The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
Use of a static code analysis tool can help detect some possible problems.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Many applications use a mix of several languages in their construction and use.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.