

# INTRODUCTION TO COMPUTER LANGUAGE

## Question

How do you think we communicate with a computer?

## Answer

A computer cannot understand any commands that you may give in English or in any other language. Computer has its own set of instructions for communication, or what we call computer languages.

## Computer Languages

The user of a computer must be able to communicate with it. That means, he must be able to give the computer commands and understand the output that the computer generates. This is possible due to the invention of computer languages.

### 1] Low Level Languages

Low level languages are the basic computer instructions or better known as **machine codes**. These are very easily understandable by the machine.

The main function of low level languages is to interact with the hardware of the computer. They help in operating, syncing and managing all the hardware and system components of the computer. They handle all the instructions which form the architecture of the hardware systems.

### **a) Machine Language**

**This is one of the most basic low level languages. The language was first developed to interact with the first generation computers. It is written in binary code or machine code, which means it basically comprises of only two digits – 1 and 0.**

### **b) Assembly Language**

**This is the second generation programming language. It is a development on the machine language, where instead of using only numbers, we use English words, names, and symbols. It is the most basic computer language necessary for any processor.**

## **2] High Level Language**

**The important feature about high level languages is that they allow the programmer to write programs for all types of computers and systems. Every instruction in high level language is converted to machine language for the computer to comprehend.**

### **a) Scripting Languages**

**Scripting languages or scripts are essentially programming languages. These languages employ a high level construct which allows it to interpret and execute one command at a time.**

Scripting languages are easier to learn and execute than compiled languages. Some examples are **AppleScript, JavaScript, Pearl** etc.

## **b) Object-Oriented Languages**

These are high level languages that focus on the 'objects' rather than the 'actions'. To accomplish this, the focus will be on data than logic.

The reasoning behind is that the programmers really cares about the object they wish to manipulate rather than the logic needed to manipulate them. Some examples include **Java, C+, C++, Python, Swift** etc.

## **c) Procedural Programming Language**

This is a type of programming language that has well structured steps and complex procedures within its programming to compose a complete program.

It has a systematic order functions and commands to complete a task or a program. **FORTTRAN, ALGOL, BASIC, COBOL** are some examples.