Python Class Software Installation

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Install VSCode

VSCode is the python program editor we will use in our class.

- 下载 VSCode

> Google search: vscode download Search result: Download Visual Studio Code - Mac, Linux, Windows

VSCode Download Website

Download Visual Studio Code - Mac, Linux, Windows

code.visualstudio.com/Download ⌄

Download Visual Studio Code. Free and built on open source. Integrated Git, debugging and extensions. By **downloading** and using **Visual Studio Code**, you agree to the license terms and privacy statement .

Insiders Build
For early adopters, you can get the latest release of VS...

FAQ
Visual Studio Code FAQ. Our docs contain a Common questions...

Updates
Contributions to vscode-references-view: Babak K. Shandiz...

Extensions
One place for all extensions for Visual Studio, Azure DevOps...

Code Editing. Redefined
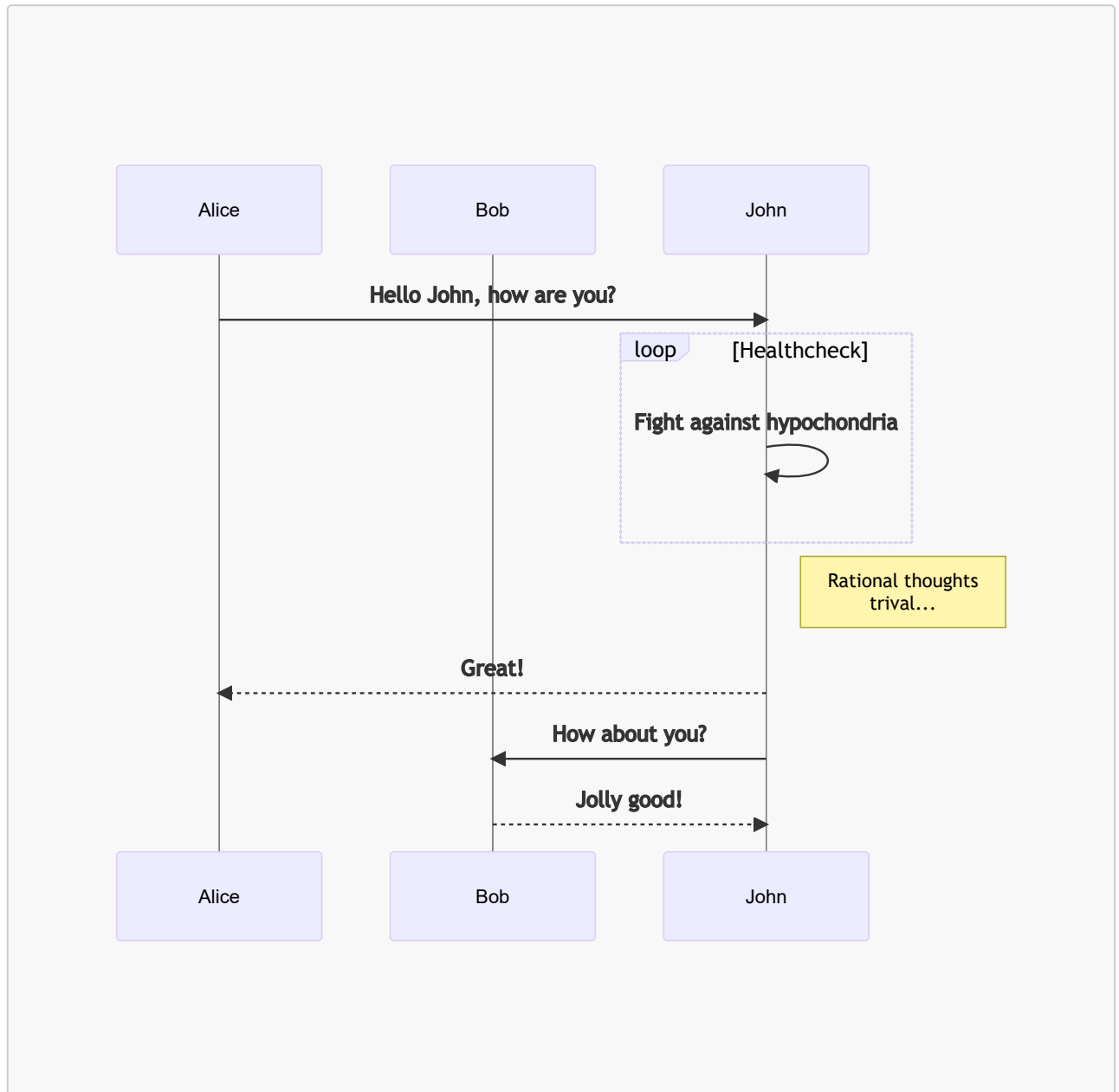Visual Studio Code is a code editor redefined and optimized...

> File: VSCode-darwin-stable.zip

- Extract zip file to ~/Downloads folder,

  - MacOS: move "Visual Studio Code" to Application folder
  - Windows 10:

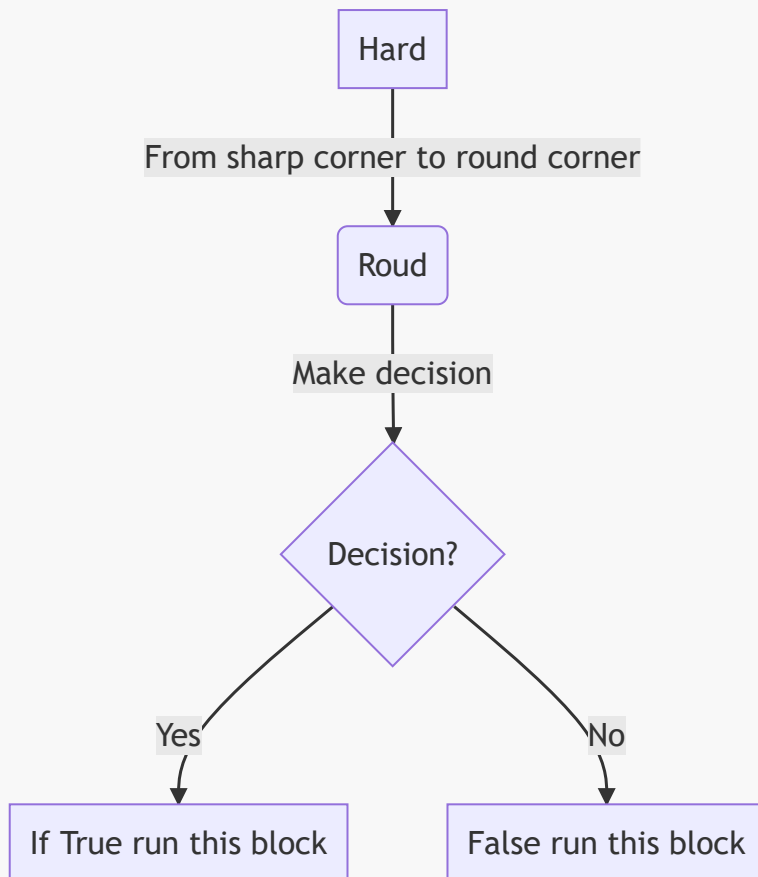- Check the success of the installation

double click the desktop icon, start VSCode.

- Install extentions
  - Python; for Running, Debugging, IntelliSense
  - Markdown All in One; Markdown preview, Table of contents, Math Equation
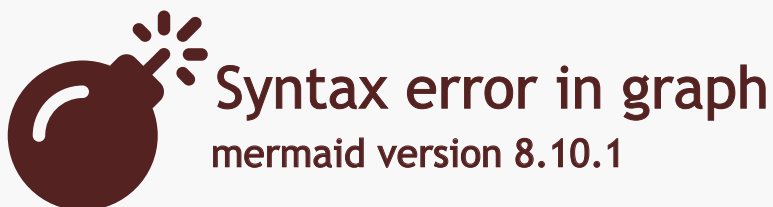 - Markdown Preview from Matt Bierner; better preview

Mermaid Diagram Mermaid Diagram Github
  - Flow

```mermaid
Hard
```

From sharp corner to round corner

Roud

Make decision

Decision?

Yes

No

If True run this block

False run this block

- Class

Syntax error in graph
mermaid version 8.10.1

```
* Markdown to PDF; convert markdown to PDF
* Pylance; source code format
* Unicode Latex; Insert unicode
  Command Palette... > Unicode: Insert Math Symble > πr²
  7 ÷ 5 = 1.4, 3
* vscode-pdf; PDF preview
* PlantUML; generate diagram from code
* Jupyter; Python Notebook
```

- Setup Virture Environment

```
python -m venv env
./env/bin/activate.bat
```

```
python -m venv env
source env/bin/activate
```

```
- close terminal, open new terminal
- Command Pallete ... > Python Select Interpreter
```

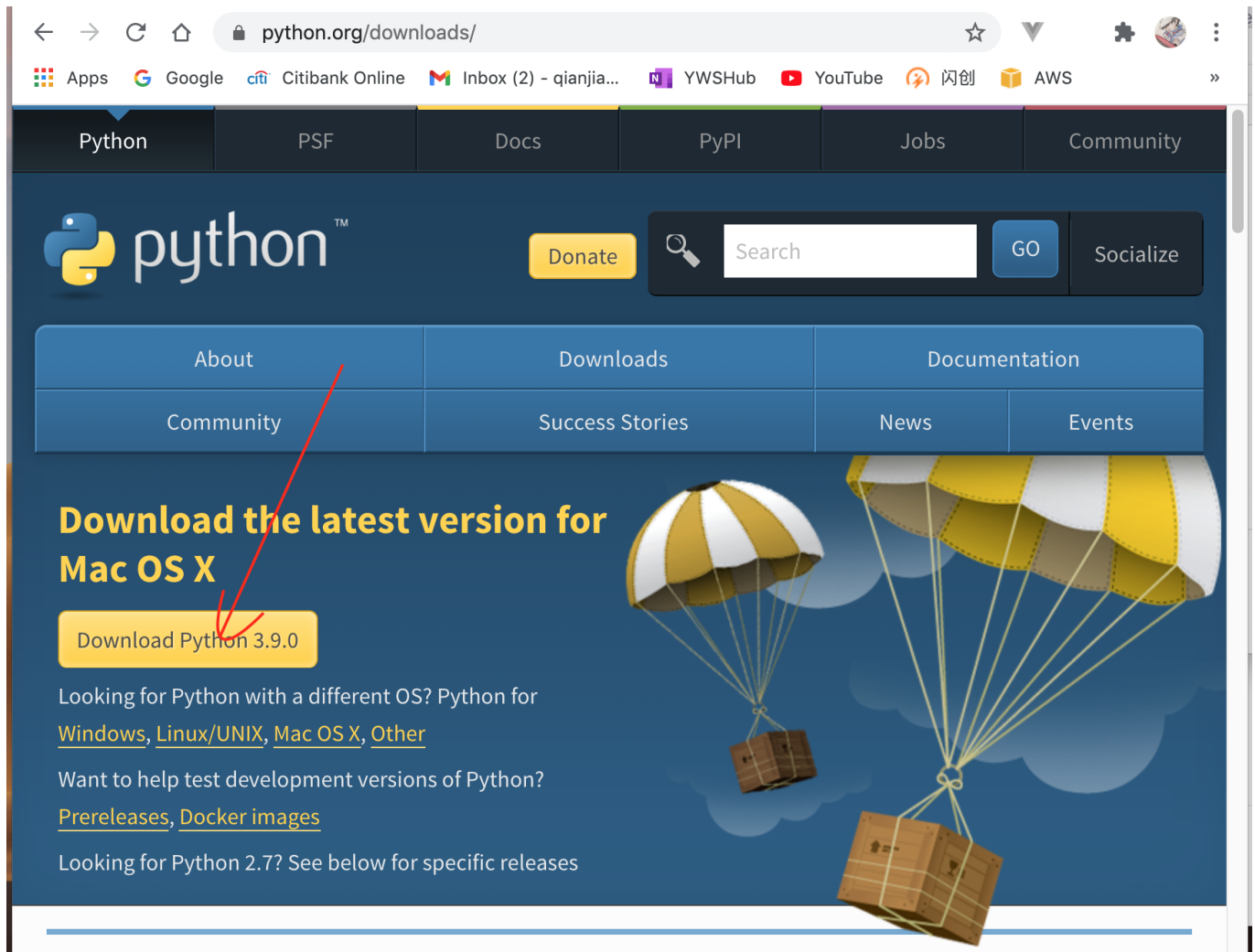Table of Contents

Install Python

We need Python interpretor installed in order to execute Python program.

- 下载 Python

> Google search: python download

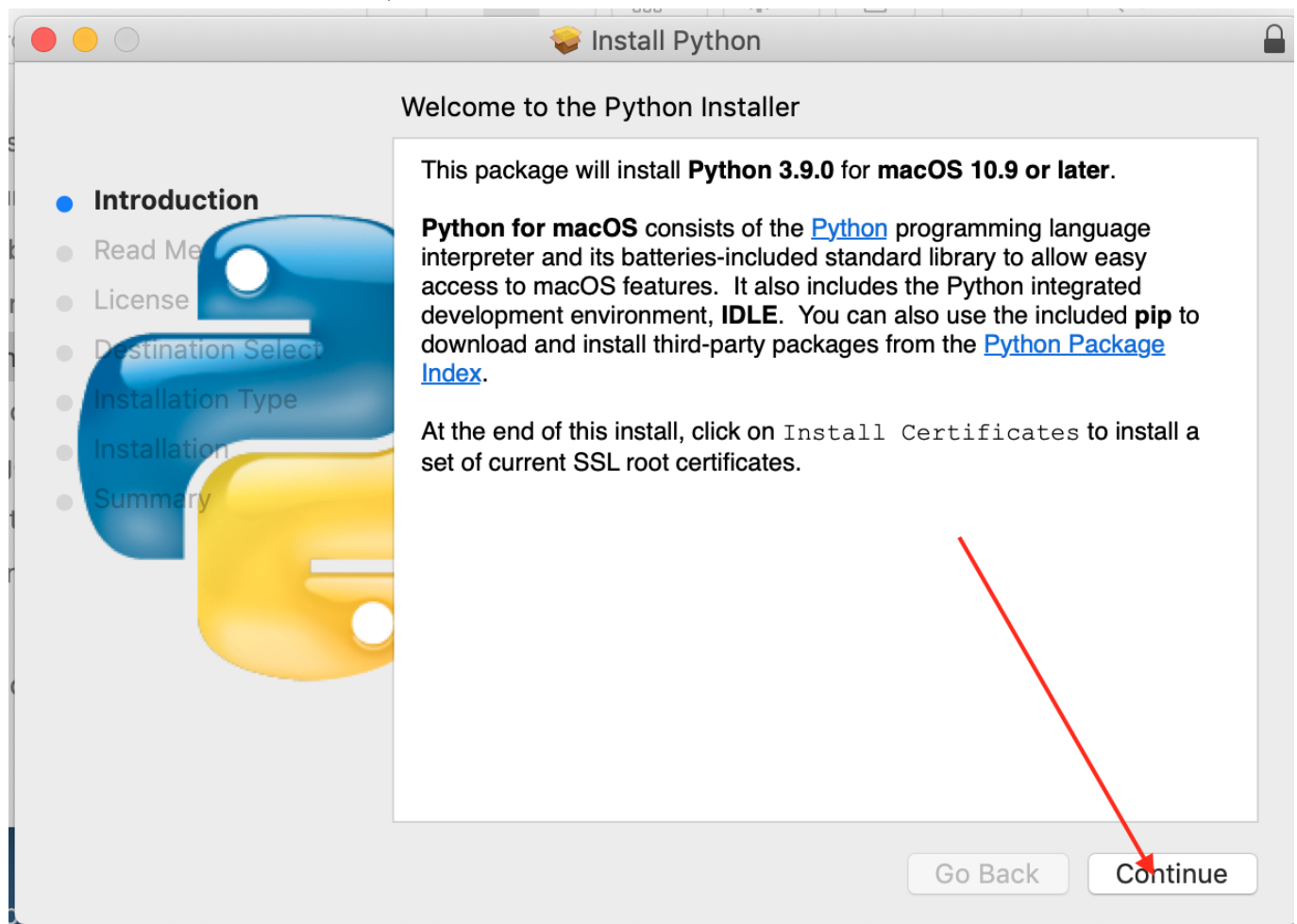Search result: Download Python | Python.org

Python Download Website

File:

python-3.9.0-macosx10.9.pkg (MacOS)

python-3.9.0-amd64.exe (Windows OS)

- Install python

double click the downloaded file,

- Check the installation

```
python --version
```

- Setup Python interpreter in VS Code

```
python -m venv env
./env/bin/activate.bat
```

```
python3 -m venv env
source env/bin/activate
```

Command Palette…>Python: Select Interpreter

Install Git

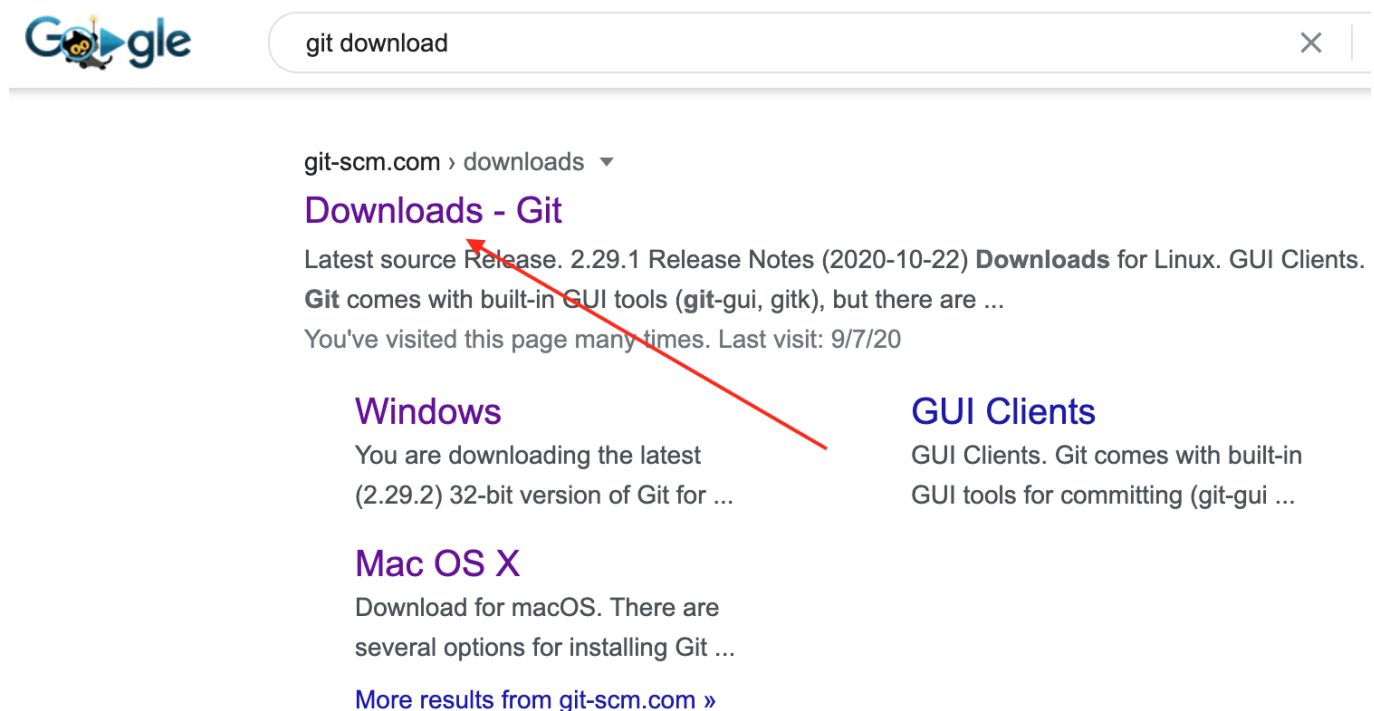Git is very powerful source version control software nowaday, we will use it for our python source code version control and homework repository.
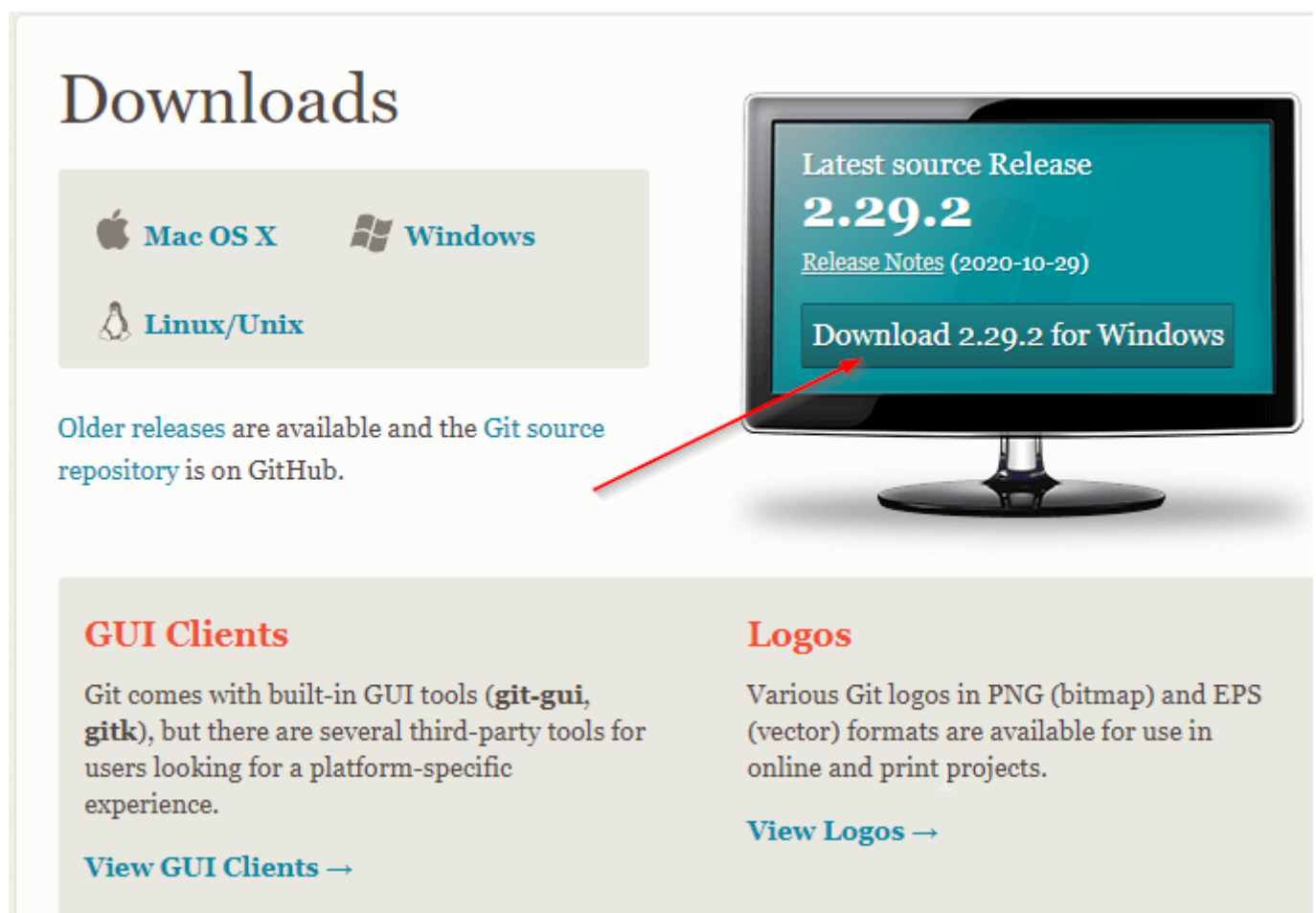
- Download Git

Google search: git downloads Search result: Git - Downloads

Git Download website

File: Git-2.29.2-64-bit.exe

- install Git

double click the executable file.

- Use brew to install git on MacOS

```
brew install git
ls -la /usr/local
sudo chown -R wangqianjiang:wheel /usr/local
brew link git
```

Some version of MACOS, you just check the git version, it will install git when there is no git installed.

- Check the installation

```
git --version
```

PIP install missing module

```
c:/Users/12818/workspace/django/hello.py
Traceback (most recent call last):
  File "c:\Users\12818\workspace\django\hello.py", line 1, in <module>
    import pandas as pd
ModuleNotFoundError: No module named 'pandas'
```

Whenever you see ModuleNotFoundError: do the following

```
pip install pandas
```

check all modules that pip installed

```
pip freeze
```

Image utility (ImageMagick)

- Installation file: ImageMagick-x86_64-pc-windows.exe

- installed at C:\Program Files (x86)\ImageMagick-7.0.11-Q8

```
magick
```

- Conver images from png to gif, list of png file to one gif file

```
magick F_*.png motion.gif
magick pencil.png favicon.ico
```