

2.1. General information about the algorithmic language Fortran. The file structure of the compiler. Compiling the source code

There are two types of translators. Interpreters, for example, QBASIC, broadcasting and performing poststroke source code. Compilers, such as C, PASKAL, FORTRAN. Unit broadcasting compiler - source file, the result of translation - the object code file, which may prove to the state code that is executed.

FORTRAN (FORTRAN) - first translator, which implemented high-level programming language for machines built on the classical scheme von Neumann. FORTRAN was created in the period from 1954 to 1957 by a group of programmers led by John Backus (John Backus) the corporation IBM. By this time, programming was carried out or directly in machine language, symbolic or assembler.

FORTRAN (FORTRAN - from FORmula TRANslator, translator or formulas) - programming language that is used for scientific and engineering calculations. File Source to the algorithmic language FORTRAN is a plain text file that has the extension "FOR" ("F", "F90") for example, prg.for, and compiled by the rules of the programming language FORTRAN. FORTRAN is a compiler that translates the entire text of the file in the file with machine codes. The latter can be brought to the state of the file that is done, for example, prg.exe.

FORTRAN - rigidly standardized language, which is why it is easily transferred to different platforms. There are several international standards FORTRAN language:

- FORTRAN IV, later the basis for FORTRAN 66 (1966);
- FORTRAN 77 (1978) has a lot of improvements: string data type and function to handle this type operators block IF, ELSE IF, ELSE, END IF, operator (metakomanda) inclusion INCLUDE fragment programs and others.
- FORTRAN 90 (1991) - significantly revised standard language. Free format text writing code. There were additional descriptions IMPLICIT NONE, TYPE, ALLOCATABLE, POINTER, TARGET, NAMELIST, PRIVATE, PUBLIC, CONTAINS, INTERFACE, USE, INTENT; Controlling construction DO-END DO, DO-WHILE, CYCLE, SELECT CASE, WHERE; work with dynamic memory (ALLOCATE, DEALLOCATE, NULLIFY); software components MODULE, new built-in functions, primarily for working with arrays, object programming elements.

- FORTRAN 95 (1997) - correction of the previous standard.
- FORTRAN 2003 (2004 g.) Was further support the development of object-oriented programming and enhanced interaction with the operating system.

All are multipass compilers. For example, the process of translation the translator output file Microsoft Fortran 77 v 3.31 is consistent start to the program source file for1.exe, preparing temporary files, programs pas2.exe, which makes them the object module. Then link.exe program should be used to the resulting object file. The result of her work is an executable file.

Such actions should be repeated every time if the source file has changed.