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\* What is Programming?

• Programming is the process of writing instructions that a computer can understand and executes 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 (0s & 1s)

Ex: 100100011

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 (or) 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 <sup>Simple</sup> 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