Alexei Chernenko
L.M. Korotenko, scientific supervisor
M.L. Isakova, language adviser
SHEI “National Mining University”, Dnipropetrovsk

C Programming Language

C is a general programming language, well known for its efficiency, economy, and portability. These benefits provide good quality of almost any kind of software based on C language. The use of the C language as a tool allows to obtain fast and compact program. In many cases, programs written in C, comparable in speed with programs written in assembly language. In doing so they have better visibility and easier to maintain. C combines the efficiency and capacity in a relatively small-sized version. C language has its essential features:

C provides a complete set of operators of structured programming. C offers an unusually large set of operations. Many of the operations of the C correspond to machine instructions, and therefore allow a direct translation to machine code. Variety of operations allows them to choose a different set to minimize the resulting code.

In the structure of the C there is a preprocessor that handles text files before compiling. As well as the features in C, there are a lot of flaws. After all, no project is protected from them, including project development and execution of programs written in C.

C language imposes relatively high skill requirements of the programmer using it. When studying C it is desirable to have an idea about the structure and operation of the computer. At least a minimum knowledge of assembly language helps greatly and gives a better understanding of the ideas of C as system programming language. However, as it turned out with C, it is extremely effective and expressive language, suitable for a wide class of problems.

C + + is a universal programming language, made in such a way to make programming more pleasant for serious programmer. Except for minor details of C + + programming language is a superset of C. In addition to the opportunities offered as C, C + + provides a flexible and effective means of defining new types. Using the definition of new types, exactly consistent with the concepts of application, the programmer can separate development of programs on easily controlled parts. This method of programming is often called data abstraction. Information on the types contains in some user-defined objects of types. Such objects are reliable and easy to use in situations where you cannot set its type at compile time. Programming with such objects is often called object-oriented. When used correctly, this method provides a shorter, easier to understand and easier-controlled program.