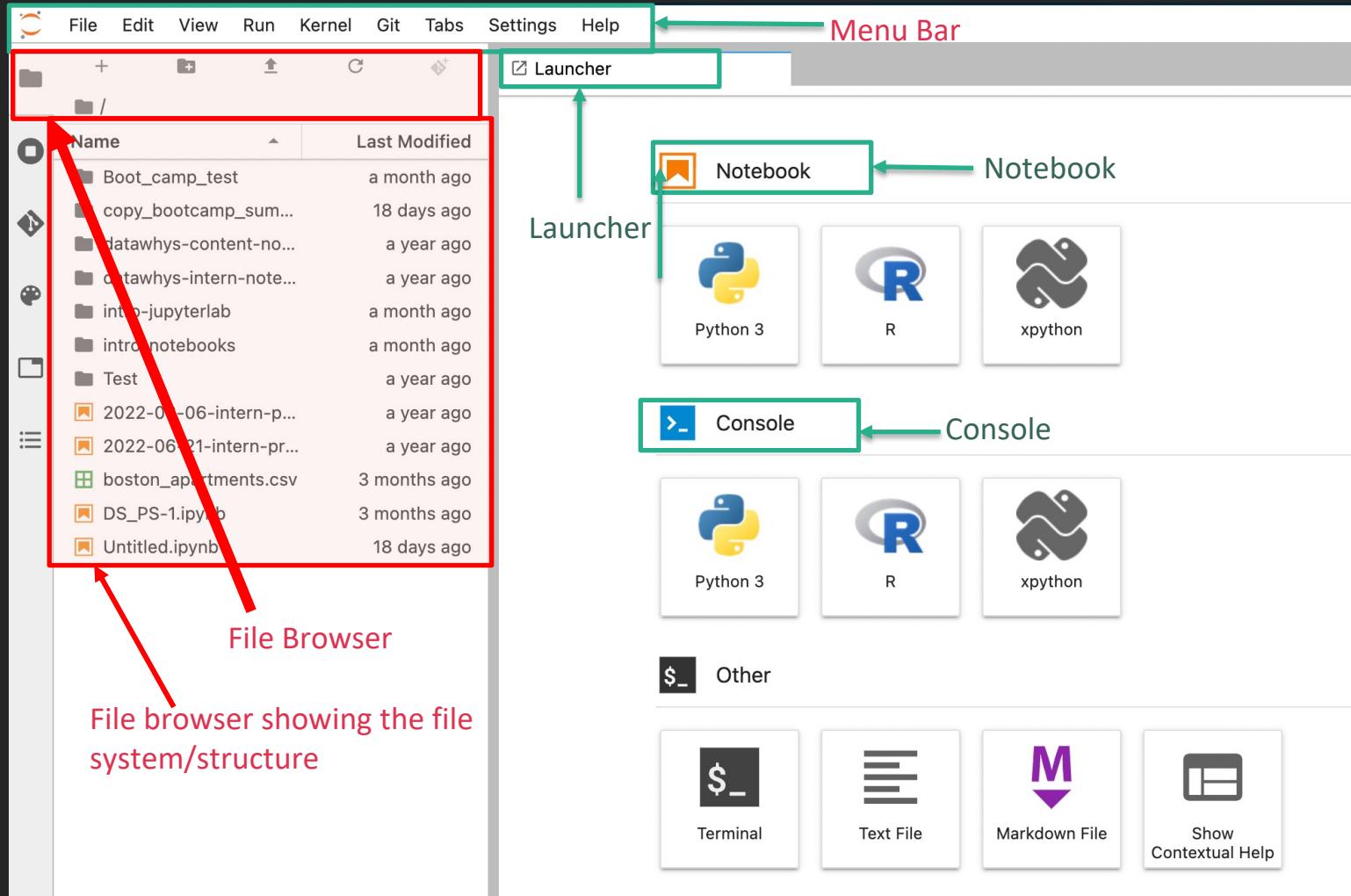


# File Management

A guide to manage files in Jupyterlab user interface

# Objectives

- Identify and name the file browser in JupyterLab and explain its UI elements.
- Perform general file management tasks



# File Browser Details

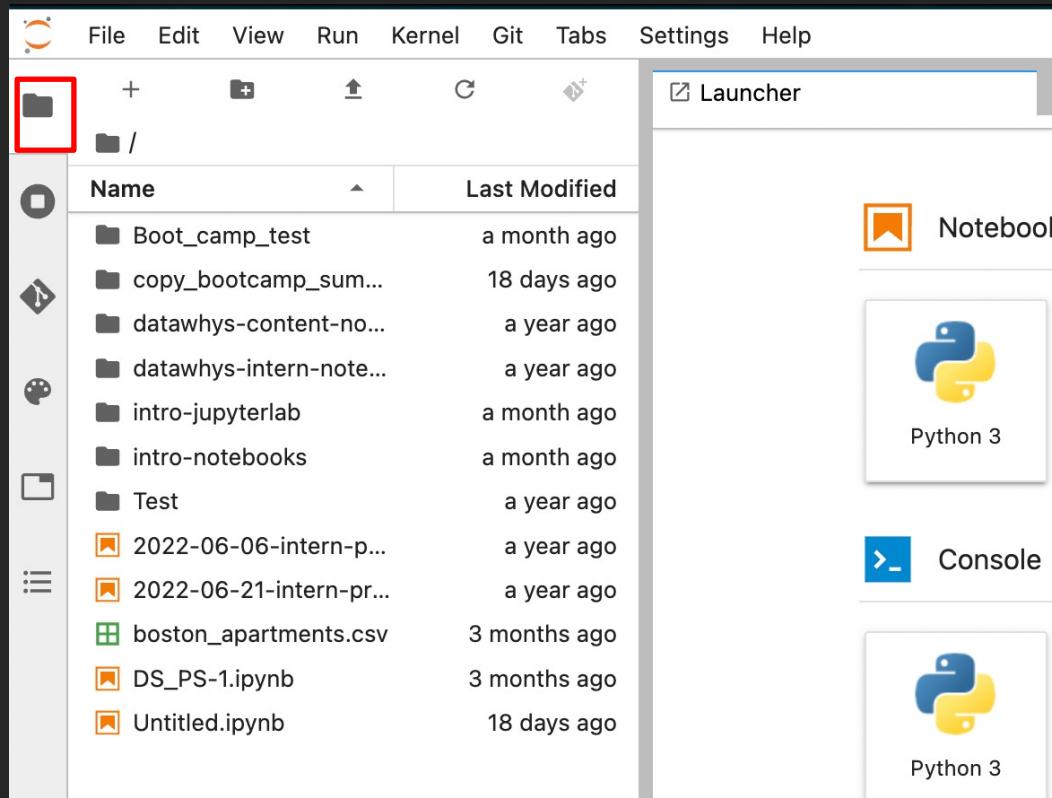
The screenshot shows the Jupyter Notebook interface with the 'File' menu open. The 'File' menu bar includes: File, Edit, View, Run, Kernel, Git, Tabs, Settings, Help. Below the menu is a toolbar with four icons: a plus sign (+), a folder with a plus sign (+), an upward arrow, and a circular 'C'. To the right of the toolbar is a table listing files and folders. The table has columns for Name, Last Modified, and a file icon. The table lists:

Name	Last Modified
Boot_camp_test	a month ago
copy_boocamp_sum...	18 days ago
datawhys-content-no...	a year ago
datawhys-intern-note...	a year ago
New	erlab
Launcher	books
Test	
New	-intern-pr...
Folder	intern-pr...
boston_apartments.csv	3 months ago
DS_F	Upload Files
Untitled.ipynb	3 months ago
	18 days ago

Below the table is a red box labeled 'Refresh File List'. A vertical sidebar on the left contains icons for file operations: a folder, a plus sign, a folder with a plus sign, an upward arrow, and a circular 'C'. The 'New' and 'Folder' items in the table are highlighted with orange boxes. The 'Upload Files' item is also highlighted with an orange box. The 'Refresh File List' button is also highlighted with an orange box.

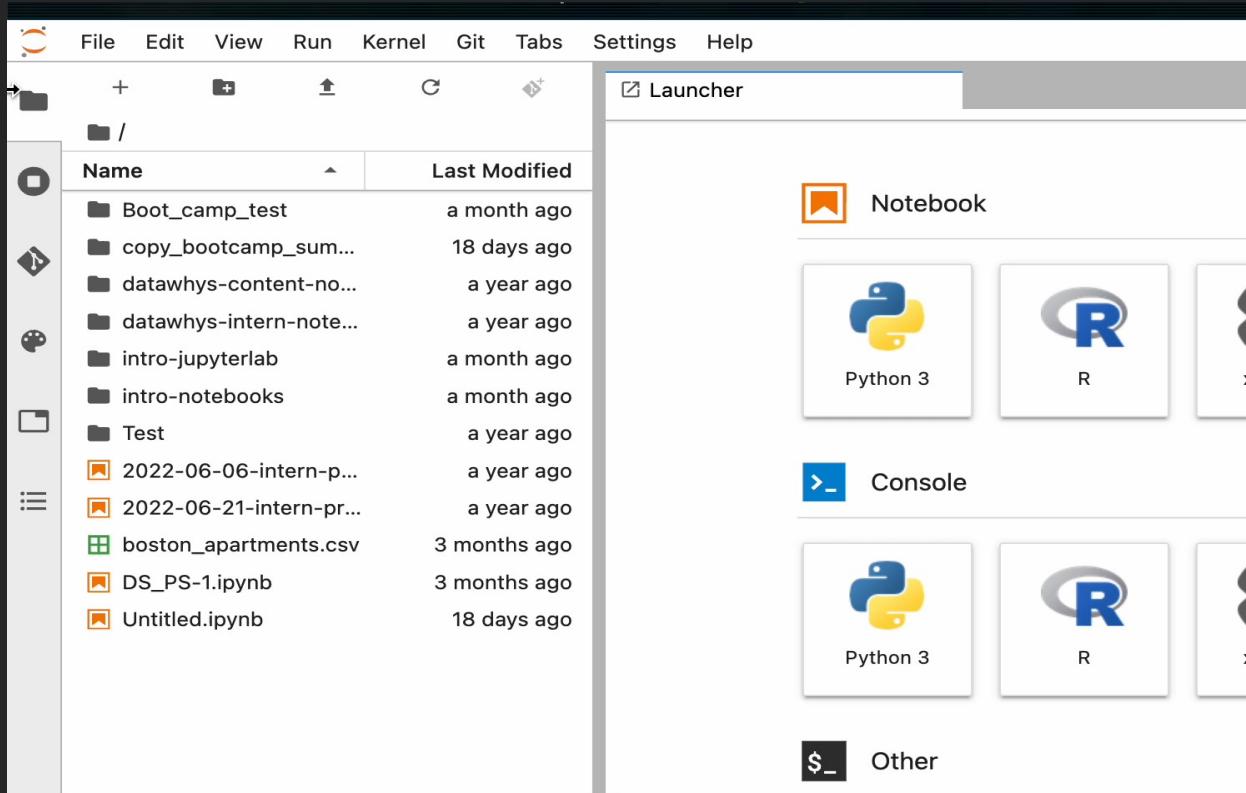


# Hide/Unhide File Browser Details



Click on the File Browser to  
hide/unhide the file browser details

# Hide/Unhide File Browser Details



Click on the File Browser to hide/unhide the file browser details

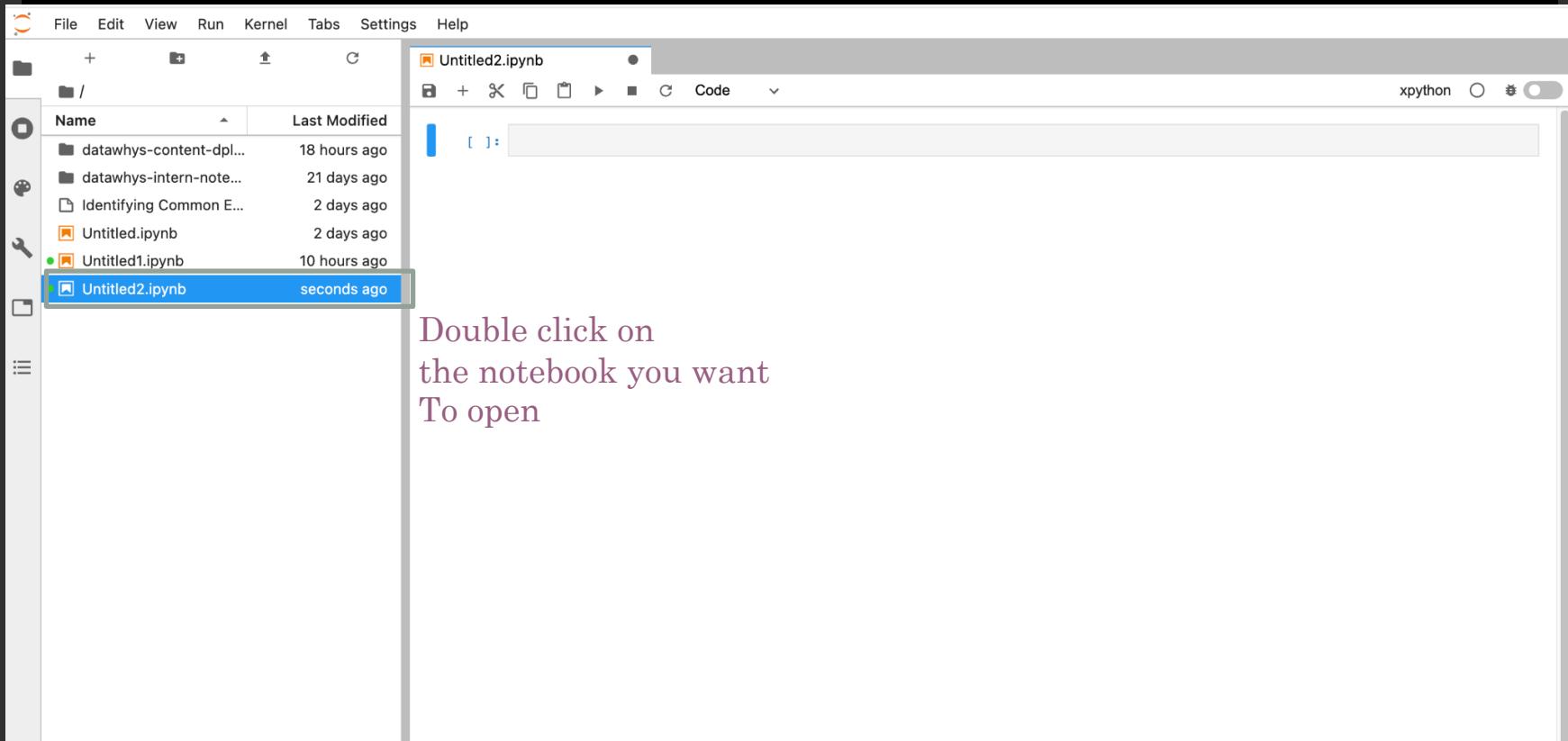
# Creating python file from launcher

The screenshot shows a Jupyter Notebook launcher window. On the left is a sidebar with a file browser, a search bar, and a list of recent notebooks. The main area is titled "Launcher" and contains three sections: "Notebook", "Console", and "Other". In the "Notebook" section, there are two items: "Python 3 (ipykernel)" and "R". A red arrow points from the text below to the "Python 3 (ipykernel)" icon. In the "Console" section, there are also two items: "Python 3 (ipykernel)" and "R". At the bottom, there are icons for "Terminal", "Text File", "Markdown File", "Python File", "R File", and "Show Contextual Help". The status bar at the bottom shows "Simple" mode, 0 files, 0 changes, master branch, and 110.72 MB memory usage.

Create a new python notebook.  
Select the Python 3 option  
which is the kernel that we will  
work on.

Simple 0 0 master Mem: 110.72 MB Launcher 1

# Open created python file



# Opening other file types

The screenshot shows the Jupyter Notebook interface. On the left is a file browser with a list of files and a red box around the '+' icon. A large red arrow points from this area down to the 'Other' section of the launcher. The launcher contains several kernel icons (Python 3, Python [conda env:macaw-], Python [conda env:root] \*, R, R [conda env:root] \*, SoS [conda env:macaw-]) and three xpython icons. Below the launcher is a 'Console' section with similar kernel icons. At the bottom is an 'Other' section with icons for Terminal, Text File, Markdown File, and Show Contextual Help.

You can also open other files such as terminal, text files etc. from the launcher

Name	Last Modified
datawhys-content-dp...	a day ago
datawhys-terminal-note...	21 days ago
data.csv	12 hours ago
Identifying Comon E...	2 days ago
Untitled.ipynb	2 days ago
Untitled1.ipynb	a day ago
Untitled2.ipynb	13 hours ago

**Launcher**

- Python 3
- Python [conda env:macaw-]
- Python [conda env:root] \*
- R
- R [conda env:root] \*
- SoS [conda env:macaw-]
- xpython
- xpython [conda env:macaw-]
- xpython [conda env:root] \*

**Console**

- Python 3
- Python [conda env:macaw-]
- Python [conda env:root] \*
- R
- R [conda env:root] \*
- SoS [conda env:macaw-]
- xpython
- xpython [conda env:macaw-]
- xpython [conda env:root] \*

**Other**

- Terminal
- Text File
- Markdown File
- Show Contextual Help

# Creating a Folder

The image shows a Jupyter Notebook interface. On the left is a file browser with a sidebar containing various icons. The main area displays a list of files and folders:

Name	Last Modified
Boot_camp_test	a month ago
copy_bootcamp_sum...	18 days ago
datawhys-content-no...	a year ago
datawhys-intern-note...	a year ago
intro-jupyterlab	a month ago
intro-notebooks	a month ago
Test	a year ago
2022-06-06-intern-p...	a year ago
2022-06-21-intern-pr...	a year ago
boston_apartments.csv	3 months ago
DS_PS-1.ipynb	3 months ago
Untitled.ipynb	18 days ago

A red arrow points from the text "Click on the New Folder icon" at the bottom left to the "+" icon in the top toolbar, which is highlighted with a red box.

Launcher

- Notebook
- Python 3
- R

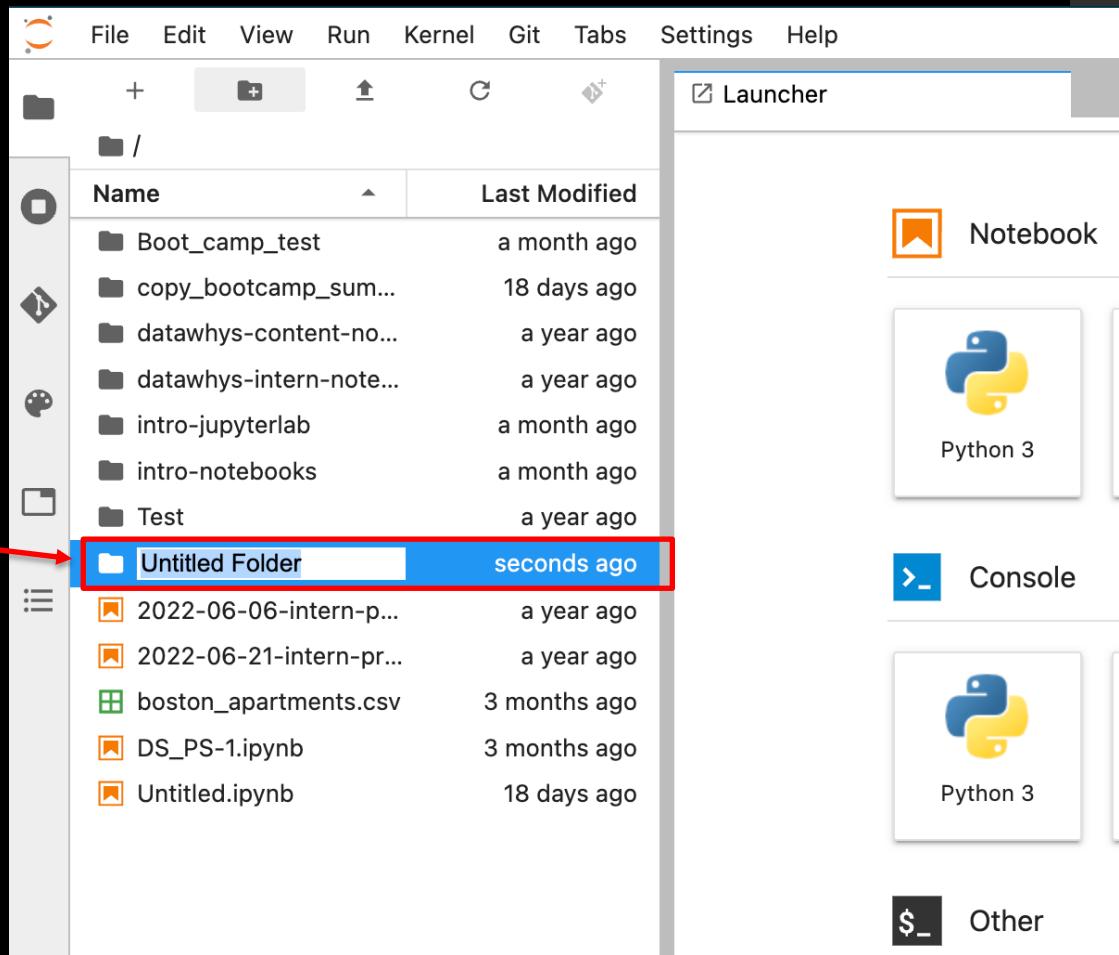
- Console
- Python 3
- R

- Other

Click on the New Folder icon

# Creating a Folder

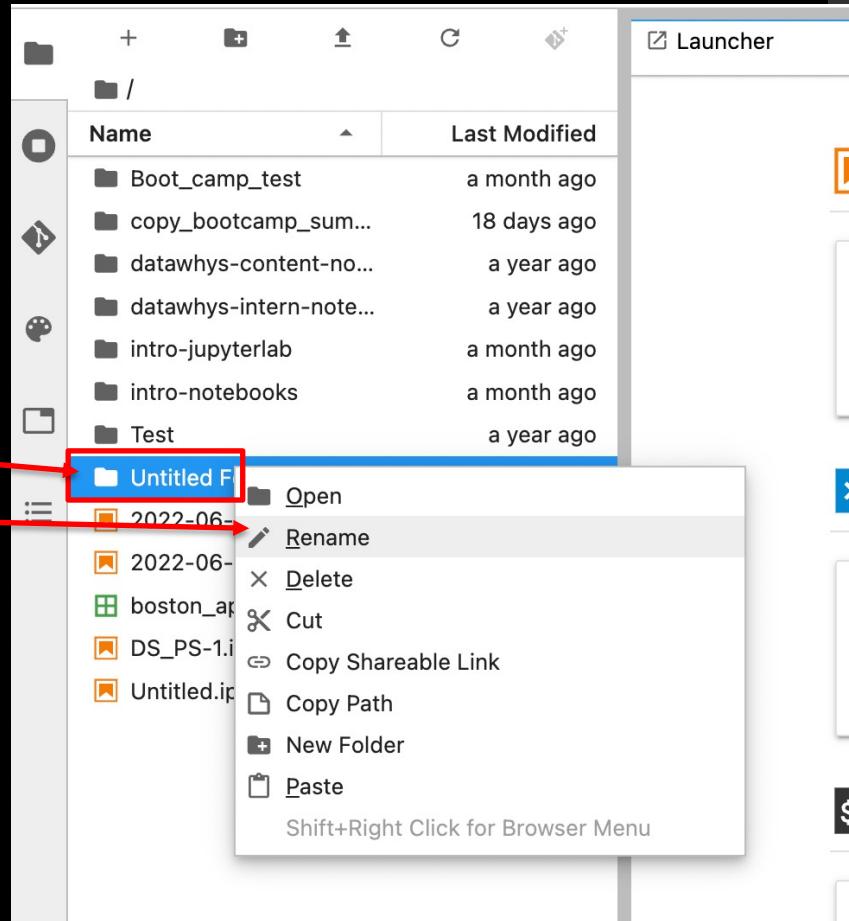
"Untitled Folder"  
created



# Renaming a Folder

Right click on the folder name

Click on Rename and provide desired name and press "Enter" or Click anywhere



# Renaming a Folder

Folder has been  
renamed

A screenshot of a Jupyter Notebook interface. On the left, there is a file browser with icons for creating a new folder, navigating up, copying, pasting, and deleting. The main area shows a list of items in a table format:

Name	Last Modified
Boot_camp_test	a month ago
copy_bootcamp_sum...	18 days ago
datawhys-content-no...	a year ago
datawhys-intern-note...	a year ago
intro-jupyterlab	a month ago
intro-notebooks	a month ago
Test	a year ago
Test Folder	9 minutes ago
2022-06-06-intern-p...	a year ago
2022-06-21-intern-pr...	a year ago
boston_apartments.csv	3 months ago
DS_PS-1.ipynb	3 months ago
Untitled.ipynb	18 days ago

The "Test Folder" item is highlighted with a red box and a red arrow points from the text "Folder has been renamed" to it. The interface also includes a "Launcher" section with "Notebook" and "Python 3" options, and a "Console" section.

# Creating and Renaming a Folder

The screenshot shows the Jupyter Notebook interface. On the left is a sidebar with various icons for file operations like creating, deleting, and moving files. Below that is a file browser listing several folders and files:

Name	Last Modified
Boot_camp_test	a month ago
copy_bootcamp_sum...	18 days ago
datawhys-content-no...	a year ago
datawhys-intern-note...	a year ago
intro-jupyterlab	a month ago
intro-notebooks	a month ago
Test	a year ago
2022-06-06-intern-p...	a year ago
2022-06-21-intern-pr...	a year ago
boston_apartments.csv	3 months ago
DS_PS-1.ipynb	3 months ago
Untitled.ipynb	18 days ago

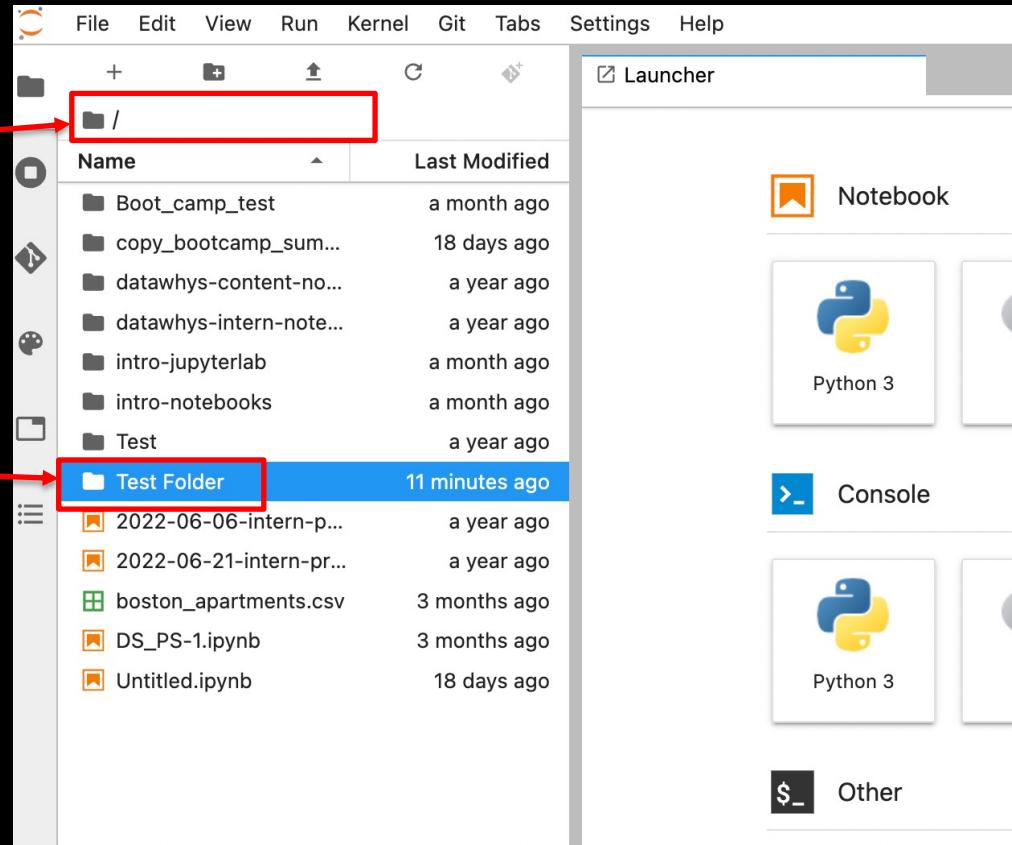
The main area is a "Launcher" which displays kernel options:

- Notebook**: Python 3, R, xpy
- Console**: Python 3, R, xpy
- Other**

# Open Folder

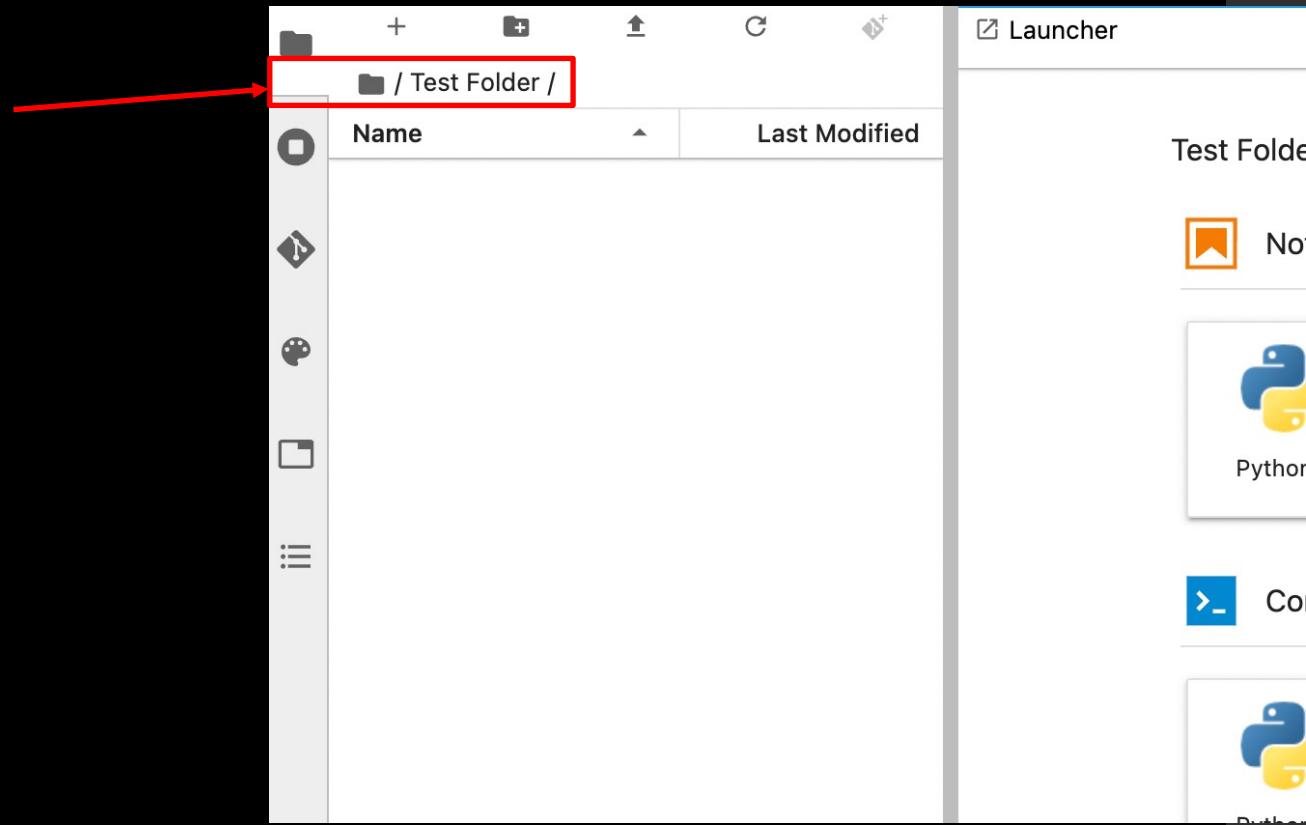
Before opening a new folder notice this.  
This shows our current location in the file system.

Double click to open a folder



# Open Folder

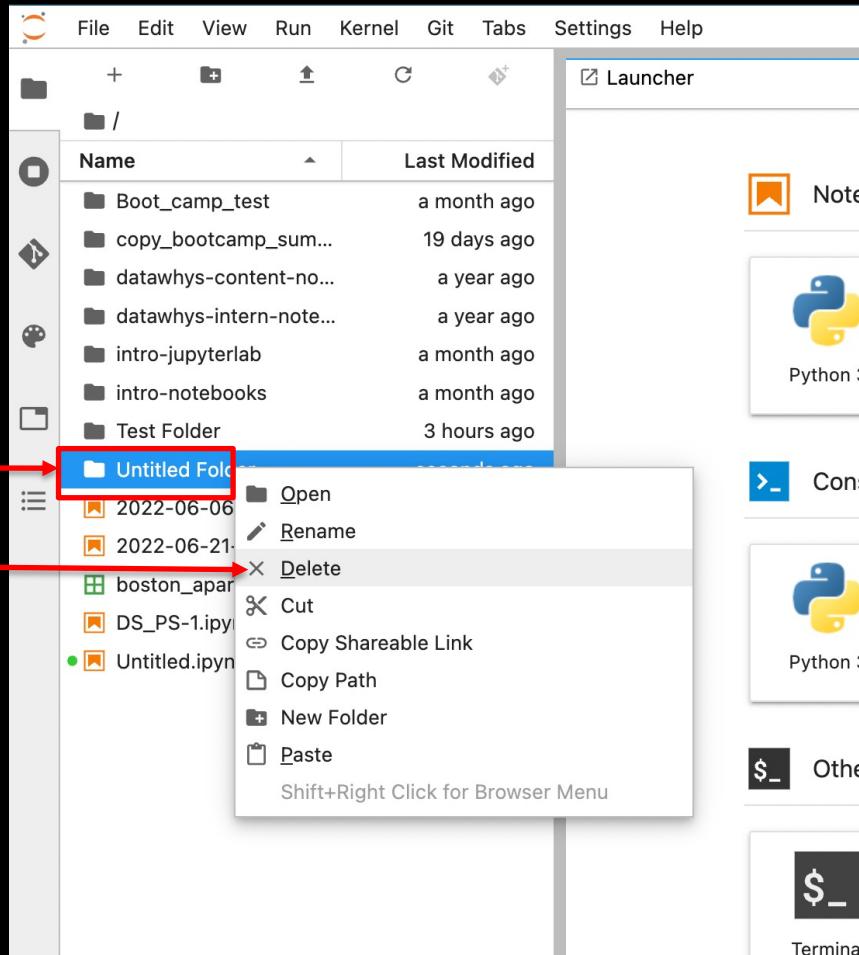
Indicates we are in  
Test Folder



# Deleting a Folder

Right click on the folder name you want to delete

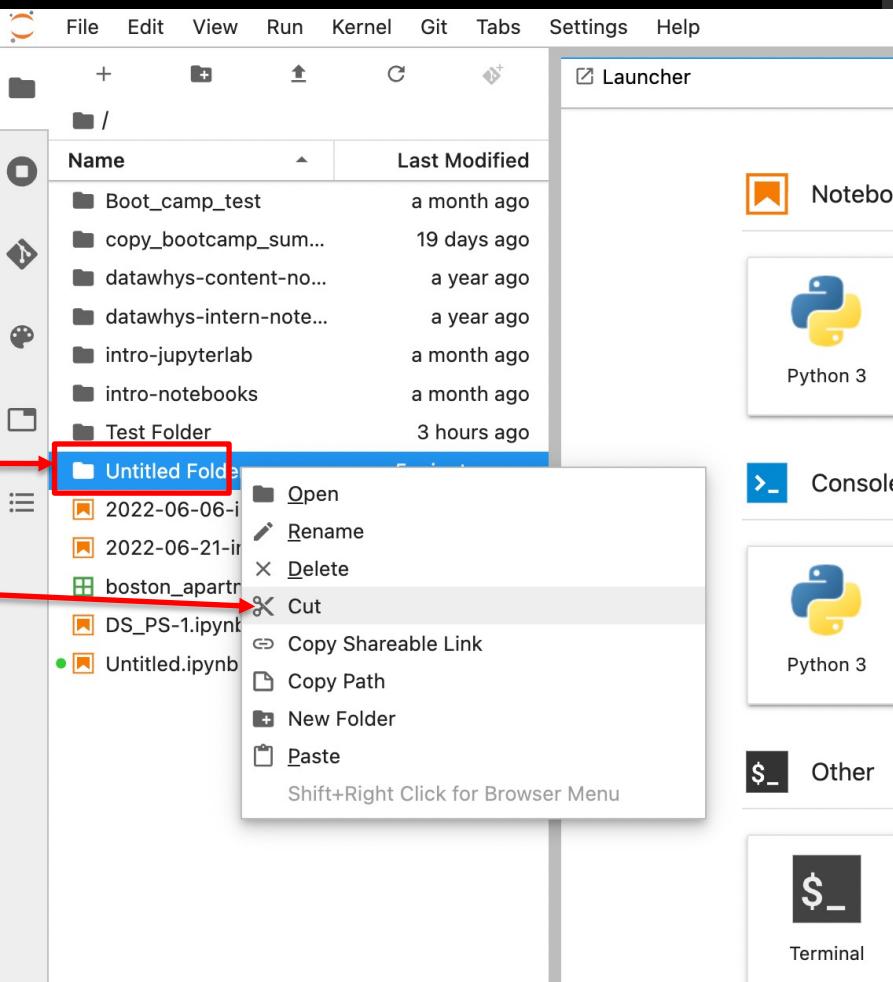
Click on Delete



# Cut a Folder

Right click on the folder name you want to cut

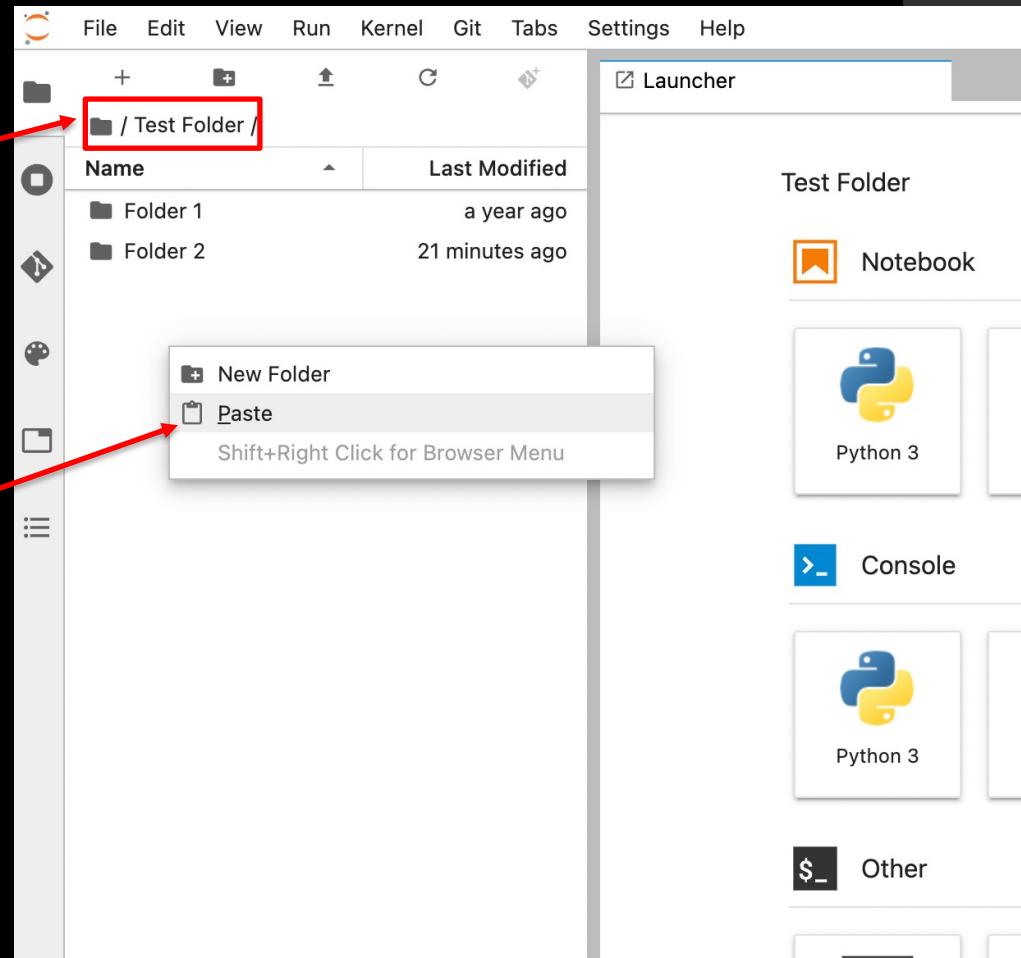
Click on Cut



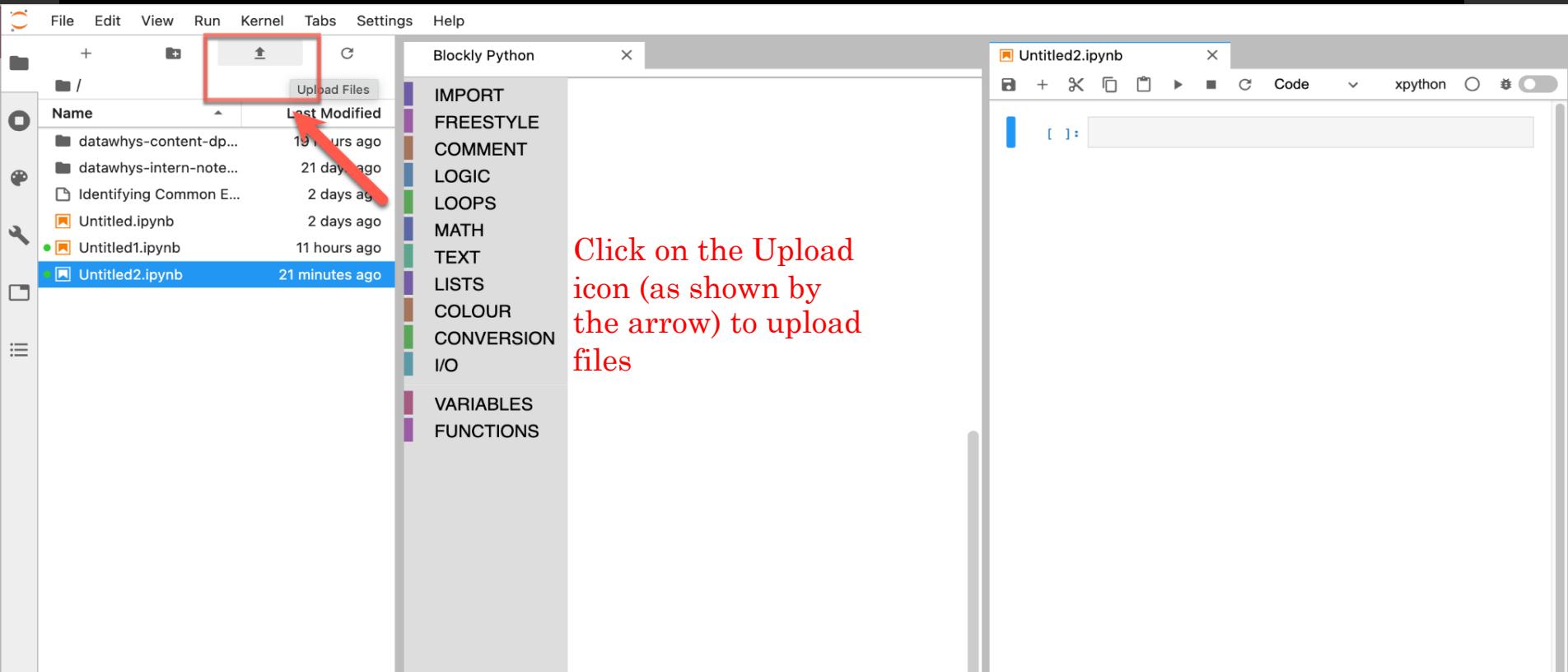
# Cut a Folder

Open the folder where  
you want to Paste

Right click and  
select Paste



# Uploading a file in Jupyterlab (1)



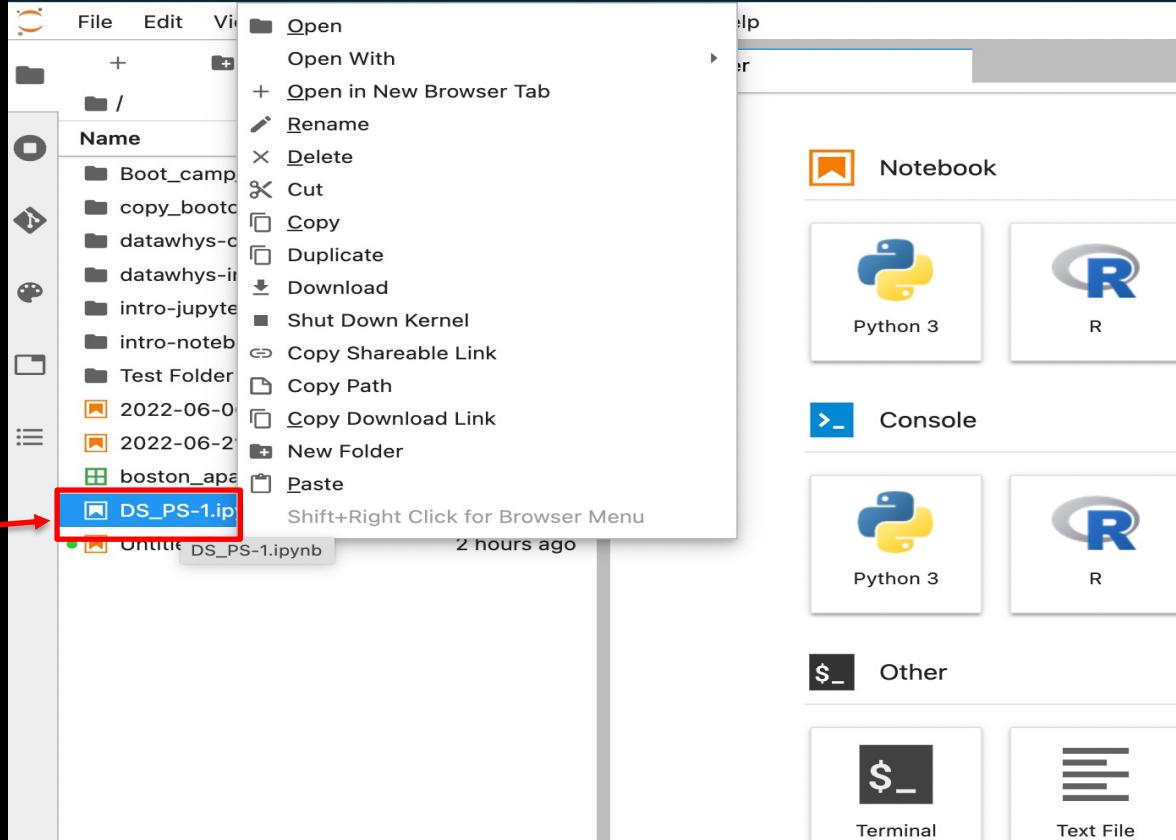
# Uploading a file in Jupyterlab (2)

The screenshot shows the JupyterLab interface with the following components:

- File Explorer:** On the left, it displays a file tree under the root directory '/'. A file named "data.csv" is highlighted with a red border.
- Blocky Python Editor:** The central panel is titled "Blocky Python". It contains a sidebar with categories: IMPORT, FREESTYLE, COMMENT, LOGIC, LOOPS, MATH, TEXT, LISTS, COLOUR, CONVERSION, I/O, VARIABLES, and FUNCTIONS. The main area is currently empty.
- Code Editor:** On the right, there is a tab titled "Untitled2.ipynb" which is currently active. It shows a single cell starting with "[ ]:".

# File operations

Right Click on any file to perform rename, copy, cut, delete, download etc.

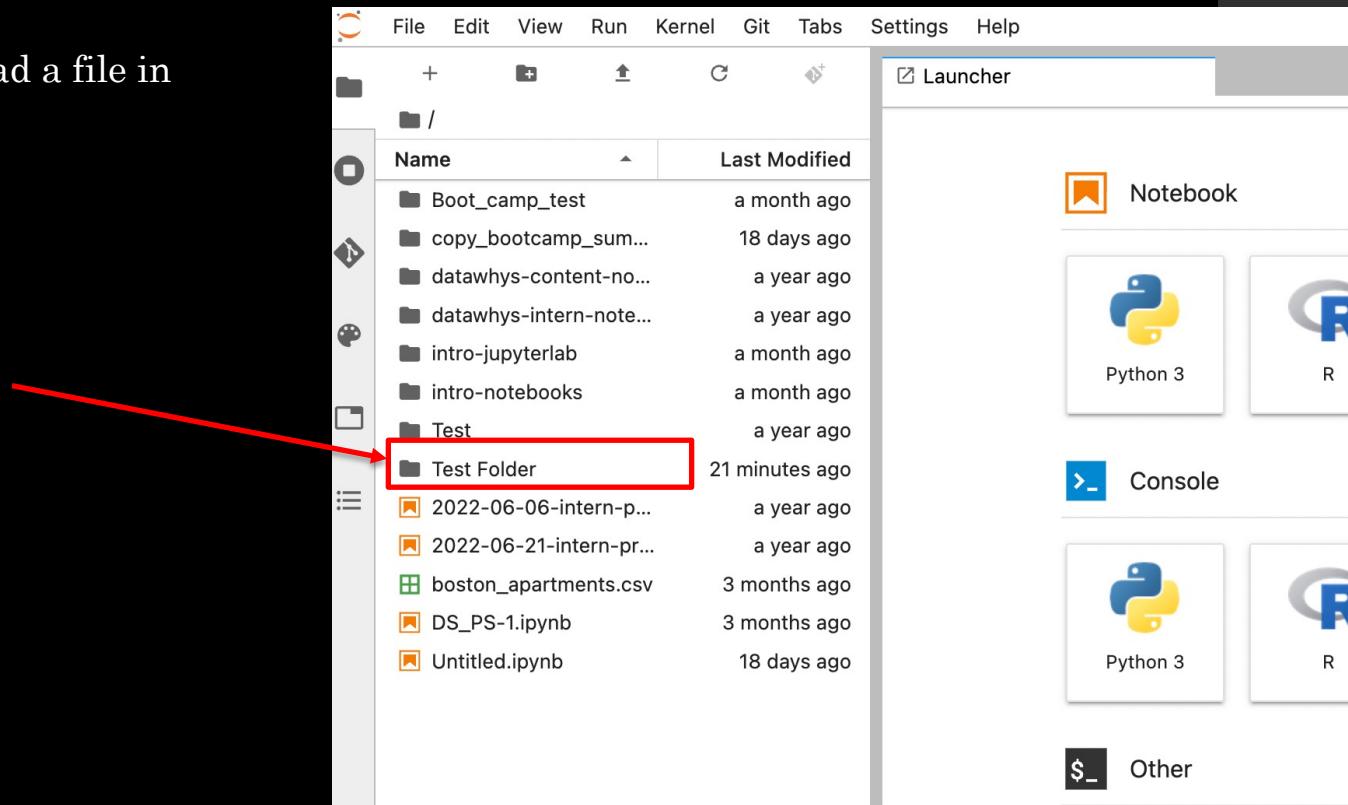


# Upload a file in any specific folder

Suppose we want to upload a file in Test Folder. We've to

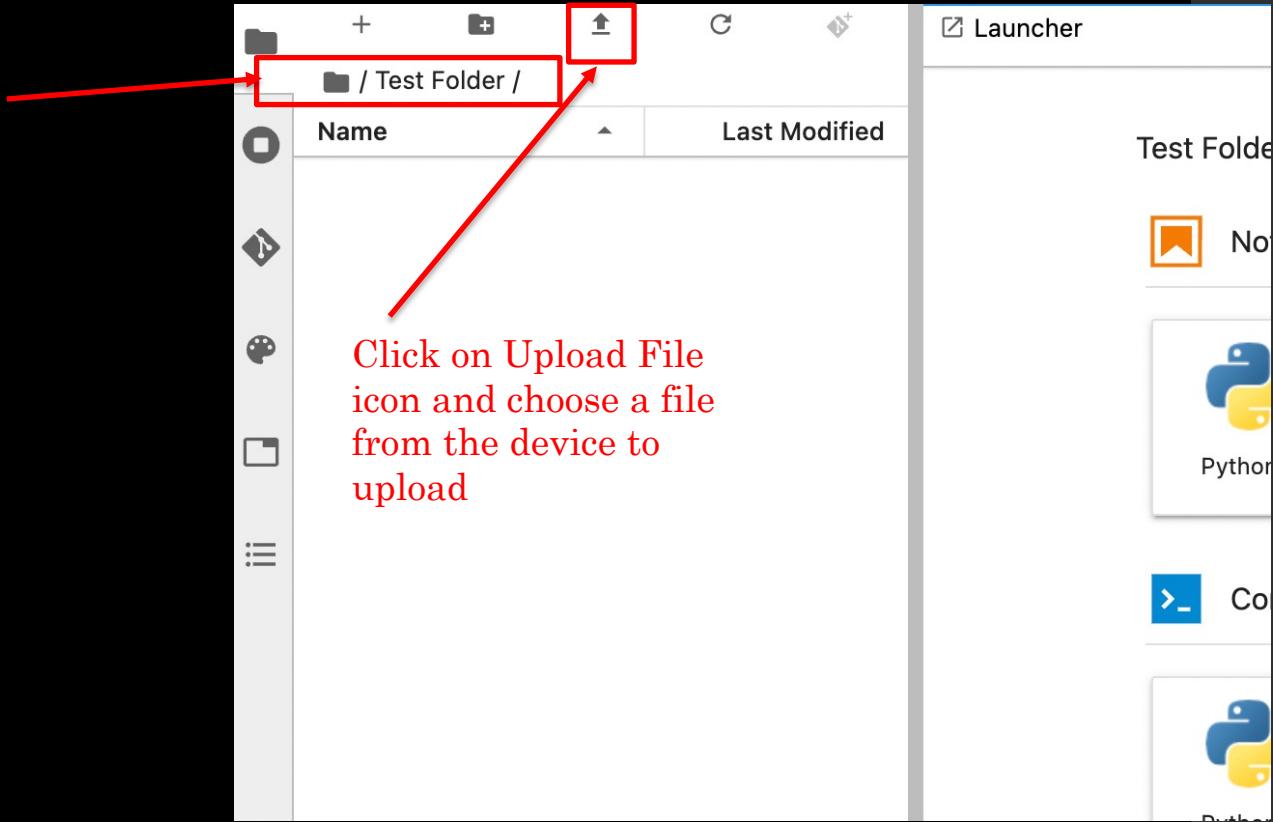
- Open Test folder
- Upload the file

Open Test Folder by double clicking



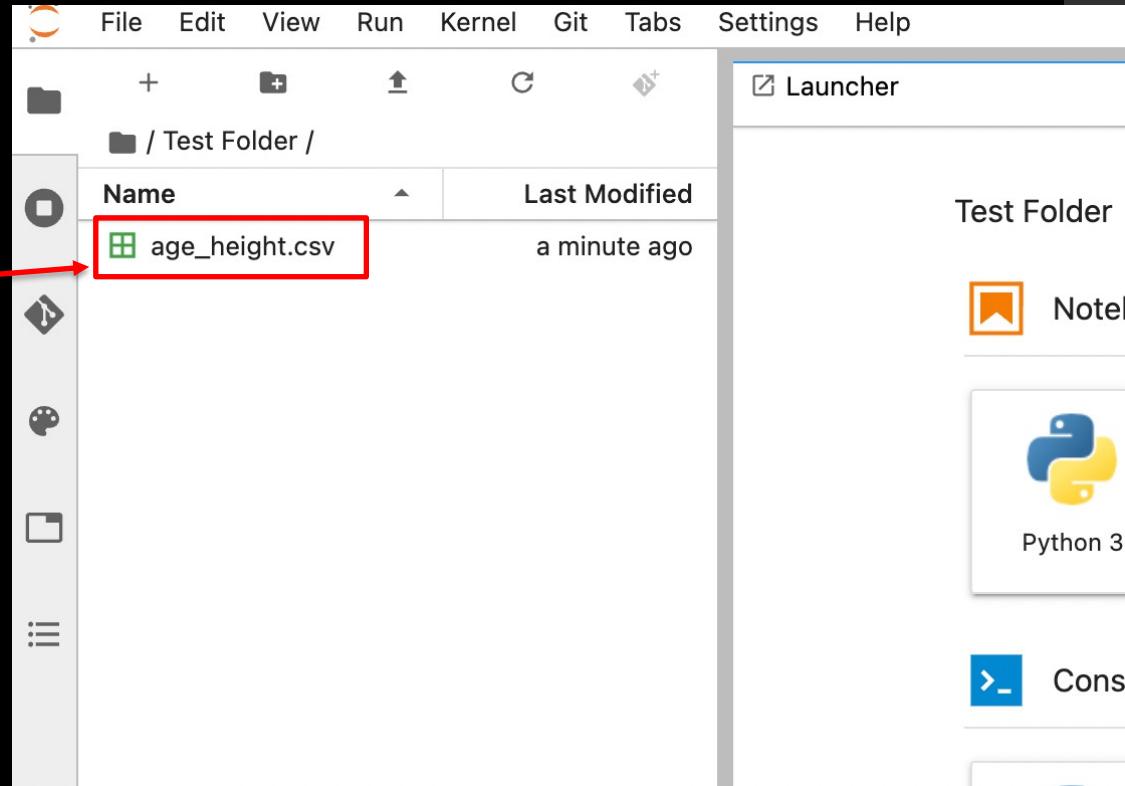
# Upload a file in any specific folder

Indicates we are in  
Test Folder



# Upload a file in any specific folder

A file has been  
uploaded



# File Path

- A file path specifies the location of a file in a file system/structure.
- They can be used to locate files.
- Example: "/home/username/Documents/File1.txt".  
In file system each folder is also known as "directory" and in each directory are separated with separator "/"

# File Path

Path: "/home/username/Documents/File1.txt".

- home
- username
- documents
- File1.txt

- This path indicates that in our "home" directory or folder we have "username" folder.
- Within the "username" folder we have "Documents" folder.
- Within the "Documents" folder we have our targeted file "File.txt".

# File Path

Path: "/home/username/Documents/File1.txt".

- "home" is the **parent directory** of "username"
- "username" is the **parent directory** of "documents"

Alternatively, we can say

- "username" is the **child directory** of "home"
- "documents" is the **child directory** of "username"



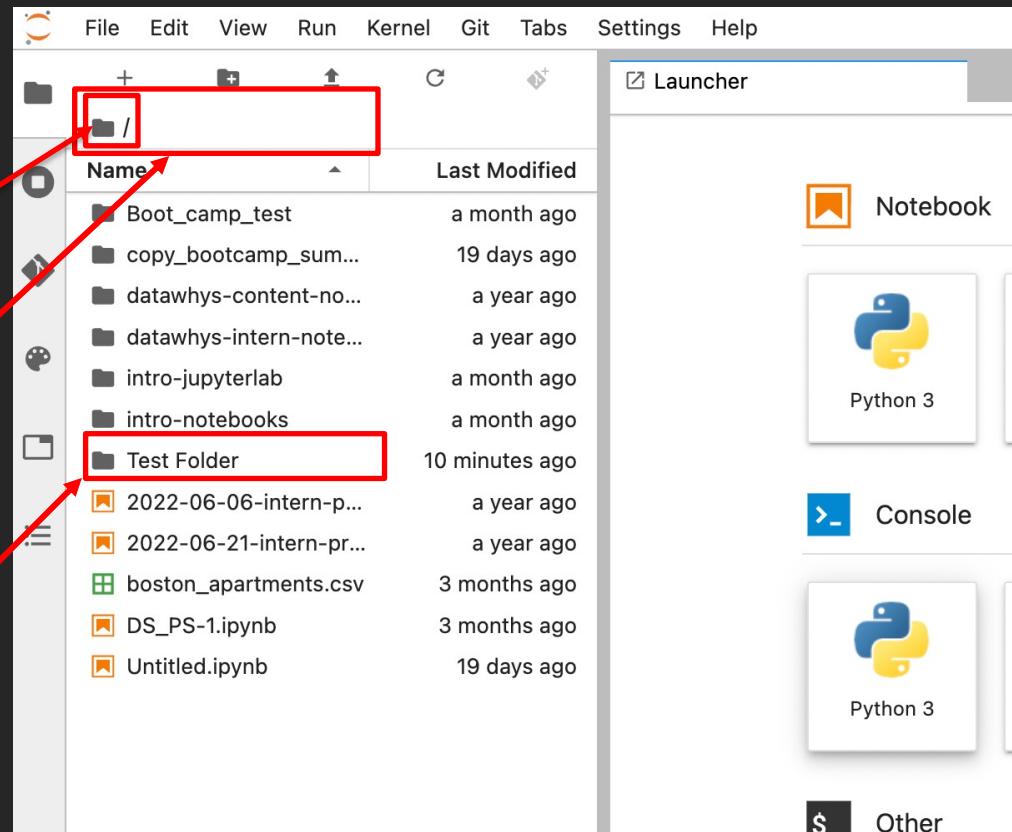
# File Path in Jupyter Lab

- After Login the interface shows like this

This "folder/" icon indicates root folder/directory for each user

In JupyterLab current directory is shown in this area

Let's open this folder and see

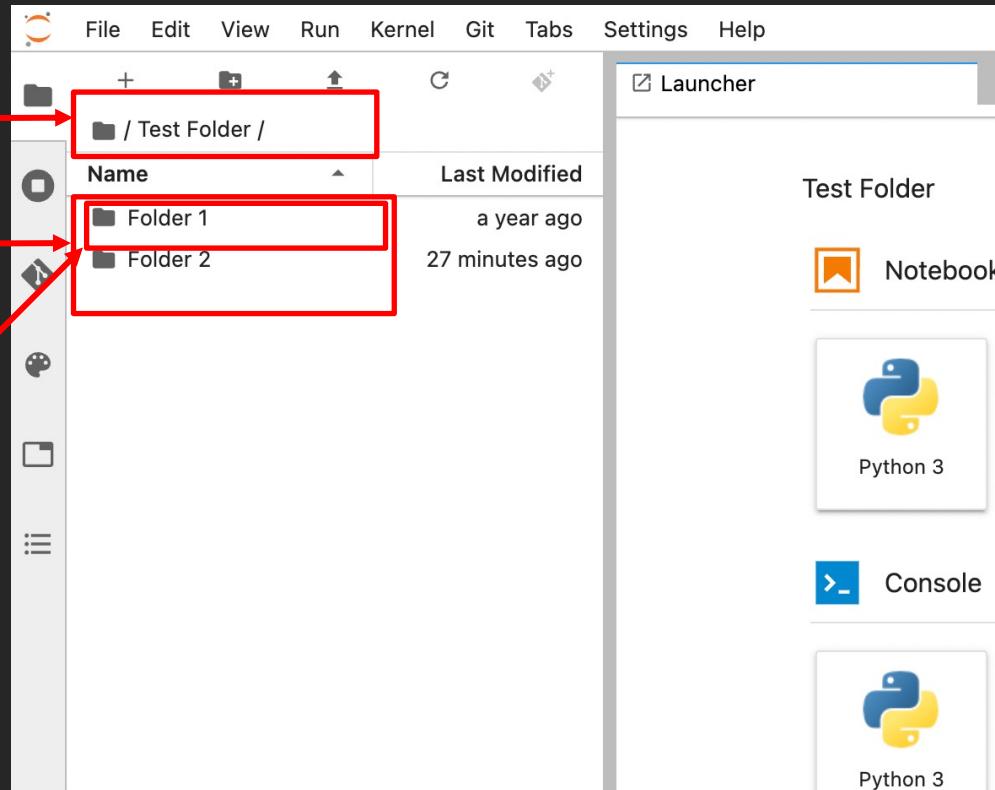


# File Path in Jupyter Lab

Indicates that we are within Test Folder and current directory is Test Folder

Shows the file system of Test Folder

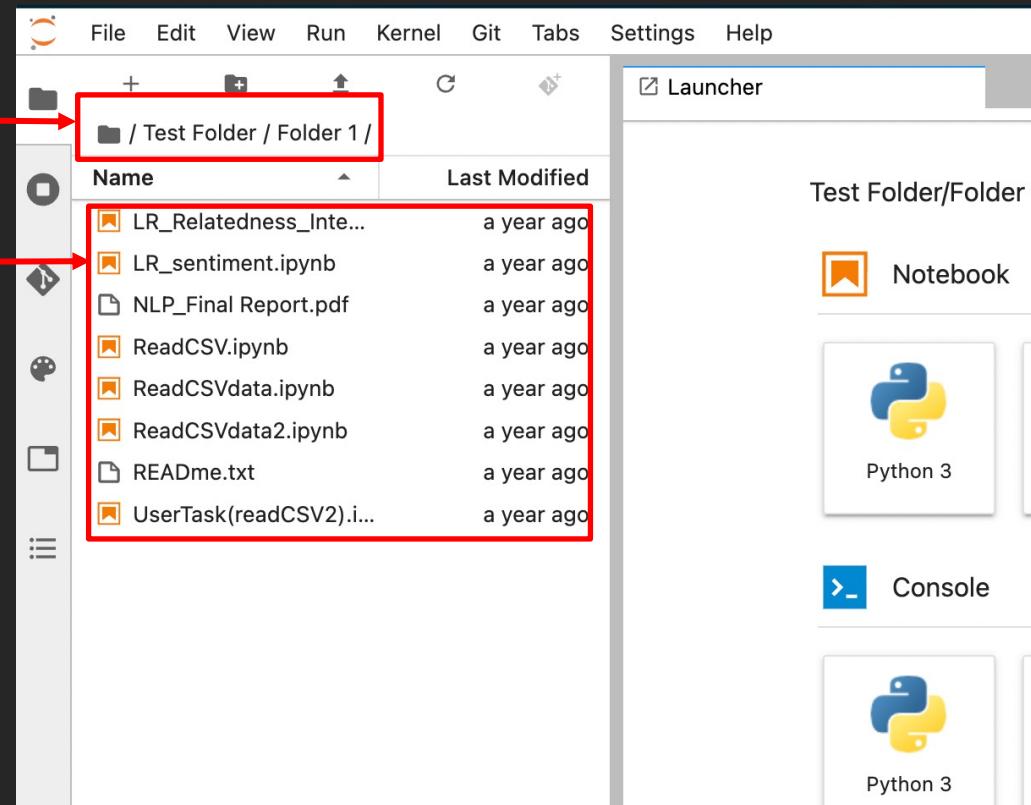
Let's open Folder 1 and see



# File Path in Jupyter Lab

Indicates that we are within Folder 1  
and current directory is Folder 1

Shows the  
files within Folder 1



# Types of File Path

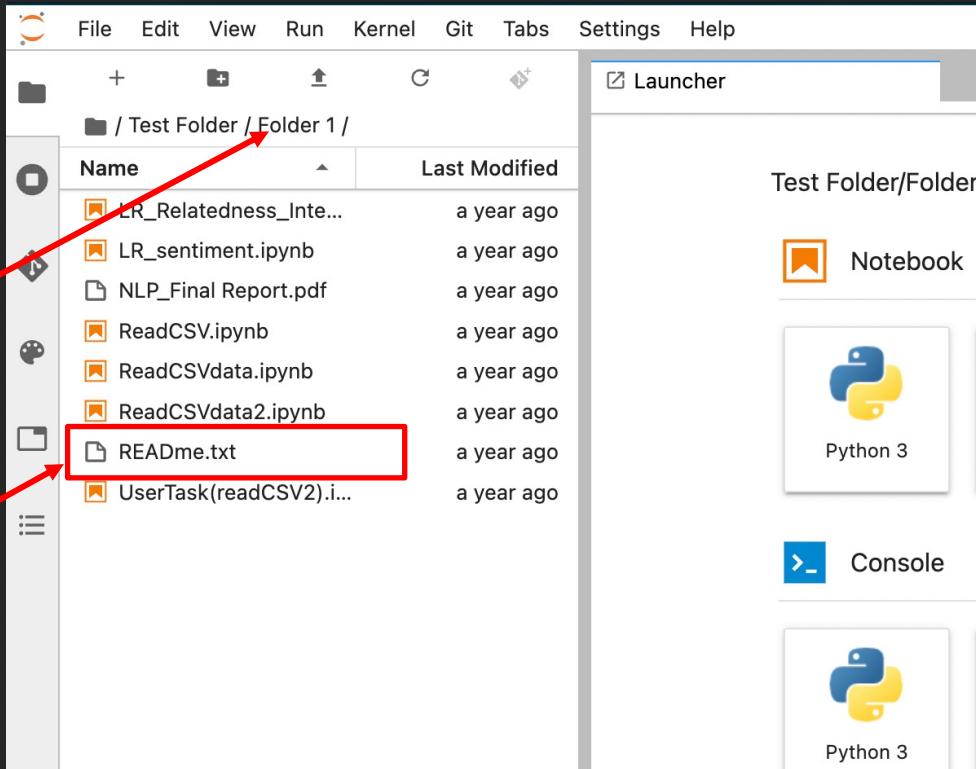
- Relative Path
- Absolute Path

# Relative Path

- A relative path specifies the location of a file or folder relative to the current working directory.

Current directory is Folder 1

READme.txt file is located  
in current directory.  
The relative path of this file is  
"READme.txt"



# Relative Path

- Suppose we have this file structure under our root directory. And our **current directory** is **Folder 1**.
- What is the relative path of Universities.csv?

Ans: "Universities.csv"

- Test Folder
  - Folder 1
    - Universities.csv
    - Folder 3
      - Students.csv
  - Folder 2
    - Teachers.csv

Given file  
structure

# Relative Path

- Suppose we have this file structure under our root directory. And our **current directory** is **Folder 1**.
- What is the relative path of Students.csv?

- Test Folder
  - Folder 1
    - Universities.csv
    - Folder 3
      - Students.csv
  - Folder 2
    - Teachers.csv

# Relative Path

- Suppose we have this file structure under our root directory. And our **current directory** is **Folder 1**.
- What is the relative path of Students.csv?
  - Notice that Students.csv is under Folder 3
  - Folder 3 is the **child directory** of Folder 1
  - The relative path of this Students.csv will be "**Folder 3/Students.csv**"

By this we  
go to Folder 3  
as Folder 3 is  
child directory  
of Folder 1

- Test Folder
  - Folder 1
    - Universities.csv
    - Folder 3
      - Students.csv
  - Folder 2
    - Teachers.csv

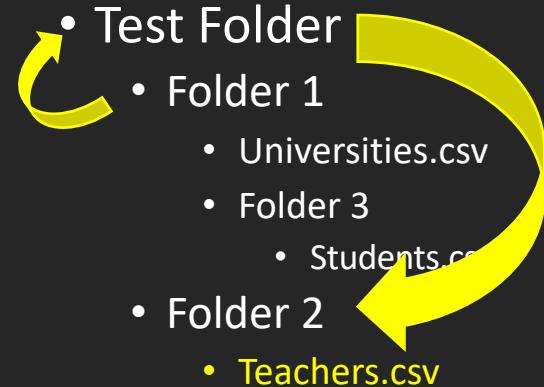
# Relative Path

- Suppose we have this file structure under our root directory. And our **current directory** is **Folder 1**.
- What is the relative path of Teachers.csv?

- Test Folder
  - Folder 1
    - Universities.csv
    - Folder 3
      - Students.csv
  - Folder 2
    - Teachers.csv

# Relative Path

- Suppose we have this file structure under our root directory. And our **current directory** is **Folder 1**.
- What is the relative path of Teachers.csv?
- To navigate to Teachers.csv
  - First ,we have to go the parent directory Folder 1 which is Test Folder. For this we use "../"
  - Then we go to Folder 2 which is a child directory of Test Folder. For this we use "Folder2/"
  - Path will be "../Folder2/Teachers.csv"



# Absolute Path

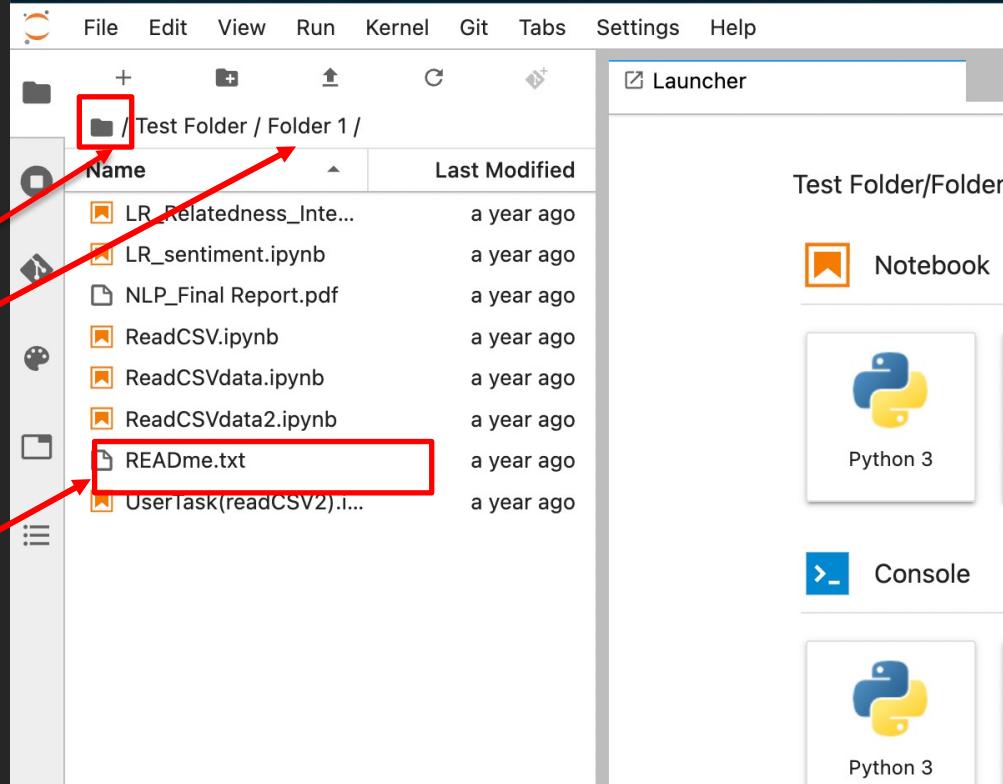
- An absolute path provides the complete location of a file or folder starting **from the root directory**

This "folder/" icon indicates root directory for each user

Current directory is Folder 1

The absolute path of this file is  
"Test Folder/Folder  
1/README.txt"

- An absolute path doesn't depend on current directory

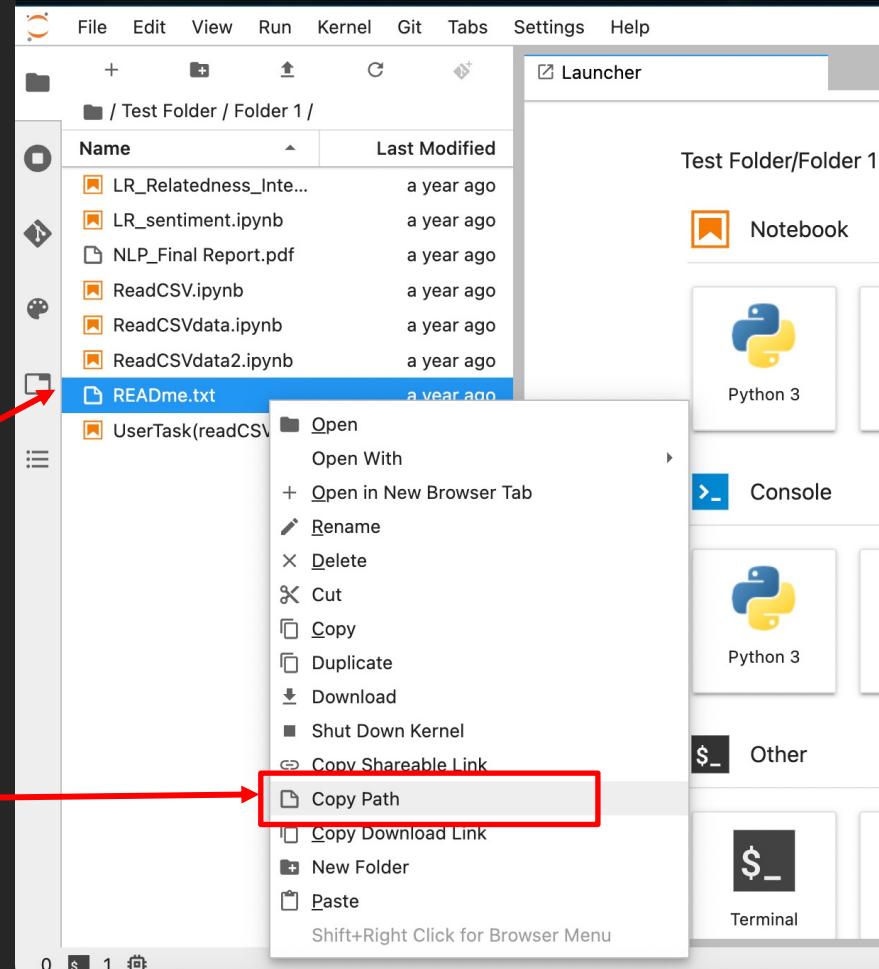


# Absolute Path in JupyterLab

- In JupyterLab absolute path can be obtained by "Copy Path"

Right click on a file

Clicking on "Copy Path" will copy the absolute path in the clipboard. You can paste this in any text



# Absolute Path

Suppose we have this file structure under our root directory.

- What is the absolute path of Students.csv if our current directory is Folder 1?
- What is the absolute path of Students.csv if our current directory is Folder 2?

- Test Folder
  - Folder 1
    - Universities.csv
    - Folder 3
      - Students.csv
  - Folder 2
    - Teachers.csv

# Absolute Path

Suppose we have this file structure under our root directory.

- What is the absolute path of Students.csv if our current directory is Folder 1?
- What is the absolute path of Students.csv if our current directory is Folder 2?

- Test Folder
  - Folder 1
    - Universities.csv
    - Folder 3
      - Students.csv
  - Folder 2
    - Teachers.csv

Absolute path doesn't depend on current directory. For both cases they are the same which is "Test Folder/Folder3/Students.csv"

# Activity

- Open the Activity document and proceed with the tasks