Day 01

Question: How you can download & install python in your local computer?

Answer: Just click on the link https://www.python.org/downloads/ or search python on the browser by yourself where you will see ***python.org*** site through which you can select setup file according to your operating system and download it. While installing python when you open a setup you will see a option that says ***Add Python x to PATH*** you have to check that box and then click on install now.

Now for the IDE part you can choose between replit or any other online IDE or you can go for visual studio code (mostly recommended)

But if you don't know about what is IDE then here's a short explanation, an IDE is an Integrated Development Environment which allows you to write code and run it. Now visual studio code allows a large variety of languages like Python, Javascript, Java,c++ etc in which you can write the code and run it. Visual studio code also makes debugging very easy which means if you make any mistake inside the code it will show you a red underline there that something is going wrong.

You can install visual studio code from this link: https://code.visualstudio.com/ or you can search ***visual studio code*** by yourself and download it.

For setting up visual studio code for python, here' s a video that I would recommend https://www.youtube.com/watch?v=9o4gDQvVkLU , same you can either search on the youtube by yourself or click on the link to directly go to that video.

Now let's talk about main stuff which is what is programming?

There are many chances that you are probably here because you heard somewhere that coding jobs are high in demand or you are someone who wants to build their own product in the future or you are someone who is just learning for the semester course, well we all have many different reasons but let's get right into it that what is a basically programming? When someone says that "Hey, I'm a programmer" what it really means? Is he a superhero or something? Well, Programming is a way to tell the computer what to do. Just like your parents tell you to study by grabbing a stick, well maybe that's the only way you understand right?, just like that computers also don't understand human language they need some other way to understand what user wants me to do. Computer only understands 0 and 1 which means the binary numbers, if you don't know what is a binary number? Well for now let's just understand this that binary number is a computer language that's what computer understands just like you and me understand the language "***English***". So, Programming language is a way to interact or talk to the computer.

Yesterday, a guy who is currently doing mechanical engineering from Pakistan. He asked me this question that "***What would be your suggestion if someone wants to learn coding"*** and I replied that "***For absolute beginners, I would recommend Python always because personally that was my first ever language and because of its easy syntax, how much bigger problems you can solve you have no idea. So If you are a beginner you can for sure go for python.***" Well, Zain I'm not a beginner I just want to

excel in the field of data science and ai, then my friend you can also go for python. But I'm just saying that if someone has even zero knowledge about coding, he/she can start from python.

Python is dynamically typed, meaning variables do not require explicit type declarations, and their types can change at runtime. This provides flexibility but can lead to runtime errors if types are misused. It is a general purpose programming language that supports object oriented programming approach as well as functional programming approach. Well what did I just said if makes nothing sense to you then it is completely fine because that what you are going to learn in 100 days of code the ultimate python course. Pheww!

Python is a high-level programming language, meaning it is designed to be easy to read and write, abstracting complex details like memory management. It allows developers to focus on logic rather than low-level hardware operations. You can also say that it is a language that is closer to English language and we can write codes efficiently.

It is a platform independent which means if you wrote some code in windows, well guess what? You can easily run it in linux also in Mac.

Python is an open-source language meaning ***It is freeeeeeeeeeeeeeeeeeee.***

What you can do with python? Well you already read about that from **Harry (Day 01) > Tutorial.md** , If not then I would recommend to check that out, you can open that file in visual studio code and press

Ctrl + Shift + v

Which will open that markdown file in a preview mode where you can easily read it, But Zain what the hell is this command and what is even that markdown? Well Markdown is a lightweight markup language used for formatting text using simple syntax, making it easy to write and read. It is commonly used for documentation, README files, and writing on platforms like GitHub and Stack Overflow. If you didn't understood it, well for now you can understand markdown as a little sister of MS Word.

Now you can write **python** in the command prompt or powershell in windows and **python3** in MAC Terminal. Same goes for linux you can write **python** in the terminal. Now when you write it down and press enter you will see a python repl in the terminal. Now what is repl? Repl means Read evaluate print loop in which you can write a python code which will execute ***Line by line*** Why I said that in bold+italic mode? Well for now remember this, whenever you are going to run your python file, it will execute line by line. Not all at once.

Now these notes are only to give you an extra knowledge If you are not getting any then you can skip my notes.