**INTRODUCTION TO PYTHON**

Hello and welcome to **Introduction to Python Programming Language**. We are all going to learn together to program using this Powerful, Popular, and Easy to use Programming language.

Below are going to be what we shall cover as we program step-by-step:

**Topics to cover:**

**Section I**

**i) Python Programming Basics**

**ii) Variable Names**

**ii) Basic Operators**

**iv) Core Data types**

**v) Numeric Types**

**vi) Precedence and Associativity**

**Section II**

**vii) Exception Handling**

**viii) Pseudocode, Algorithms and Examples**

**ix) Sequence, Selection and Iteration**

**x) Python Functions (Functional Programming)**

**xi) Classes and Objects**

**Section III**

**xii) Files Processing and Pickle Module**

**xiii) Operator Overloading**

**ivx) Regular Expressions**

**vx) Encapsulation**

**vix) Inheritance**

**(viix) Data Abstraction**

**(viiix) Polymorphism**

This course will take **50** days to cover the above ☝🏾 lessons. From April 1st to May 20th.

Topics from (**Section I** **(i)** to **(vi)**) will be covered in the first **20 days**. These are relatively easy topics and wouldn't take long to grasp and apply. Easy, but fundamental enough to pay close attention to allow you to put a solid foundation on what to come.

**Covered in 7 days::** (**Section II**) **lesson (vii) to (ix)**) . Lesson **(ix)** will be a little different and will need us all to tighten the seat belt to make that ride a good one. That means (**Section I**) is essential for us to understand (**Section II**).

**Covered in 8 days::** (Lessons **(x)** and lesson **(xi)**) - These will be the nuts and bolts to assist us to cement the previous (**Section I** and part of **Section II -** Lessons **(vii)** to **(ix)**)

**Covered in 7 days::** (**Section III**) Lessons (**(xii)**) to **(ivx)**). Now, these three lessons are what will be the File processing and data manipulation core modules.

**Covered in 8 days::** We shall extendOOP (Object Oriented Programming building blocks in Python Programming OOP), which is also an extension to (**Section II** Lesson **(xi)**. **Section III** Lessons **(vx)** to **(viiix)**, these topics depend on each other for clarity.

In the whole of those 50 days covering Python, we shall have ONLY 3 zoom sessions each approximately 90 minutes to go through the summary of notes, answer the questions of what we have covered, or what we are about to cover.

The zoom sessions shall be done on a **Saturdays afternoon from 4:00 pm Central Standard Time**. We shall announce these well in advance and share the links of the recording on Youtube. The zoom sessions shall be recorded and posted on youtube for later reference.

While attending this class (Introduction to Python Programming) I would suggest notes taking and practicing the code samples by actually typing and testing them, also read the notes to help reinforce the knowledge transfer.

At the END of the 50 days you may proceed and see if you can challenge yourself to a Python Testing for Certification online or take a project and build it from the ground up using the tools you learned in **Introduction to Python**. I will be on standby just in case you need my assistance.

Let’s Begin the Lesson on **Thursday, April 1th, 2021.**

**TOOLS to use for programming Python (IDE):**

**Approaching Python:**

Requirements:

i) Highly recommend at least a Computer (Desktop or a Laptop) running Windows 10 Pro.

a) Memory at 4 Gig but 8 GB will be ideal, and 16GB or 12 GB will be better

b) Processor at 2.0 GHz minimum I live at least a 5i

c) Hard drive with at least 200 GB but 500 GB will be better to have

ii) Installing Python Program Interpreter for windows 64 bit

iii) Installing the IDE:

a) Please visit this link, download and install Python - at least version 3.8. https://www.python.org/ftp/python/3.9.2/python-3.9.2-amd64.exe

b) Installing IDEs of choice; One of the ones below will be fine. If you like, you can do more than one or all.

i) PyCharm (nice to have): (Make sure you download the Community Edition.) https://www.jetbrains.com/pycharm/download/

ii) Anaconda (Swiss knife of Data Science): Download from here https://www.anaconda.com/products/individual and install

iii) VS Code (one of my favorites): https://code.visualstudio.com/download and install

Or if you happen to have a Google Account, you can also access Google Colab here: https://colab.research.google.com/ quite a handy tool and resembles Jupyter Notebook

ANY/ALL of THESE I HAVE INDICATED AND SHARED ABOVE ARE ALL FREE. Don't buy anything. Keep that money for future use

Below are the instructions on how to install it on Mac, Windows and Linux . Click a link for your OS

1) https://docs.anaconda.com/anaconda/install/mac-os/

2) https://docs.anaconda.com/anaconda/install/windows/

3) https://docs.anaconda.com/anaconda/install/linux/

4) https://docs.anaconda.com/anaconda/install/linux-power8/

To Update Anaconda: Use these commands at the terminal [From JupyterLab click on File->New->Terminal or Console to access the command line: type this command ==> conda update conda **PRESS ENTER** conda update anaconda=VersionNumber PRESS ENTER

Verifying that Anaconda is installed: https://docs.anaconda.com/anaconda/install/verify-install

Let’s Begin the Lesson on **April 1st, 2021.**