

30/10/25

MLP daily notes

1) What is Python and why is it called an interpreted language?

Python is a high-level general-purpose programming language known for its readability & simplicity. It is called an interpreted language because Python code is executed line-by-line by the Python interpreter rather than being compiled into machine code before execution. This allows for quick testing & debugging but can make execution slower than compiled language.

2) What are the key features of Python that make it popular for beginners & professionals?

- * Easy to learn & read - clean English-like syntax.
- * Interpreted & dynamically typed no need for explicit variable declarations.
- * Extensive standard library supports many tasks (file-handling, math, networking, etc.)
- * Cross-platform - runs on windows, macOS, Linux, etc.

3) What are the difference between Python 2 & Python 3?

Python-3.

- * Print Statement
"Hello."
- * Division
 $5/2 = 2.5$
- * Unicode Support
ASCII by default by default
- * End of support in 2020

Python-2

- * Print
Print("Hello")
- * $5/2 = 2$ (integer (true division))
- * Strings are unicode.
- * Officially ended.
- * Actively maintained.

4) what are Python's applications in real-world projects?

* Python is widely used in:-

- * Web development (Django, flask)
- * Data Science & Machine Learning.
- * (Pandas, numpy, Tensor flows).
- * Automation / Scripting (task, automation, both)
- * Cyber Security & Ethical Hacking.
- * Game development. (Pygame).
- * IoT & Robotics.
- * Desktop & GUI Applications. (graphical user interface).

5) What is PEP 8 & why is it important in Python Programming?

* PEP 8 (Python Enhancement Proposal).

is the official style guide for writing clean, readable Python code it covers. Naming Conventions, indentation, line length, Important, & more.

- * improve code readability & Consistency.
- * makes it easier for teams to collaborate.
- * Considered a best practice in the Python community.

6) Who developed Python and in which year was it released?

Ans * Developer:- "Guido van Rossum"

* first released : 1991

Guido began developing Python in the late 1980s as a successor to the ABC Programming language.

7) What do you mean by "dynamically typed" in Python?

Python is dynamically typed; meaning you don't need to declare variable types explicitly.

* The interpreter automatically determines the variables' data type at runtime.

Example:-

Python.

X = 10 # int

X = "Hello" # string

8) What is the difference between a compiler & interpreter and which does Python use?

* ASpecy- interpreter.

* Interpreter takes "single" instruction as input.

* "No" intermediate object code is "Generated".

* Conditional control statements are executed "slower".

* Memory Requirement is "less". (Example:- "BASIC")

* Compiler:-

* Compiler takes "entire" program as input.

* Intermediate object code is "Generated".

* Conditional control statements are executed "faster".

* "More" memory requirements

* Program need not be "compiled" every time

Ex:- C - 'Compiler' —.