**Python Essentials Day 1 - Assignment**

**Question 1 :**

What is python? What are the ways to install python to your PC?

**Answer:**

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects. Python is dynamically typed and garbage-collected. It supports multiple programming paradigms, including structured (particularly, procedural), object-oriented, and functional programming.

**Steps to install Python on your PC** –

1. Go to Anaconda <https://www.anaconda.com/products/individual> => Anaconda Installers => Downloads => Select Windows or Mac OS or Linux as per your requirement => select Bit (32/64 bit) => select Version 3.7 => Download
2. Open and run Installer
3. Open Anaconda navigator => launch Jupyter Notebook (Or any other IDE you want to use).
4. Open Jupyter notebook

**Else,**

You can Use Google Colab (Colaboratory)- <https://colab.research.google.com/notebooks/intro.ipynb#recent=true>

**Question 2:**

What is Code Environment? What are the types of Code environment?

**Answer:**

Code Environment is place where you can write, run and execute your code.

A code environment is a standalone and self-contained environment to run Python or R code. Each code environment has its own set of packages. Environments are independent: you can install different packages or different versions of packages in different environments without interaction between them.

**Types of Code environment are –**

1. **Text editor –** Simply notepad where you can start with your coding. You can work with variety of file types. Text editors can be customized with plugins and add-ons.
2. **IDEs –** Integrated Development Environments – IDEs are designed especially for Python. Larger programs and only community editors are free. Designed specifically for python with lots of extra functionality. E.g. Pycharm and Spyder.
3. **Notebook Environments –** It is virtual notebook environment used to literate programming. Its easy for learning. You can see input and output at same place. They support inline, markdown notes, visualizations, video and and other things, etc. E.g. Jupyter Notebook.

**Python IDEs are** – Jupyter, PyCharm, Spyder, IDLE, PyDev, Thonny, Wing, ActivePython, EricPython, Rodeo

**Python Code Editors** – Sublime Text 3, Visual Studio Code, Atom, Vim

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