Programming Languages

Programming Languages:

Introcution to Programming

Define programming:
computers don't understand natural languages therefore they have to be instructed with special computer languages before they can perform any task.

The process of developing series of sequence of instruction known as programs to be given to computer so as to perform specific task is known as programming.

PHP

The aims of program design:

1. Performance
2. Maintainability
3. Reliability
4. Storage Saving

Generation of Programming:

Low-Level:

- **1st Generation:** Machine Language
- **2nd Generation:** Assembly Language
  High-Level: (Requires a compiler or interpreter)
- **3rd Generation:** High-Level
- **4th Generation:**

Difference between low-level and high-level languages

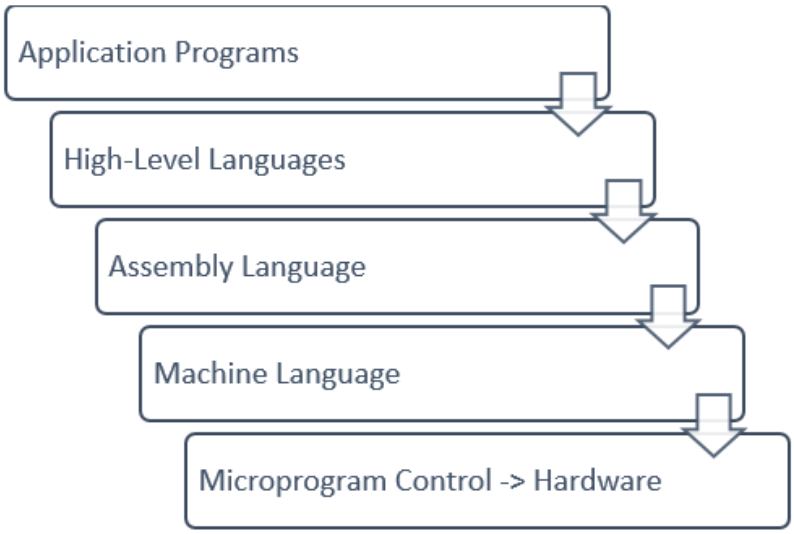
- Low-level **faster** than high-level languages
- Low-level are **memory efficient** than high-level
- Low-level are **difficult** to learn
- Low-level are **machine dependent**
- Low-level languages are **more prone to error** than high level
- Low-level are **difficult** to **debug** and **maintain**
- Low-level languages develop operating system and embedded application
- High-level languages develop applications

Definition of high-level language:
They are similar to natural languages and are programmer friendly and easy to code debug and maintain. They do not interact directly with the hardware. They focus more on complex arithmetic operation. They require compiler and interpreter.

Python, JAVA, C++

Classifications of high-level language:

- Object Oriented Programming
- Procedural Programming
- Structured Programming



- Application Programs:
- High level-language

Assembly language
Machine language
microprogram control
hardware