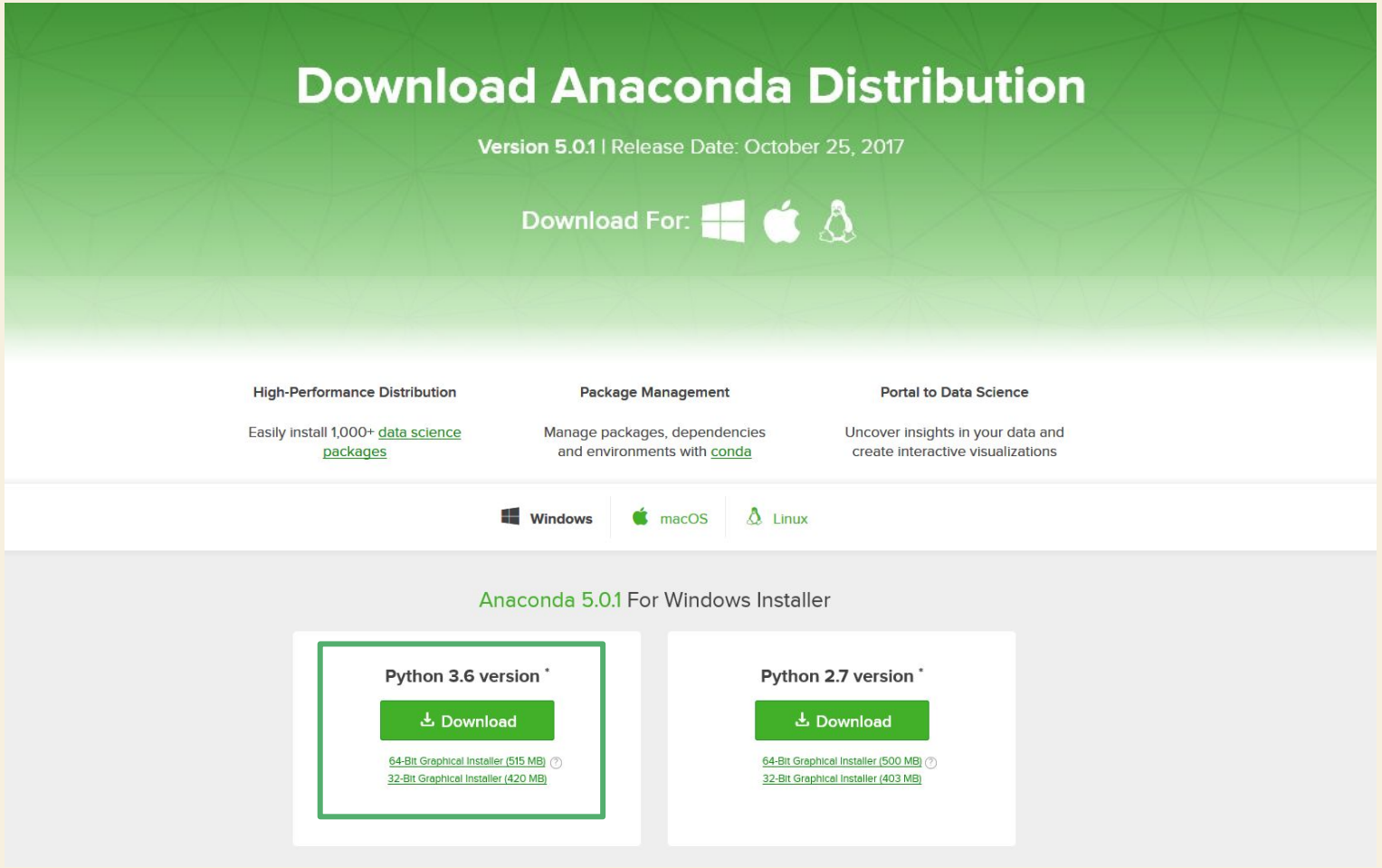
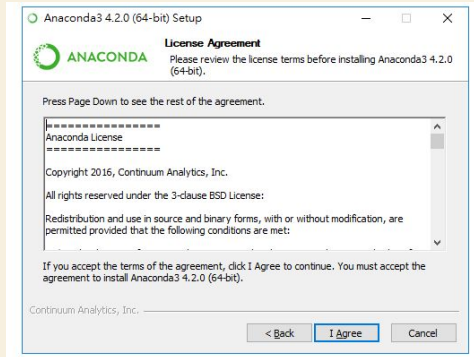
# 11.12 LAB

- **Today's Goal:**
  - **1.** setup environment.
  - **2.** teach you how to run your python code in computer.
  - 3. do a little task to get familiar with this cute snake

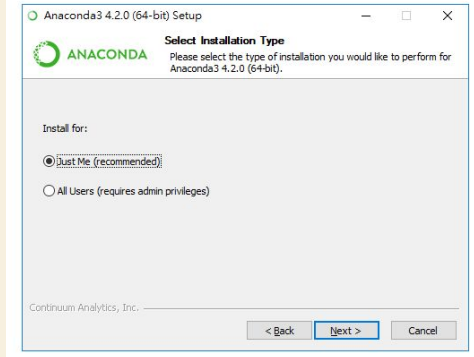
# HTTPS://WWW.ANACONDA.COM/DOWNLOAD/

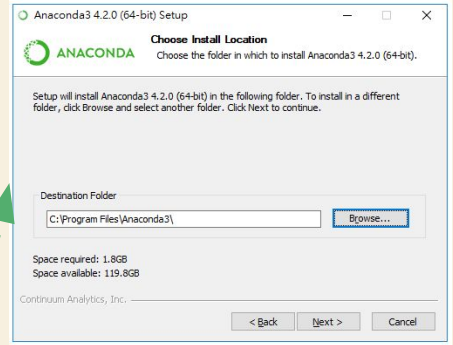


# HTTPS://RREADMOREBOOKS.BLOGSPOT.TW/2017/04/WIN10ANACONDA.HTML

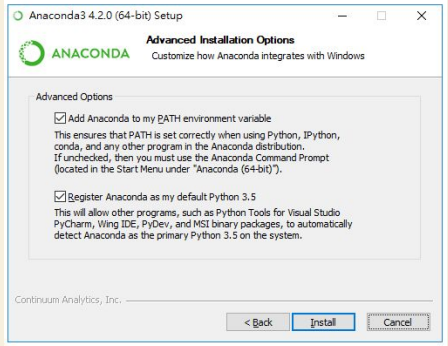



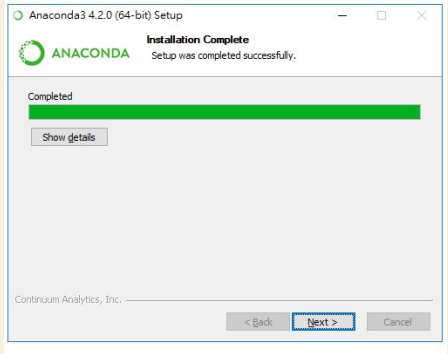

使用還是要安裝給所有人

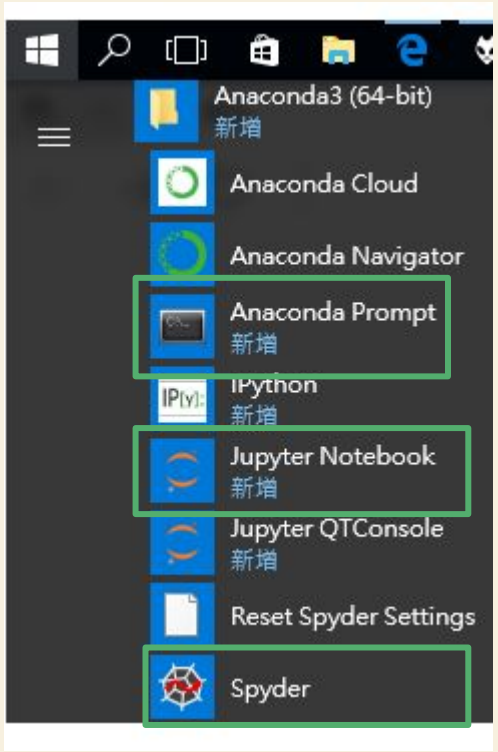


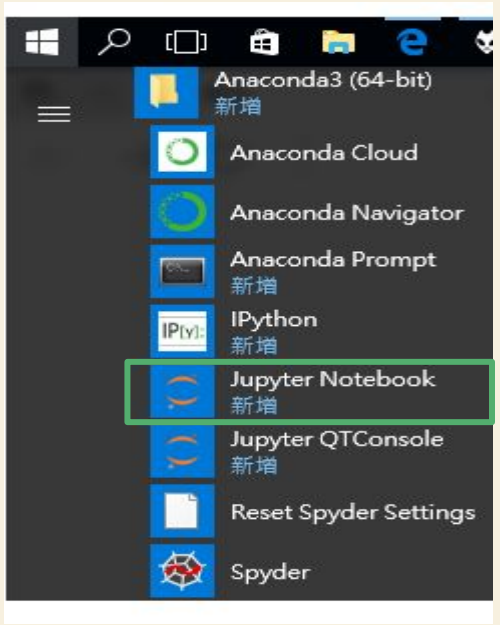

all」



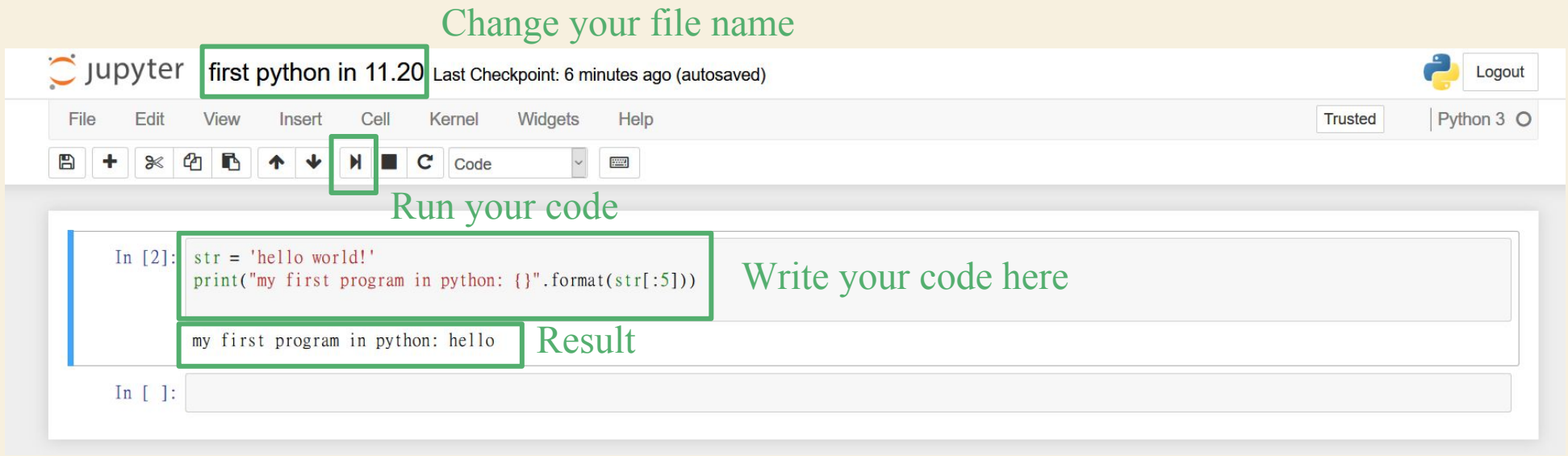



# Open Ipython notebook

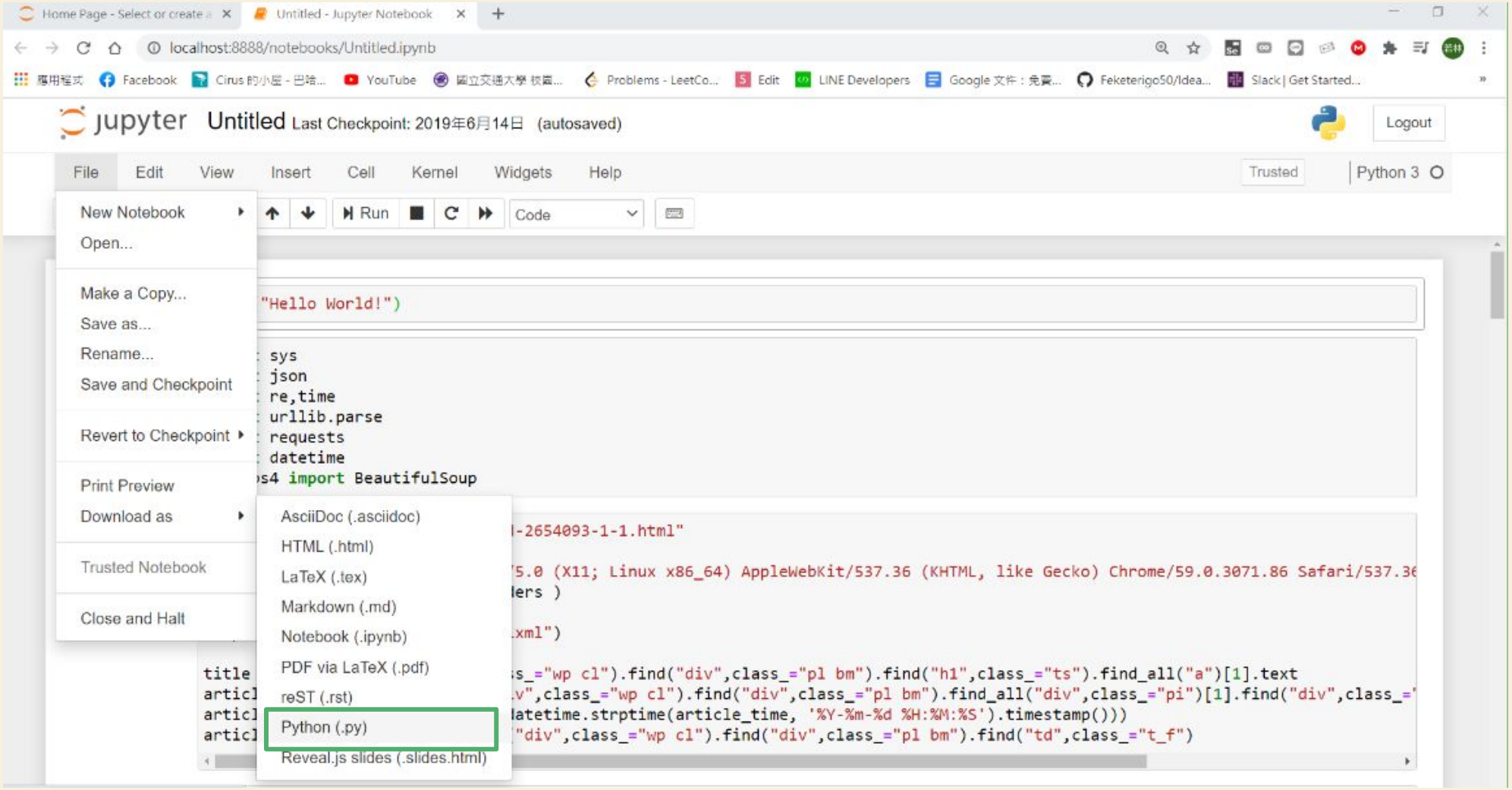



Open Jupyter notebook

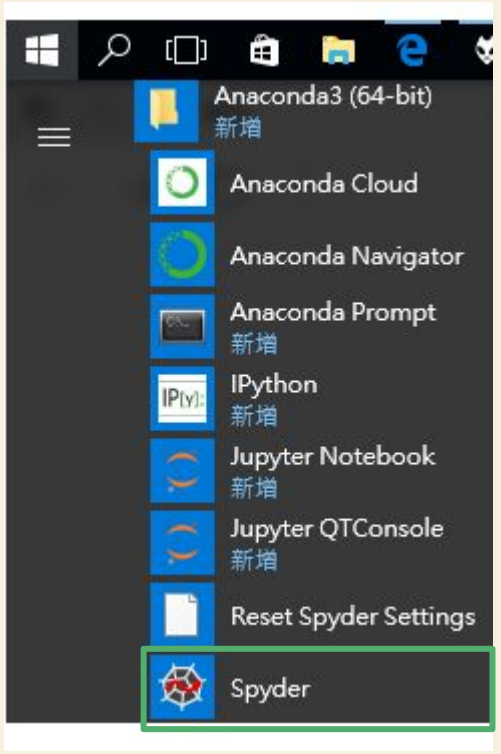
# Run cell


Change your file name
jupyter
first python in 11.20
Last Checkpoint: 6 minutes ago (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3
Code
Run your code
In [2]:
str = 'hello world!'
print("my first program in python: {}".format(str[:5]))
Write your code here
my first program in python: hello
Result
In [ ]:

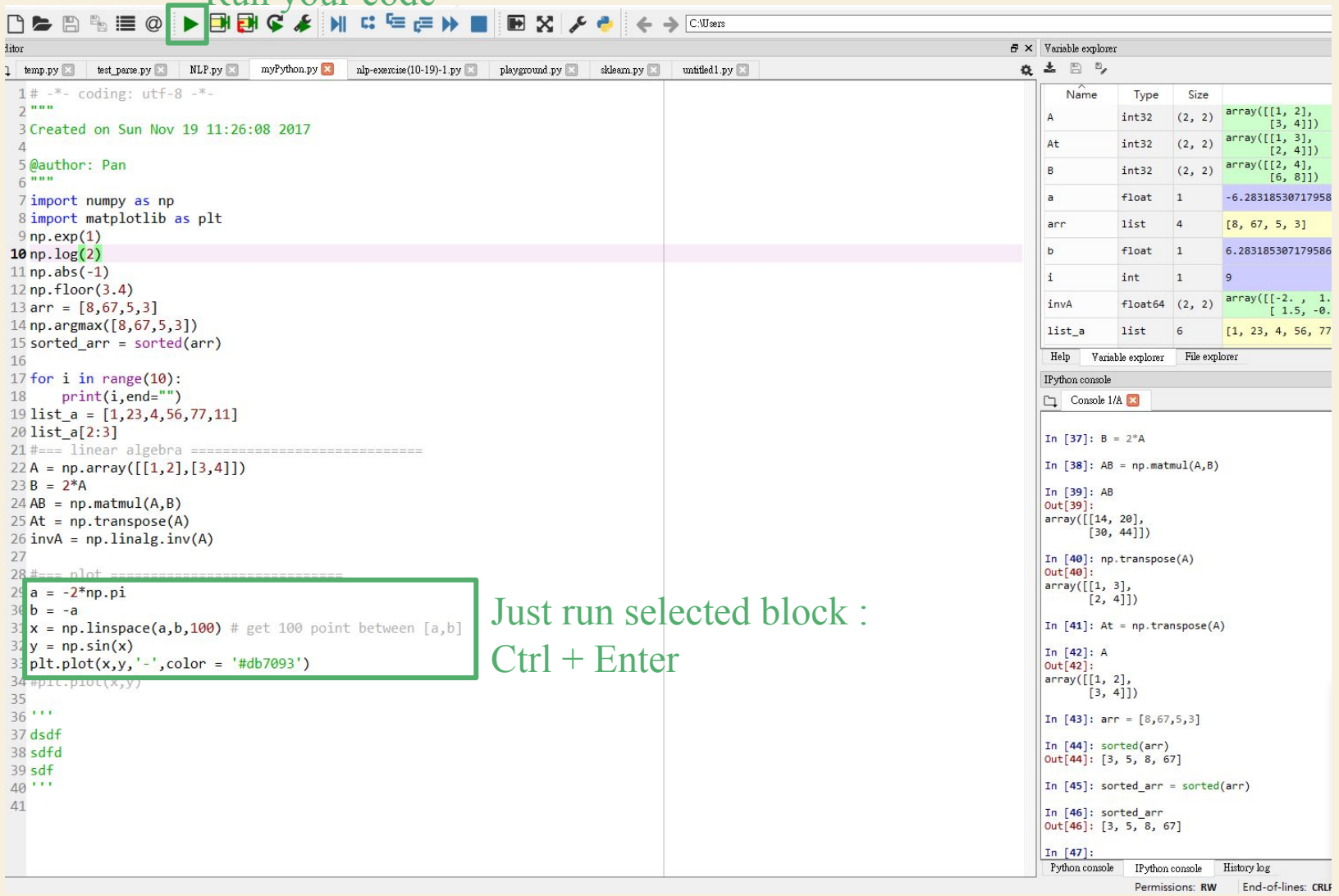
# Save as .py


Home Page - Select or create
Untitled - Jupyter Notebook
localhost:8888/notebooks/Untitled.ipynb
jupyter Untitled Last Checkpoint: 2019年6月14日 (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3
New Notebook
Open...
Make a Copy...
Save as...
Rename...
Save and Checkpoint
Revert to Checkpoint
Print Preview
Download as
Trusted Notebook
Close and Halt
Run
Code
AsciiDoc (.asciidoc)
HTML (.html)
LaTeX (.tex)
Markdown (.md)
Notebook (.ipynb)
PDF via LaTeX (.pdf)
reST (.rst)
Python (.py)
Reveal.js slides (.slides.html)
"Hello World!")
sys
json
re,time
urllib.parse
requests
datetime
s4 import BeautifulSoup

# SPYDER




Run your code

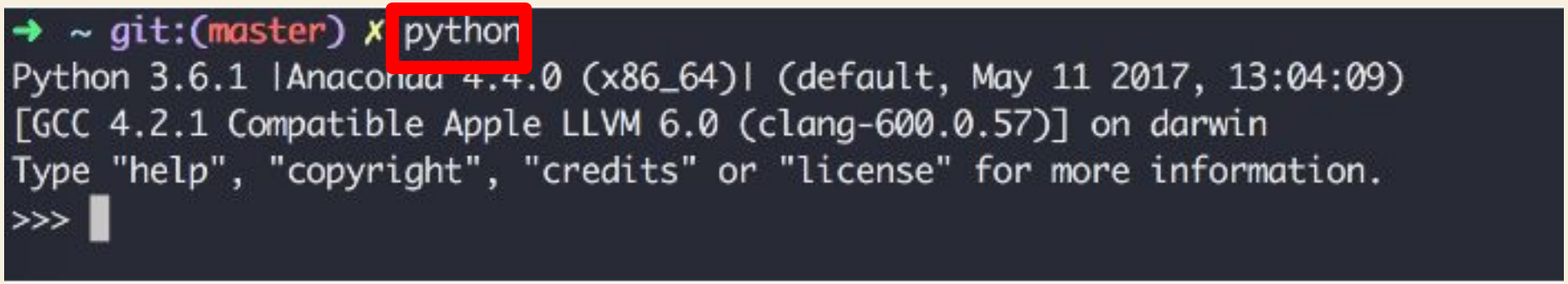



```
# -*- coding: utf-8 -*-
"""
Created on Sun Nov 19 11:26:08 2017

@author: Pan
"""
import numpy as np
import matplotlib as plt
np.exp(1)
np.log(2)
np.abs(-1)
np.floor(3.4)
arr = [8,67,5,3]
np.argmax([8,67,5,3])
sorted_arr = sorted(arr)

for i in range(10):
    print(i,end="")
list_a = [1,23,4,56,77,11]
list_a[2:3]
#=== linear algebra ============================
A = np.array([[1,2],[3,4]])
B = 2*A
AB = np.matmul(A,B)
At = np.transpose(A)
invA = np.linalg.inv(A)

#=== plot ======================================
a = -2*np.pi
b = -a
x = np.linspace(a,b,100) # get 100 point between [a,b]
y = np.sin(x)
plt.plot(x,y,'-',color = '#db7093')
#plt.plot(x,y)

'''
dsdf
sdfd
sdf
'''
```

Just run selected block :
Ctrl + Enter

# Command line

Open the command line (Windows) or terminal (Mac) in your computer



# Python for Everybody (PY4E)

Hello and welcome to my site where you learn Python even if you have no programming background.

### 1: Installing Python

The first task is to work through the installation steps including installing Python and text editor.

### 2: Why Program?

We learn why one might want to learn to program, and look at the basic issues with learning to program.

### 3: Variables, expressions, and statements

We learn how to make variables and store data in those variables.

### 4: Conditional Execution

We look at how Python executes some statements and skips others.

### 5: Functions

Take a brief look at how Python implements the 'store and use later' programming pattern.

### 6: Loops and Iterations

We look at how Python repeats statements using looping structures.

### 7: Strings

We look at how Python stores and mnipulates textual data using string variables and functions.

### 8: Files

We learn how to open data files on your computer and read throught the files using Python.

### 9: Lists

We look at Python's simplest data structure - the list. Lists can store more than one item in a variable.

### 10: Dictionaries

The dictionary data structures allows us to store multiple values in an object and look up the values by their key.

### 11: Tuples

The tuple is a Python data structure that is like a simple and efficient list.

### 12: Regular Expressions

Regular Expressions allow us to search for patterns in strings and extract data from strings using the regular expression

### 13: Network Programming

We take a quick look at how data moves acros the network using th HyperText Transport Protocol (HTTP) and ow we

### 14: Using Web Services

Web services allow a program to access data available in a different server.

### 15: Object-Oriented Programming

We do a quick look at how Python supports the Object-Oriented programming pattern.

### 16: Databases

Databases give us very fast random access to large amounts of data. There is a lot of material in this chapter as we

### 17: Data Visualization

In this section, we learn to scrape data from the network, store the data in a database and then read the data from

**Website:**
https://www.py4e.com/lessons You can follow the lecture to learn python.
**Free textbook:http:**
//do1.dr-chuck.com/pythonlearn/EN_us/pythonlearn.pdf

# Lab7

Write a program which repeatedly reads numbers until the user enters “done”.
Once “done” is entered, print out the total, count, and average of the numbers.
Remember that the input must be numbers or “done”,
State that “Invalid Input“ when there is an invalid one.

Example:

**Enter a number:** 3
**Enter a number:** 4
**Enter a number:** Gura Rocks
**Invalid Input : Gura Rocks**
**Enter a number:** 5
**Enter a number:** done
**Total = 12, Count = 3, Average = 4**