

## Day - 1

\*\*\*Some insights\*\*\*

- 1) named after the BBC show "Monty Python's Flying Circus"
- 2) Python is simpler to use, available on Windows, macOS, and Unix operating systems, and will help you get the job of automating routine, tedious tasks, done more quickly than \*shell scripting\* or \*windows batch operations\*.
- 3) Being a \*very-high-level language\*, it has high-level data types built in, such as flexible arrays and dictionaries.
- 4) Python modules provide things like file I/O, system calls, sockets, and even interfaces to graphical user interface (GUI) toolkits like Tkinter (Tk).'
- 5) \*\*Why go with Python?\*\*
  - 5-1) \*Easily readable\* :- High-level language implies easy-to-understand high-level datatypes; No complicated Bracket structures (only indentations); No variable/argument declaration
  - 5-2) \*interpreted\* :- No compilation and linking is necessary. The interpreter can be used interactively.
  - 5-3) \*Extensible\* :- can link the Python interpreter into an application written in C and use it as an extension or command language for that application

**\*\*APPROACH\*\***: beginning with **\*\*simple expressions\*\***, **\*\*statements\*\*** and **\*\*data types\*\***, through **\*\*functions and module\*\***s, and finally touching upon advanced concepts like **\*\*exceptions\*\*** and **\*\*user-defined classes\*\***.

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**\*Python-macos-GUI tools\***:

Several options for building GUI applications on the Mac with Python

- \* PyObjC
- \* Tkinter
- \* wxPython
- \* PyQt

- 1) Python IDLE (IDLE - Integrated DeveLopment Environment)
- 2) Python through VS code - To work with Python inside VS Code, we need to use the Python extension, which includes many useful features, such as code completion with IntelliSense, debugging, unit testing support, etc.

2 types of environments in vscode (virtual): (1) .venv (2) .conda

- \* Command line tools - clang is the language in macos -- xcode is the tool
- \* Can use `*softwareupdate --list*` to see what's available and then `*softwareupdate --install -a*` to install all updates or `*softwareupdate --install <product name>*` to install just the specific update (if available)
- \* While downloading a conda platform (with specific python version), - \*The Python version is specific only to the base environment. Conda can create new environments with different Python versions and implementations.\*

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Steps to get tensorflow in macos ventura with m1 chip

^ Install Command line tools -

In **Terminal**, use `*softwareupdate --list*` to see what's available and then `*softwareupdate --install -a*` to install all updates or `*softwareupdate --install <product name>*` to install just the specific update (if available)

^ Install Miniforge -

In **Terminal**, `*brew install miniforge*` -- installs miniforge

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