Fortran – history and structure

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In the first part of the presentation our intention is to acquaint audience with the beginnings of the Fortran language from a historical point of view. Fortran was developed by IBM in order to provide a language for scientific calculations and numerical applications that is more effective than assembly languages. Its name that is an abbreviation for "FORmula TRANslator" was derived also from its purpose. The Fortran history began in 1954 and the first final version was released in April, 1957. Fortran evolved alongside with the progress in the compiler theory. In the year of 1966 the FORTRAN '66 standardized version was adopted. Until this day several versions have been released. The Fortran language is still evolving but it is not so popular anymore. However the principles that were designed and developed for Fortran are used in contemporary programming languages. One of the most significant features of Fortran is the variable accuracy of numerical data types that allows to use numerical variables which suit the current algorithm. Due to this fact, Fortran is strong in floating-point operations and very popular in scientific programs.

In the second part of the presentation we will show you an example of the Fortran structure, then we will talk about declarations of variables and arrays, and about the kind parameter and its usage. After that we will say something about numeric expressions, data types of numeric expressions and we will explain the function of loops, do–while statements and conditionals. And last but not least, we will talk about functions, subroutines, subprograms, and Fortran I/O system.