



INTRODUCTION TO PROGRAMMING

Python Crash Course

Abdelrahman A. Mohamed

Where we are going?



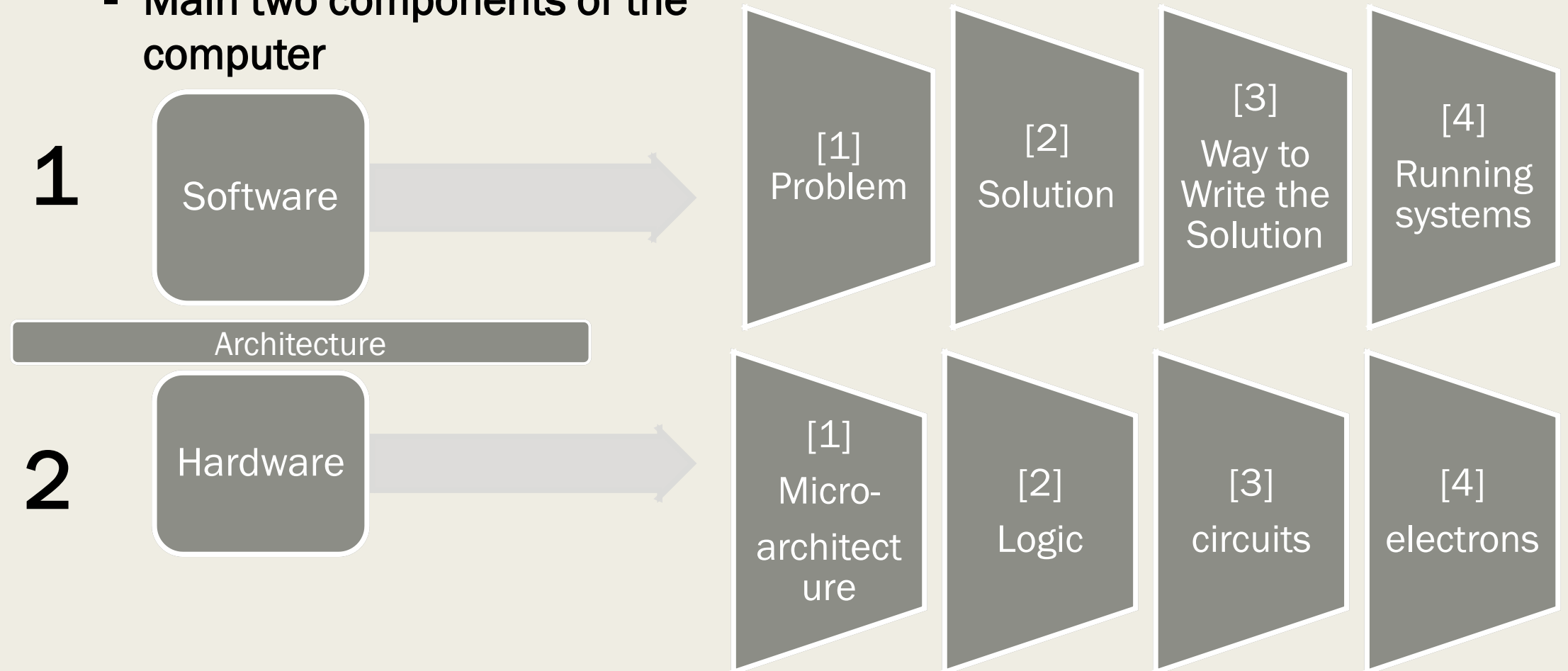
Main Headlines.

- What is the programming ?
- Why we need it ?
- Human languages
- Programing languages
- From the problem to solution
- Why Python?
- Python **I**ntegrated **D**evelopment **E**nvironment **IDE** (Anaconda Environment)
- Frist Program

What is the programming and Why we need it ?

- To Answer these Questions We Need to understand how the computer is working ?

- Main two components of the computer



Human Languages

- How to say how are you? in different languages by different ways ?

Arabic	English	Turkish	Spanish
كيف حالك	How are you	Nasılsın	Cómo estás ?
ايه الاخبار	What's up	Nasıl gidiyor	¿Qué tal?
كيفك	How it's going	Ne haber	Cómo andas ?

As we see above, we can do the same thing by different ways

So ,Can we do this with programming ?

Programming languages

-Make a Program to print “hello world” three times .

```
In [4]: for i in range(3):  
        print("hello world")
```

hello world
hello world
hello world

```
In [5]: i=0  
        while(i<3):  
            print("hello world")  
            i+=1
```

hello world
hello world
hello world

```
In [6]: print("hello world")  
        print("hello world")  
        print("hello world")
```

hello world
hello world
hello world

and that prove there is no unique solution for any problem may there is more than one solution

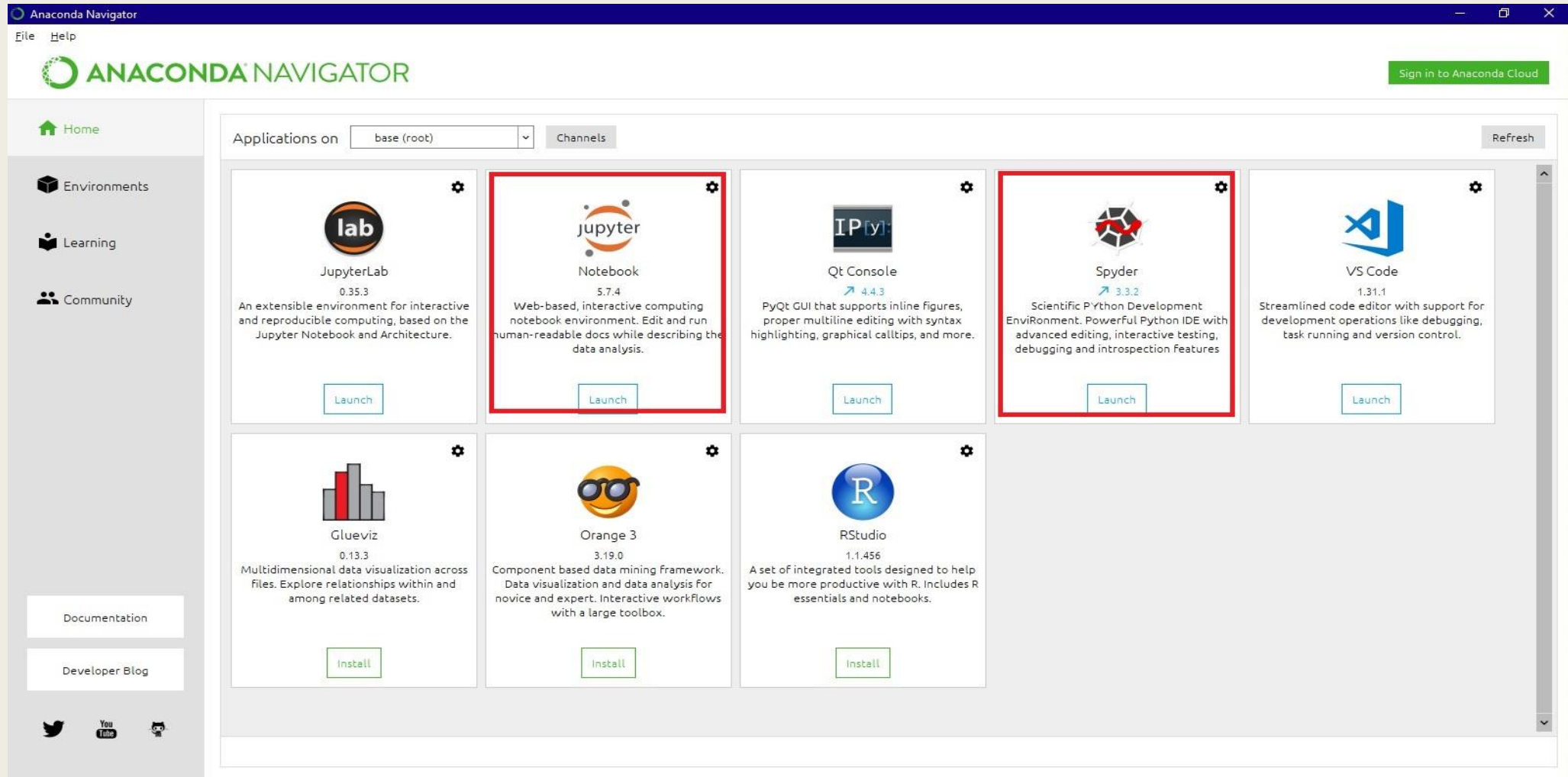
Why Python?

- Open Source
- Easy to learn
- A lot of libraries
- Web programming
- Windows applications
- Mobile applications
- Security
- Artificial intelligence

Worldwide, Dec 2018 compared to a year ago:

Rank	Change	Language	Share	Trend
1	↑	Python	25.36 %	+5.2 %
2	↓	Java	21.56 %	-1.1 %
3	↑	Javascript	8.4 %	+0.0 %
4	↑	C#	7.63 %	-0.4 %
5	↓↓↓	PHP	7.31 %	-1.3 %
6		C/C++	6.4 %	-0.4 %
7		R	4.01 %	-0.3 %
8		Objective-C	3.21 %	-0.9 %
9		Swift	2.69 %	-0.7 %
10		Matlab	2.06 %	-0.3 %

Python IDE and Anaconda Environment.



Download link:

<https://www.anaconda.com/distribution/>

How to download ?

The screenshot shows the Anaconda Python/R Distribution website. The browser address bar displays <https://www.anaconda.com/distribution/>. The page content includes a list of supported data science packages and a section for downloading the Anaconda 2018.12 for Windows Installer.

data science and machine learning on Linux, Windows, and Mac OS X. With over 11 million users worldwide, it is the industry standard for developing, testing, and training on a single machine, enabling *individual data scientists* to:

- Quickly download 1,500+ Python/R data science packages
- Manage libraries, dependencies, and environments with Conda
- Develop and train machine learning and deep learning models with [scikit-learn](#), [TensorFlow](#), and [Theano](#)
- Analyze data with scalability and performance with [Dask](#), [NumPy](#), [pandas](#), and [Numba](#)
- Visualize results with [Matplotlib](#), [Bokeh](#), [Datashader](#), and [Holoviews](#)

1 **Windows** | macOS | Linux

Anaconda 2018.12 for Windows Installer

2 **Python 3.7 version**

Download

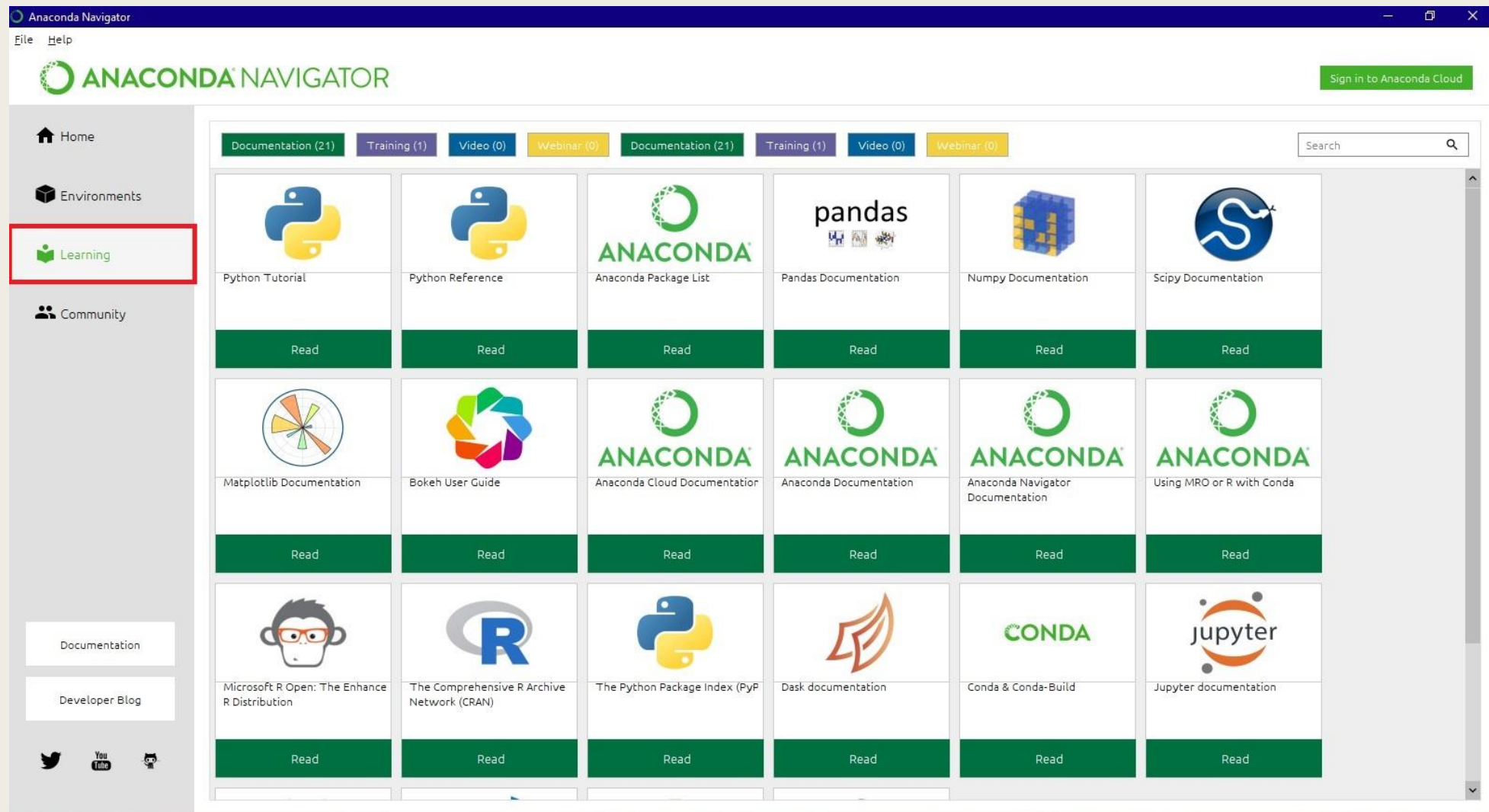
3 **64-Bit Graphical Installer (614.3 MB)**
32-Bit Graphical Installer (509.7 MB)

Python 2.7 version

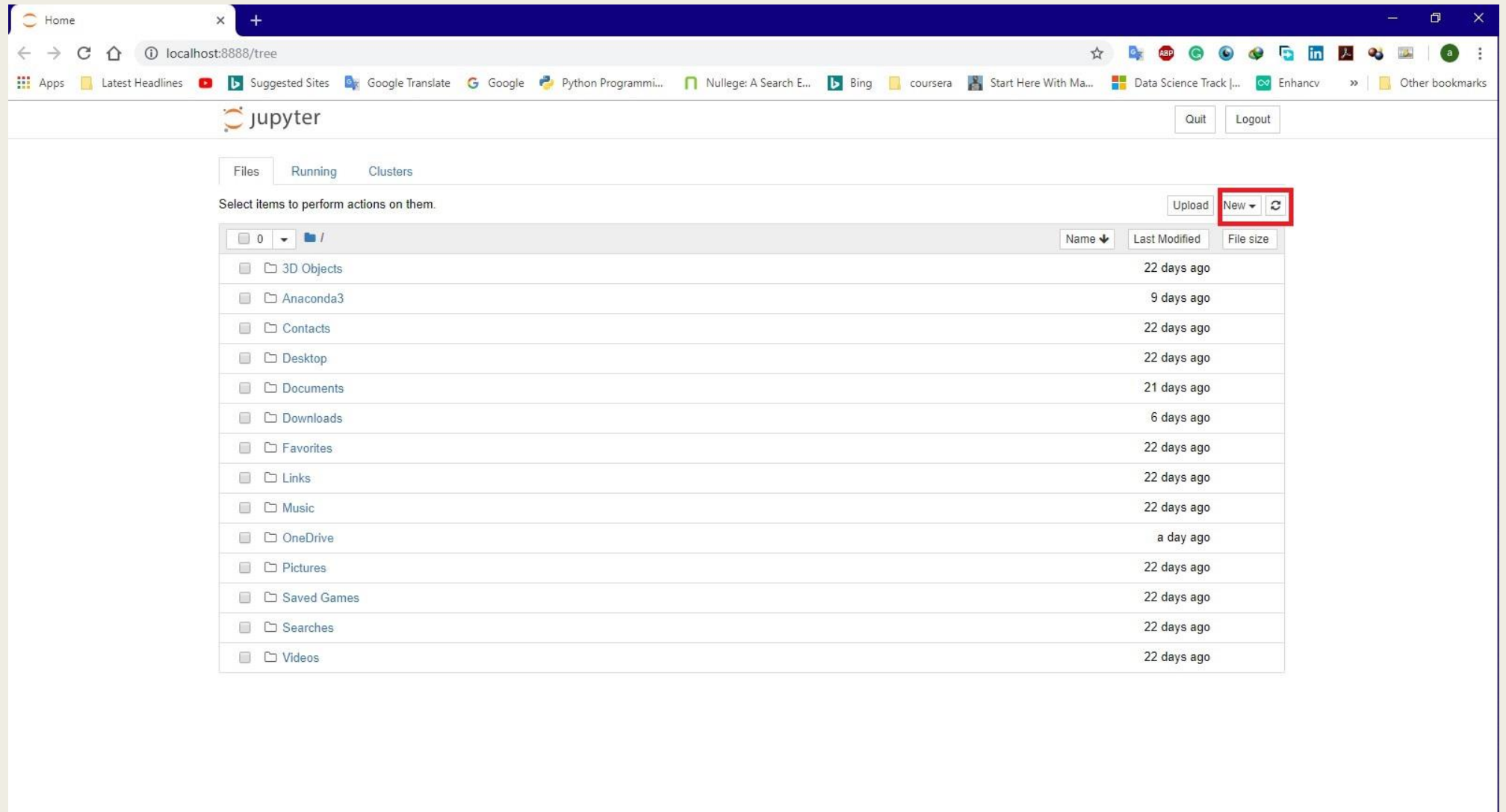
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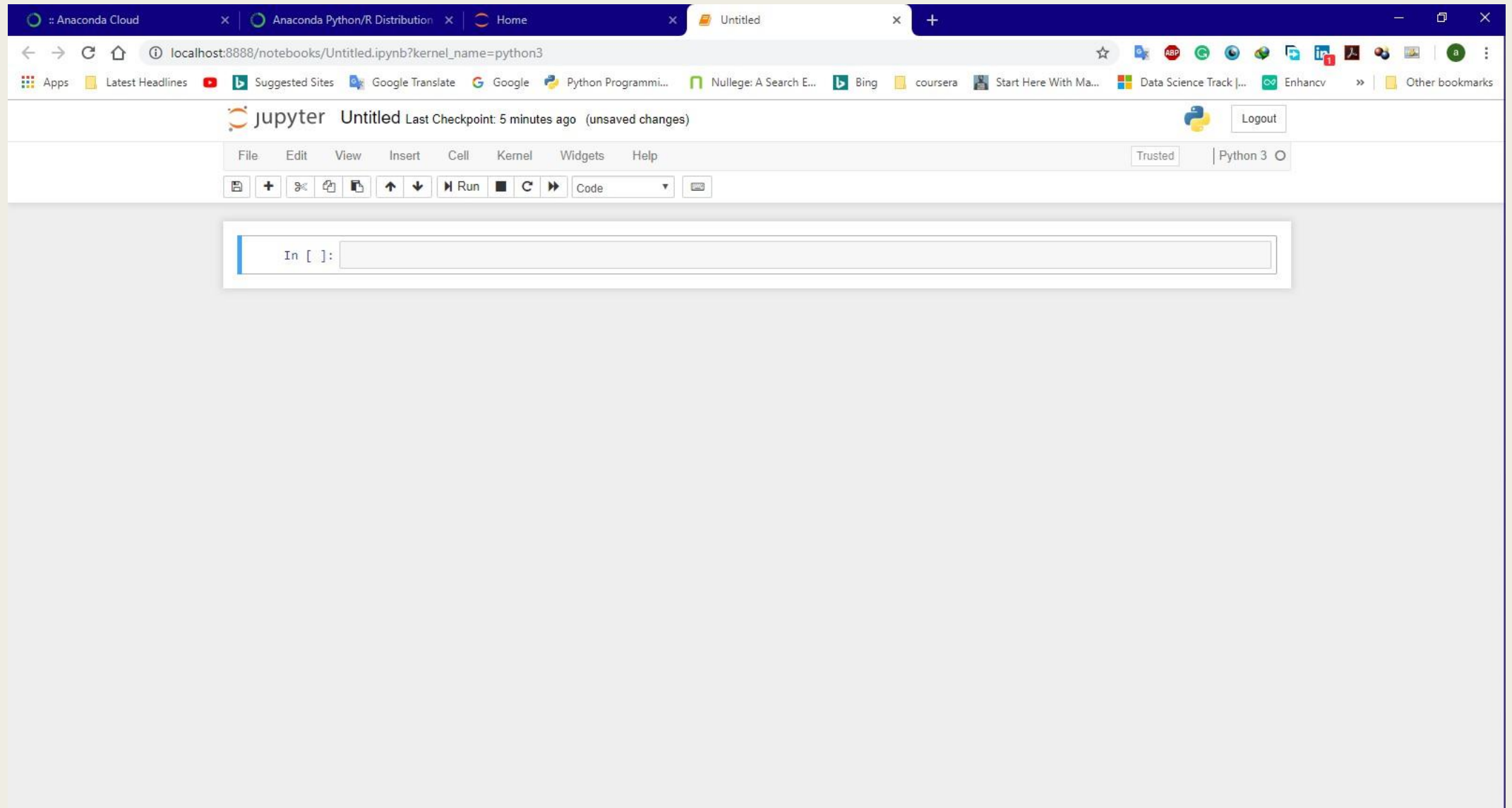
Anaconda Environment.



Jupyter Notebook



Jupyter Notebook



Our Frist program

