LANGUAGE

Human Language: Commonly used to express Feeing and understand other person expression. It can be oral or gestural kind of Communication.

DEFINITION OF COMPUTER LANGUAGES

- A computer languages are the languages by which a user command a computer to work on the algorithm which a user has written to get an output.

TWO TYPES OF COMPUTER LANGUAGES

- Low-level languages
- High-level languages

Lower Level Language

A low-level programming language is a programming language that provides little or no abstraction from a computer's instruction set architecture. It consists of numeric codes i.e 0 & 1. These codes are easily understandable to computer but difficult to human.. A lower level language is used in two generations of computer.

- first generation

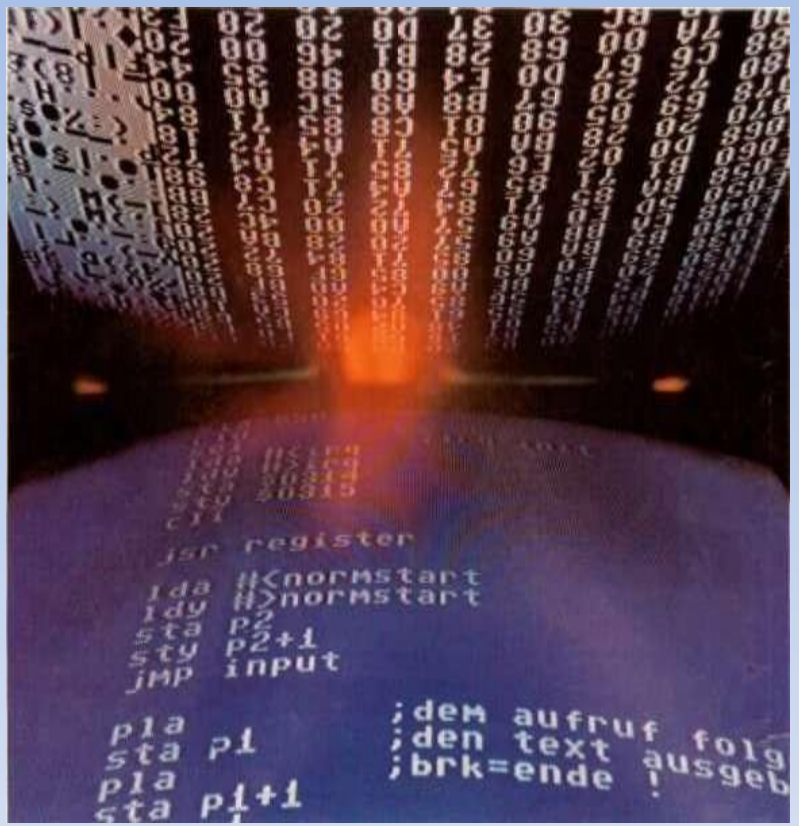
- second generation

First generation languages or 1GL

Represent the very early, primitive computer languages that consisted entirely of 1's and 0's - the actual language that the computer understands (machine language).

Second generation languages (2GL)

Represent a step up from the first generation languages. Allow for the use of symbolic names instead of just numbers. Second generation languages are known as assembly languages. Code written in an assembly language is converted into machine language (1GL).



CHARACTERSTICS OF LOW LEVEL LANGUAGES

- Direct memory management
- Little-to-no abstraction from the hardware
- Register access
- Statements usually have an obvious correspondence with clock cycles
- Superb performance

Advantages

- Computational Speed is very fast.
- Directly understandable by computer.

Disadvantages

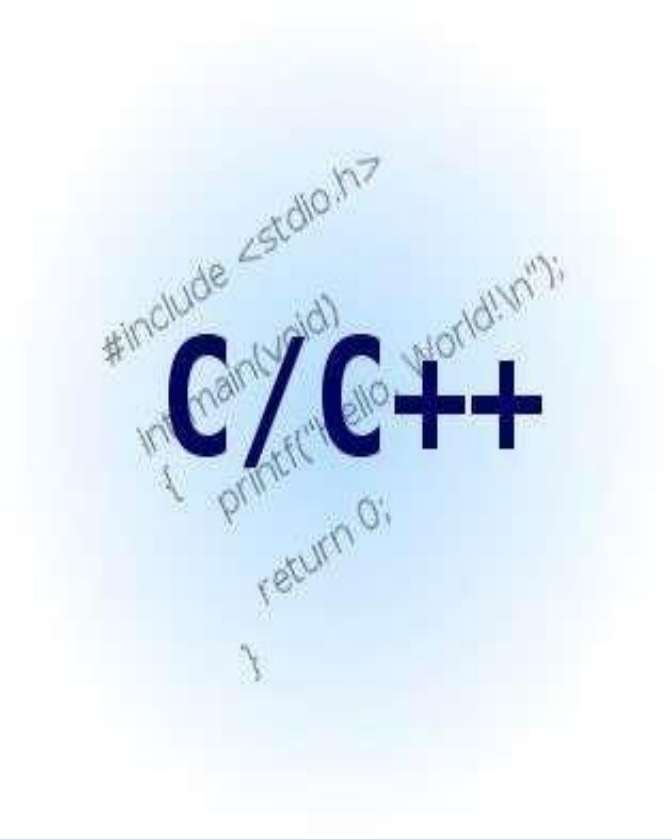
- Development of a program in machine language is very time consuming.
- Error correction is tedious process.

HIGH LEVEL LANGUAGES

- **High-level** programming languages allow the specification of a problem solution in terms closer to those used by human beings. These languages were designed to make programming far easier, less error-prone and to remove the programmer from having to know the details of the internal structure of a particular computer. This language is used in third generation.

Third generation languages (3GL)

With the languages introduced by the third generation of computer programming, words and commands (instead of just symbols and numbers) were being used. These languages therefore, had syntax that was much easier to understand. Third generation languages are known as "high level languages" and include C, C++, Java, and Javascript, among others.



TYPES

- C++
- VISUAL BASIC
- JAVA
- JAVASCRIPT

C++

- **C++ is** statically typed, free-form, multi-paradigm, compiled, general-purpose programming language. It is regarded as a "middle-level" language, as it comprises a combination of both high- level and low-level language features.

Language features

Operators and operator overloading

Templates

Objects

Polymorphism

VISUAL BASIC

- Visual Basic (VB) is the third-generation event-driven programming language and integrated development environment (IDE) from Microsoft for its COM programming model. Visual Basic is relatively easy to learn and use.

CHARACTERSTICS

- Interpreted
- Dynamic constructs (open classes, message-style methods, etc)
- Poor performance
- Concise code
- Flexible syntax (good for internal DSLs)

Advantages

- These are simple to adopt due to their english like structure of statements.
- They are easy to maintain and debug.

Disadvantages

- The Program written in high level language are less efficient as they take more execution time.
- The compiler also consumes some memory as it is required for the translation process.

THANK YOU

Now the House is open for Queries??