

# Introduction to Jupyter Notebooks

Learn Data Analysis with Python

## What is Python?

Python is an interpreted, object-oriented, high-level programming language. Python has simple, easy to learn syntax emphasizes readability. Python supports modules and packages, which encourages program modularity and code reuse.

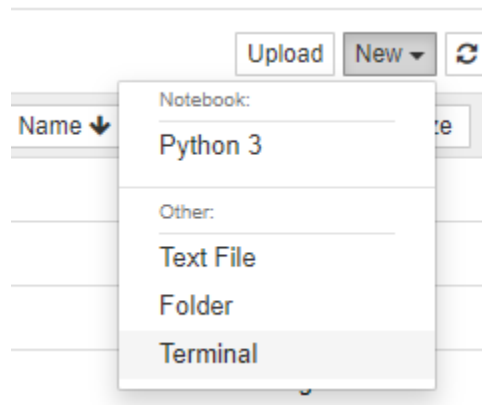
## What is Jupyter Notebook?

The Jupyter Notebook is an open source web application that you can use to create and share documents that contain live code, equations, visualizations, and text. Jupyter Notebook is maintained by Project Jupyter (<https://jupyter.org/index.html>).

## Workshop

Go to <https://classroom.nokecodes.org> and create a new log in with a password (jot it down so you can come back later). Everyone should have a shared\_data folder. This contains some sample data for the workshop.

First, we will try out some Python code outside the notebook. Open a command line session:



To try some Python commands type:  
`python`

The `>>>` is the Python prompt (REPL).

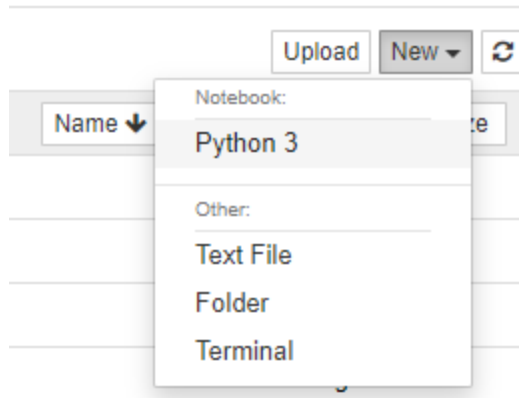
[https://www.learnpython.org/en/Hello,\\_World!](https://www.learnpython.org/en/Hello,_World!)

What does REPL mean?

**Read Evaluate Print Loop**

Close the REPL with `exit()`

## Create a new Notebook



Cell Types: Code, Markdown, Header

**Demo** – create a Header and a Markdown cell (use Control-Enter to see the result)

**Demo** – create a simple calculator in a Code cell

```
# Program make a simple calculator that can add, subtract, multiply and
divide using functions
# This function adds two numbers
def add(x, y):
    return x + y
# This function subtracts two numbers
def subtract(x, y):
    return x - y
# This function multiplies two numbers
def multiply(x, y):
    return x * y
# This function divides two numbers
def divide(x, y):
    return x / y
print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")
# Take input from the user
choice = input("Enter choice(1/2/3/4):")
num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
if choice == '1':
    print(num1,"+",num2,"=", add(num1,num2))
elif choice == '2':
    print(num1,"-",num2,"=", subtract(num1,num2))
elif choice == '3':
    print(num1,"*",num2,"=", multiply(num1,num2))
elif choice == '4':
    print(num1,"/",num2,"=", divide(num1,num2))
else:
    print("Invalid input")
```