Presentation

Programming language

Programming language is any set of rules that converts strings, or graphical program elements in the case of visual programming languages, to various kinds of machine code output. Programming languages are one kind of computer language, and are used in computer programming to implement algorithms.

In simple terms, a programming language is an intermediary between a programmer and a computer

Generation of Programming language

- 1GL
- 2GL
- 3GL
- 4GL
- 5GL

Programming languages have been developed over the year in a phased manner. Each phase of developed has made the programming language more user-friendly, easier to use and more powerful. Each phase of improved made in the development of the programming languages can be referred to as a generation. The programming language in terms of their performance reliability and robustness can be grouped into five different generations

Generation of Programming language

1GL

2GL

3GL

4GL

5GL

The first generation programming language is also called low-level programming language because they were used to program the computer system at a very low level of abstraction. i.e. at the machine level. The machine language also referred to as the native language of the computer system is the first generation programming language. In the machine language, a programmer only deals with a binary number.

Advantages of first generation language

-They are translation free and can be directly executed by the computers.
-The programs written in these languages are executed very speedily and efficiently by the CPU of the computer system.
-The programs written in these languages utilize the memory in an efficient manner because it is possible to keep track of each bit of data.

Generation of Programming language

1GL

2GL

3GL

4GL

5GL

The second generation programming language also belongs to the category of low-level- programming language. The second generation language comprises assembly languages that use the concept of mnemonics for the writing program. In the assembly language, symbolic names are used to represent the opcode and the operand part of the instruction.

Advantages of first generation language

-It is easy to develop understand and modify the program developed in these languages are compared to those developed in the first generation programming language.

-The programs written in these languages are less prone to errors and therefore can be maintained with a great case.

Generation of Programming language

1GL

2GL

3GL

4GL

5GL

The third generation programming languages were designed to overcome the various limitations of the first and second generation programming languages. The languages of the third and later generation are considered as a high-level language because they enable the programmer to concentrate only on the logic of the programs without considering the internal architecture of the computer system.

Advantages of first generation language

- It is easy to develop, learn and understand the program.
-As the program written in these languages are less prone to errors they are easy to maintain.
-The program written in these languages can be developed in very less time as compared to the first and second generation language.

Generation of Programming language

1GL

2GL

3GL

4GL

5GL

The fourth generation programming languages were considered as very high-level programming languages required a lot of time and effort that affected the productivity of a programmer. This generation were designed and developed to reduce the time, cost and effort needed to develop different types of software applications.

Advantages of first generation language

-These programming languages allow the efficient use of data by implementing the various database.

-They require less time, cost and effort to develop different types of software applications.

-The program developed in these languages are highly portable as compared to the programs developed in the languages of other generation.

Generation of Programming language

1GL

2GL

3GL

4GL

5GL

The programming languages of fifth generation mainly focus on constraint programming. The major fields in which the fifth generation programming language are employed are Artificial Intelligence and Artificial Neural Networks

Advantages of first generation language

-These languages can be used to query the database in a fast and efficient manner.
-In this generation of language, the user can communicate with the computer system in a simple and an easy manner.