to be executed by the notebook’s kernel.

- A **code cell** contains code to be executed in the kernel and displays its output below (the cell).
- A **markdown cell** contains text formatted using Markdown and displays its output in-place when it is run.
- *What other cell types are there?*

Jupyter Notebook's Toolbar

Save

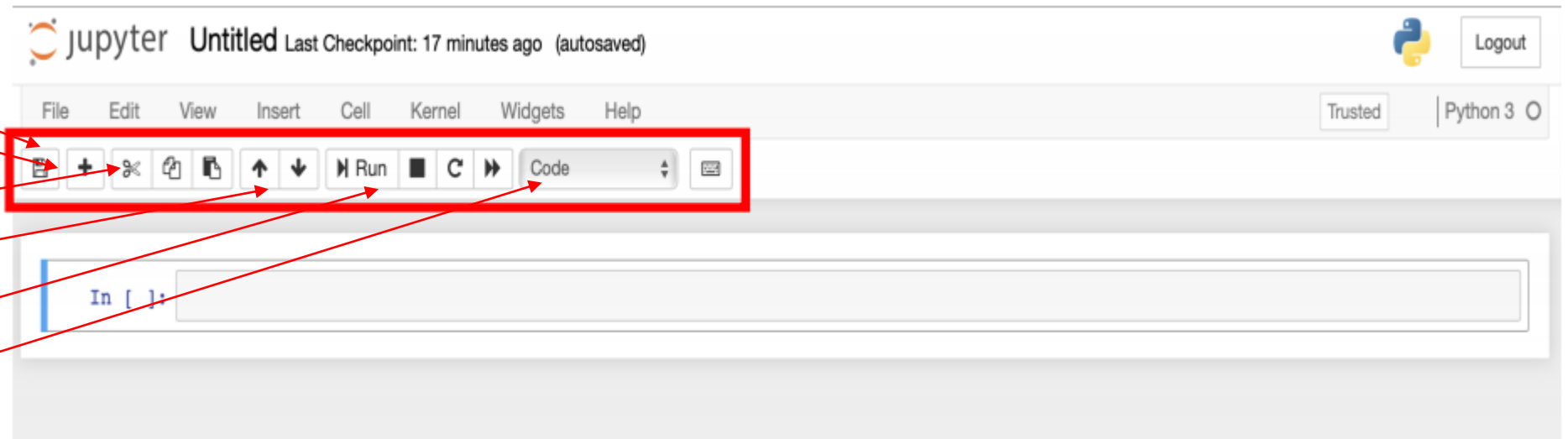
Insert new cell

Cut / Delete cell

Move cell

Execute cell

Cell type

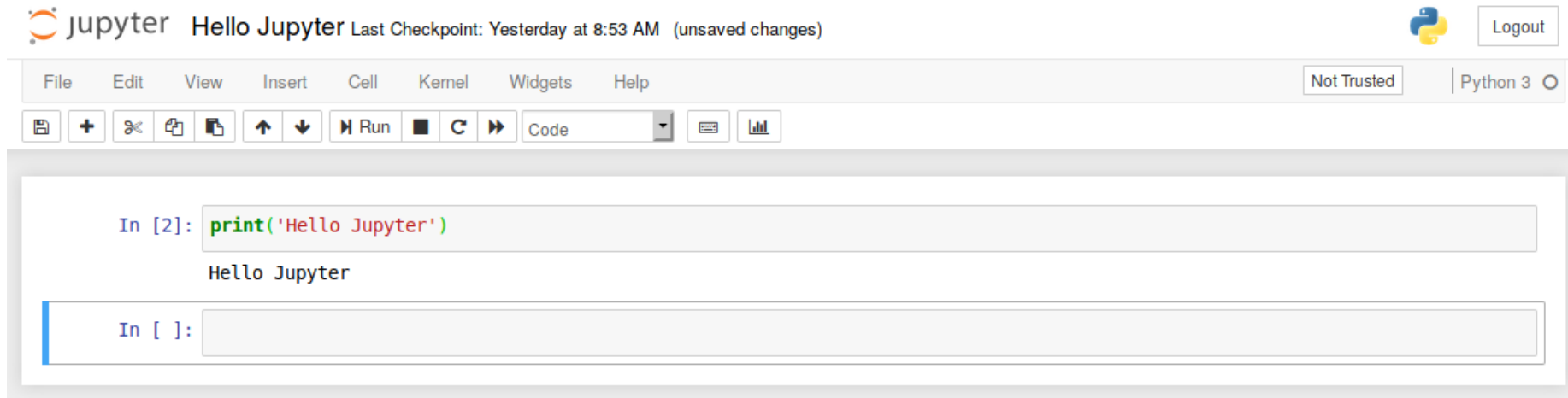


Add the following code to the cell:

Running Cells: Enter the following into the cell

```
print('Hello Jupyter')
```

Click on the “Run” button (or you can use keyboard shortcut SHIFT+ENTER)



Markdown

Jupyter supports Markdown, a markup language (simplified HTML)

Headers: Enter the following into the cell

Header 1

Header Two

Header 3

<https://www.markdownguide.org/cheat-sheet/>

Change the cell type to “Markdown” and click “Run”:

