**INTRODUCTION**

1. **Course Outline**

Python Basics

Python Basics 2

Developer Environments: Terminal, Code Editors, IDEs, Notebooks

Advanced Python

Careers

Scripting in Python

Data Scrapping  
Automation: Selenium

Web Development

ML & Data Science

1. **Join Our Online Classroom!**

[*ZeroToMastery (discord.com)*](https://discord.com/invite/9KxUUxt7Vd)

1. **Exercise: Meet The Community**

**PYTHON INTRODUCTION**

1. **What Is a Programming Language**Set of instructions written in a high-level language which can be translated to machine language by compiler/interpreter.

Assembly language: Close to machine language.  
Python: Close to English.  
Compiler/Interpreter: Translator between High level language and Machine language.  
Compiler: Translates entire code all at once and creates a Binary file.  
Interpreter: Translates codes one line at a time and creates a Byte code which runs on a Cpython Virtual Machine.

1. **Python Interpreter**[*https://www.python.org/*](https://www.python.org/) : cPython  
   Jython (Java), PyPy (Python), IronPython (DotNet)
2. **How To Run Python Code**[*https://replit.com/*](https://replit.com/)[*https://glot.io/*](https://glot.io/)
3. **Note Jumping To Developer Environment**
4. **Our First Python Program**name = input(‘What is your name?\n’)  
   print(‘Hello ’ + name)
5. **Python 2 Vs Python 3**Python (2) was created by “Guido Van Rossum” in 1991. Name was coined from “Monty Python’s Flying Circus”, a comedy series from the 1970s.  
   In 2008, they created Python 3. Some of the features of Python 2 doesn’t work in Python 3 due to some breaking changes.  
     
   [*https://www.youtube.com/watch?v=J0Aq44Pze-w*](https://www.youtube.com/watch?v=J0Aq44Pze-w)[*https://sebastianraschka.com/Articles/2014\_python\_2\_3\_key\_diff.html*](https://sebastianraschka.com/Articles/2014_python_2_3_key_diff.html)[*https://www.geeksforgeeks.org/important-differences-between-python-2-x-and-python-3-x-with-examples/*](https://www.geeksforgeeks.org/important-differences-between-python-2-x-and-python-3-x-with-examples/)
6. **Why So Many Languages**Every Languages have their own strengths and trade-offs.  
   Some languages are fast in executing but slow in writing, like C/C++. On the other hand some are fast in writing and slow in executing, like Python.
7. **Exercise How Does Python Work**  
   Teach someone how fundamentals of Python, how it works.
8. **ZTM Python Cheat Sheet**[*https://github.com/aneagoie/ztm-python-cheat-sheet*](https://github.com/aneagoie/ztm-python-cheat-sheet)

**Developer Environment**

1. **MAC – Python Install**

[*https://osxdaily.com/2018/06/13/how-install-update-python-3x-mac/*](https://osxdaily.com/2018/06/13/how-install-update-python-3x-mac/)

1. **Windows – Python Install**[*https://www.python.org/*](https://www.python.org/)[*https://realpython.com/installing-python/*](https://realpython.com/installing-python/)
2. **Windows – Get Terminal**

[*https://www.thewindowsclub.com/install-windows-terminal-on-windows-10*](https://www.thewindowsclub.com/install-windows-terminal-on-windows-10)

1. **Linux – Python Install**

[*https://realpython.com/installing-python/*](https://realpython.com/installing-python/)

1. **Python Developer tools**

Terminal  
Code Editors – lightweight  
IDEs – Full-fledged environment to write and run code  
Jupyter Notebooks

1. **Sublime Text**

[*https://www.sublimetext.com/3*](https://www.sublimetext.com/3)

1. **Quick Note Upcoming Video**

[*The Complete Web Developer in 2023: Zero to Mastery | Udemy*](https://www.udemy.com/course/the-complete-web-developer-zero-to-mastery/?referralCode=FFF295AECF3594CE440E)

1. **Optional Terminal Commands**

ls #list // lists all files and folders in directory

pwd # present working directory

cd <folder name> #move pwd to argument folder

cd .. #one directory up

cd / #move to root directory

cd ~ #move to user directory  
clear #clears the terminal

open . #opens current directory (LINUX)  
open <file name> #opens argument file (LINUX)

open –a “<application name>” #open specified application

open –a “<application name>” <file name> # opens specified application with specified application  
start . #opens current directory (WINDOWS)

start <file name> #opens argument file (WINDOWS)

mkdir <folder name> #creates new folder of argument name

touch <file name> #creates file of argument name

mv <old file name> <new file name> #rename file name

rm <file name> #delete argument file  
rm –r <folder name> #delete argument folder (LINUX)  
rmdir <folder name> # delete argument folder (WINDOWS)

TAB key: Auto fill  
UP ARROW key: command history

1. **iTerm Setup**
2. **Using the command line terminal**  
   python <python file> #runs file with program in it
3. **Visual Studio Code**  
    [*https://code.visualstudio.com/downloads*](https://code.visualstudio.com/download)
4. **PyCharm**[*https://www.jetbrains.com/pycharm/download/#section=windows*](https://www.jetbrains.com/pycharm/download/#section=windows)
5. **Code Formatting – PEP 8**  
   PEP stands for Python Enhancement Proposals.  
   There are lots of PEPs.  
   PEP 8 is style guide for Python code.
6. **Quick Note Jupyter Notebooks**
7. **Jupyter Notebooks**  
   [*https://problemsolvingwithpython.com/01-Orientation/01.03-Installing-Anaconda-on-Windows/*](https://problemsolvingwithpython.com/01-Orientation/01.03-Installing-Anaconda-on-Windows/)   
   Jupyter Notebook uses browser as GUI. It doesn’t have its own code editor.  
   Jupyter runs program line by line as soon as it is written. It auto saves file.
8. **Section Review**

**Bonus Extra Bits**

1. **Quick Note Upcoming Videos**

[***The Complete Web Developer: Zero to Mastery***](https://www.udemy.com/course/the-complete-web-developer-zero-to-mastery/?referralCode=FFF295AECF3594CE440E)

1. **CWD Git + Github**

GitHub is used for source control. It can help to counter merge conflict problem when more than one developer is working on same project.

[*https://git-scm.com/downloads*](https://git-scm.com/downloads)

# Git Bash:

git clone <repository path> #clone repository to local

git status #get status of local files

git add <file name> #add files to commit list

git add . #add all files to commit list

git commit –m“<message>” #commit files to GitHub

git push #finish commit to GitHub

git pull #grab latest commit from GitHub  
git log #to get detailed commit history

git log –oneline #to get brief commit history  
git log graph #to get the graph of branches

**Bibliography**

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