

## Hands-on Lab – Week 1

Setting up development environment & version control system for hands-on lab work.

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### Software/tools to install

1. Python
  - Official Website (<https://www.python.org/>)
  - Anaconda : (<https://www.anaconda.com/download/success>)
2. Git : <https://git-scm.com/>
3. GitHub Desktop : <https://github.com/apps/desktop>
4. Visual Studio Code : <https://code.visualstudio.com/>

## Python Installation

### Official Python Website

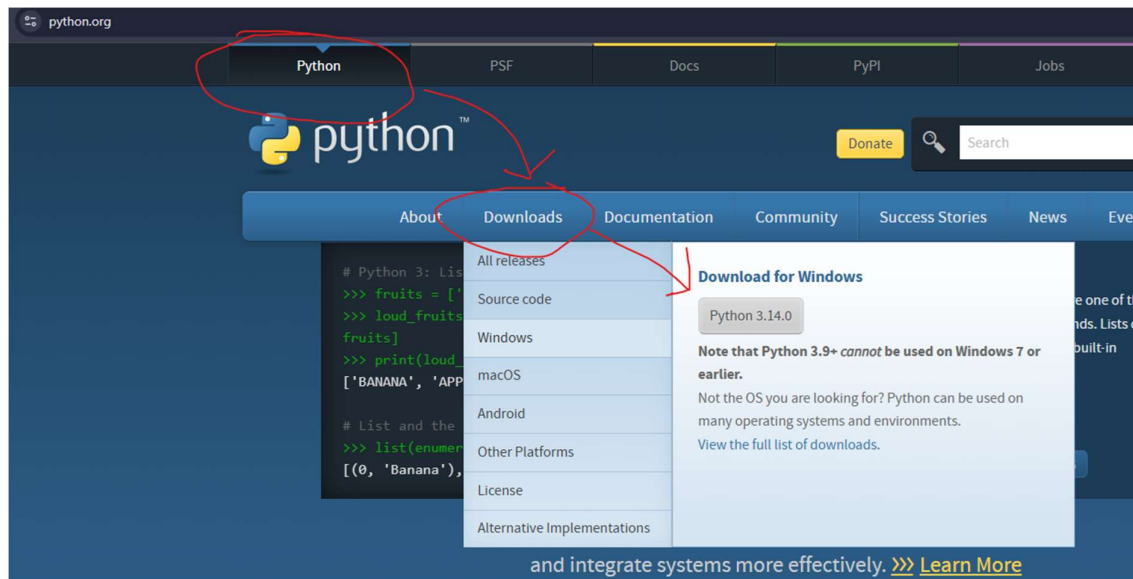


Figure 1 - Python Download Link

To check if Python is installed on your local PC, go to **Command Prompt** and type the following command:

```
python -version
```

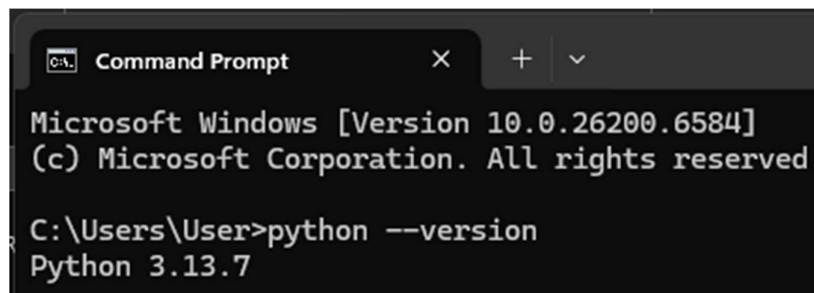


Figure 2 - Python Version

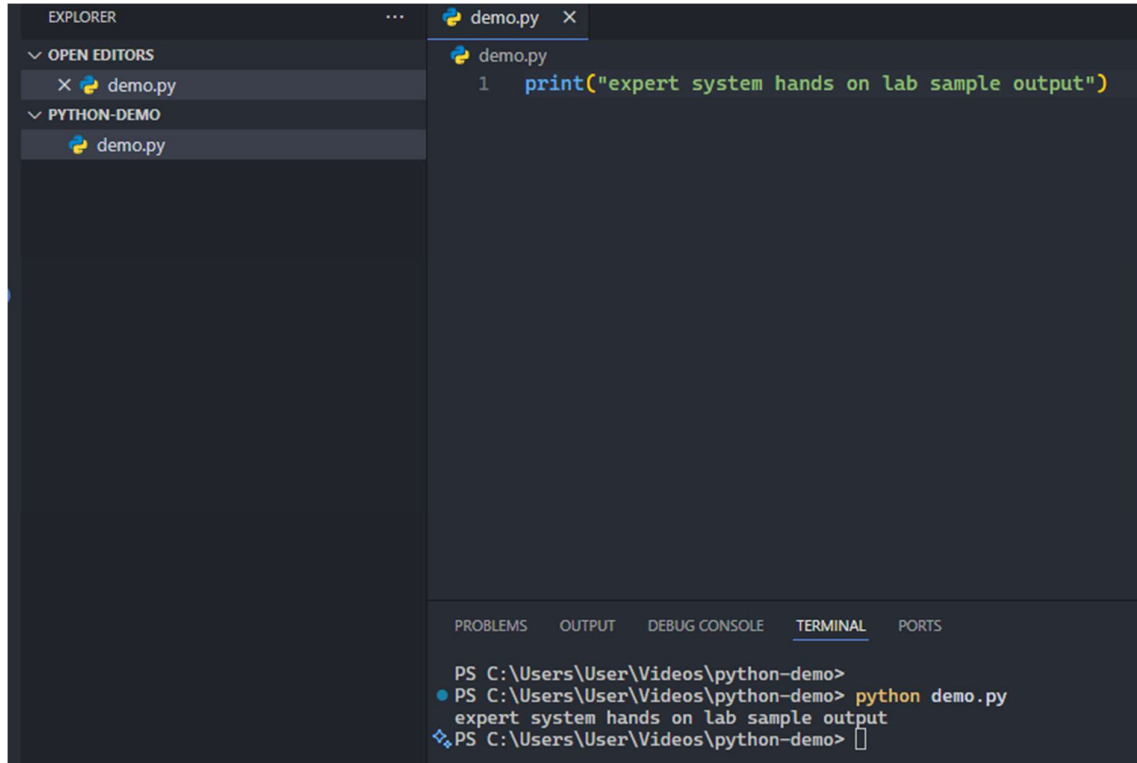
## Anaconda

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

## Note

Python code can be run in two ways:

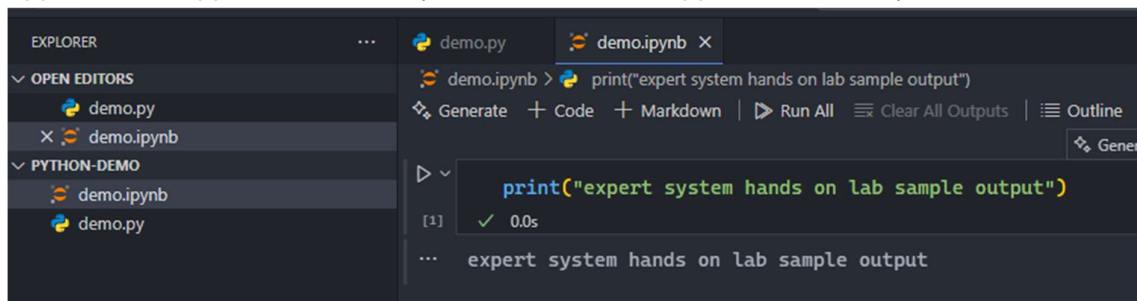
- .py files - Standard Python scripts (run in terminal or VS Code)



The screenshot shows the Visual Studio Code interface. The Explorer pane on the left shows a project named 'PYTHON-DEMO' with two files: 'demo.py' and 'demo.ipynb'. The main editor area shows the content of 'demo.py', which is a single line of Python code: `print("expert system hands on lab sample output")`. Below the editor, the Terminal pane is active, showing the command prompt output: `PS C:\Users\User\Videos\python-demo> python demo.py` followed by the output `expert system hands on lab sample output`.

Figure 3 - Sample in .py format

- .ipynb files - Jupyter Notebooks (interactive, run in Jupyter or VS Code)



The screenshot shows the Visual Studio Code interface with a Jupyter Notebook open. The Explorer pane shows the 'PYTHON-DEMO' project with 'demo.py' and 'demo.ipynb'. The main editor area shows a code cell in 'demo.ipynb' containing the same Python code: `print("expert system hands on lab sample output")`. The cell has been executed, as indicated by the [1] and a checkmark icon, with a execution time of 0.0s. The output of the cell is displayed below the code: `expert system hands on lab sample output`.

Figure 4 - Sample in .ipynb format

## Git Installation

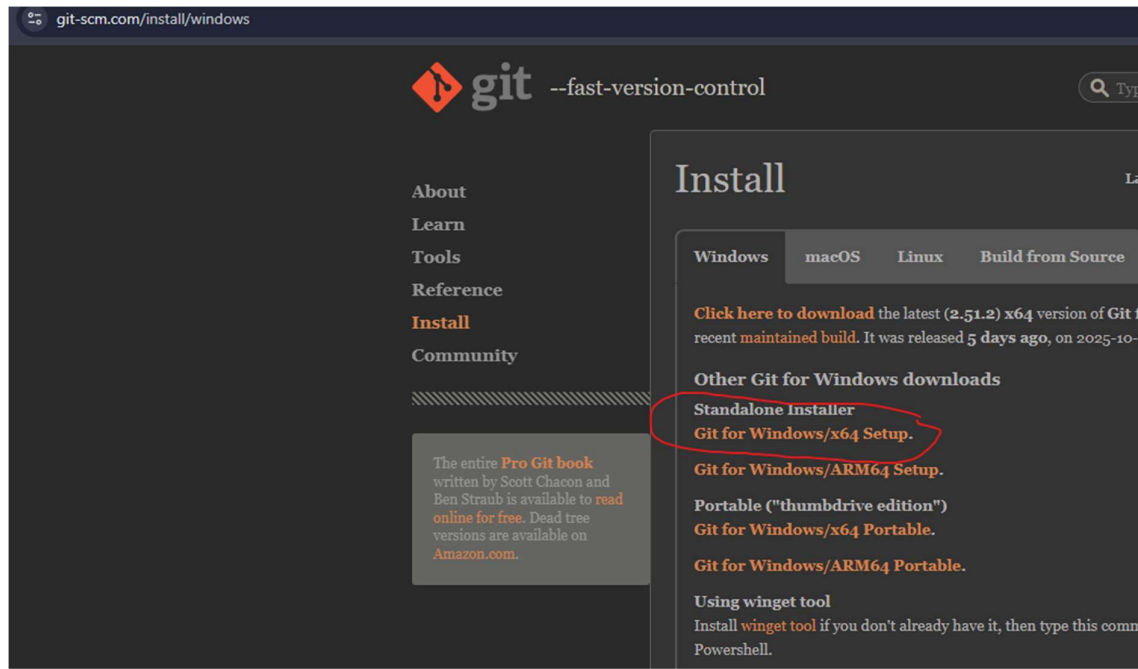


Figure 5 - Git Installation Link

To check if git is installed on your local PC, go to **Command Prompt** and type the following command:

```
python -version
```

## GitHub Desktop

- Use your personal email to create your GitHub

### To Do (Demo):

1. Create a repository “expert-system-lab”
2. Clone it to your local PC

## vscode

Install Jupyter Extension on vscode

