

* What is Programming?

- Programming is the process of writing instruction that a computer can understand and execute to perform specific tasks.

* Types of Programming.

1. Low Level Languages

- These are close to machine language and hard for humans to read but very fast for computers.

Types: 1. Machine Language : written in binary code (0 & 1s)

Ex: 1001000111

2. Assembly Language : uses short codes called mnemonics instead of binary. Ex: mov A,B

2. High Level Language

- These are easy to read, write and understand (close to human language)
- They must be translated into machine code using compilers or interpreters

Ex: Python, C++, Java, JavaScript.

3. Middle - level languages

- They combine features of both low-level & high-level languages.
- They can access hardware directly but also have simple syntax.

Ex: C language.

4. Domain Specific Languages (DSLs)

- * Languages designed for specific tasks (of) domain
- Ex: SQL, HTML/CSS

* What is Python

- Python is a programming language that allows developers to write clean and logical code for both small & large scale projects.

* Key Features

1. Easy to learn and read - use, simple English like Syntax
2. Interpreted - line by line execution
3. Object oriented - Support classes & objects
4. Dynamically typed - no need to declare variables
5. Extensive libraries - come with large set of inbuilt libraries