

PROGRAMMING LANGUAGES IN PROGRESS

Until the mid-1960s, computers were too expensive machines, used only for special tasks, and only performed one task at a time.

The programming languages of this era, like the computers on which they were used, were developed for specific tasks such as scientific computing. Since machines were expensive and slow, machine time was also expensive - so the speed of the program was in the first place.

However, during the 1960s, the price of computers began to fall so that even small companies could afford them; the speed of computers increased and the time came when the creators of programming languages began to think more and more about the convenience of writing programs, and not just the speed of their execution.

At the dawn of computerization, machine language was the only language that humans could not have invented by that time. To save programmers from the harsh machine programming language, high-level languages (i.e. non-machine languages) were created. "Small" (atomic) operations performed directly by machine devices were combined into "larger", high-level operations and whole structures which is much easier and more convenient for a person to work. So programming made a colossal breakthrough: new languages became a kind of connecting bridge between man and the machine language of a computer.

The progress of computer technology determined the process of the emergence of various new sign systems for writing algorithms (programming languages) and the development of the programming process as a whole.

The term programming means the process and art of creating computer programs using special programming languages.

Different programming languages support different programming styles.

The only language directly executed by a processor is machine language (also called "machine code").

At the heart of a programming language is some guiding idea that has a significant impact on the style of the corresponding programs.

Currently, the direction associated with the technology of creating software products is rapidly developing.

The process of a computer is to execute a program, that is, a set of well-defined commands in a well-defined order.

A programming language is a special language in which commands are written to control a computer.

In various programs, there are some quite often used command sequences that correspond to certain procedures for converting information. The effective implementation of such procedures is ensured by their design in the form of special macros and the inclusion of the latter in the programming language available to the programmer.

With the expansion of the fields of application of computer technology, it became necessary to formalize the presentation of the formulation and solution of new classes of problems.

Universal languages have been created for a wide range of tasks: commercial, scientific, modeling, etc.

The emergence of new technical capabilities set the task for system programmers - to create software tools that ensure the operational interaction of a person with a computer, they were called dialogue languages.

Non-procedural languages constitute a group of languages that describe the organization of data processed by fixed algorithms (tabular languages and report generators) and languages for communicating with operating systems.

The invention of a high-level programming language allowed us to communicate with a machine, it seems, even to understand it.

Perhaps it is the Java programming language, a very elegant and beautiful language, that will become the basis for the programming of the future. After all, it is Java that is equipped with the richest class library and at the same time is quite easy to learn.

The Java language, while more complex than shell languages, is immeasurably easier to learn than other programming languages such as C ++. Java differs from C ++ in its lightweight Java syntax.