

## **High Level Language**

### **Definition of Terms**

**Program:** A computer program is a sequence of related instruction (command) that tell the computer how to accomplish a specific task. A program can also be defined as a set of instruction that is executed by the CPU.

**Programming:** Programming is the act of writing computer program. A computer program are written by trained and qualify people called programmer.

**Computer language:** Computer language is a language used by, or associated with the computer.

**Computer Programming Language:** A computer programming language is an artificial language that can be used to control the behavior of a machine particularly a computer. Programming language is a means through which programmer communicate with the computer in solving different categories of problems. A set of rules governing how the words in the language are written is called syntax and the meaning associated with each word is called semantic. Markup

languages like HTML are generally not regarded as programming languages, but they are computer language. Programming language foster the communication of programs among programmers and computer; markup language communicate the formatting or structure of document among human and computer.

**High Level Language:** These are programming languages that allow for programs to be written in forms that are readable to human beings.

A high level language is a programming language that, in comparison to low level programming languages, may be more abstract, easier to use, or more portable across platforms.

### **Example of High Level Languages**

PASCAL

BASIC (Beginners All-purpose Symbolic Instruction Code)

C ++

Java

FORTRAN (Formula Translation)

COBOL (Common Business Oriented Language)

PROLOG

ALGOL (Algorithmic language)

APL (A Programming Language)

RPG (Report Program Generator)

Python

### **Classification of High Level Language According to Use**

- a. Scientific: These languages are oriented towards the computational procedures for solving mathematical and statistical problem. Examples are BASIC, FOTRAN. AIGOL, APL.
- b. Business Data Processing: These languages emphasize their capabilities for maintaining data processing procedures and files handling problems. Examples are COBOL and Prolog.
- c. Artificial Intelligence (AI) :
- d. String Processing

e. Object Oriented Programming Language: In OOP, the computer program is divided into objects. Examples:

- C++
- Java

f. General purpose: They are used for general purpose programming. Examples are:

- C
- PASCAL
- PL/I (Programming Language, Version I)

g. Special purpose programming language: This language had a special purpose for which they are developed. Examples are:

- SNOBOL (String-Oriented Symbolic Language)

h. Visual programming language: These are designed to for building window-based applications. Examples are:

- Visual Basic

- Visual Java
- Visual C
  - i. Artificial intelligence (AI) string and List processing
- Lisp (List processing)
- Prolog (program Logic)

### **High Level Languages according to mode of execution**

#### **1. Interpreted**

Interpreted languages are read and are executed directly with no compilation stage. E.g. BASIC, ASP, Lisp and Logo

#### **2. Compiled Language**

Compiled languages are transformed into executable form before running. E.g. PASCAL, COBOL, C, and FORTRAN

### **Features of Some High Level Languages**

<b><u>High Level Language</u></b>	<b><u>Features</u></b>
1. FORTRAN	1. Ideal for scientific application

	2. Uses mathematical notation
2. COBOL	1. Ideal for business application 2. English like
3. BASIC	1. Interactive 2. Easy to learn 3. Uses mathematical notation
4. Pascal	1. Scientifically oriented 2. Focuses on structured programming.
5. C	1. Structured programming 2. General purpose programming 3. Procedural language

### **Advantages of HLL**

1. User friendly
2. Easier to learn
3. They are easier to maintain
4. Machine independent
5. Requires less time to write