The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
Use of a static code analysis tool can help detect some possible problems.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
However, readability is more than just programming style.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 Code-breaking algorithms have also existed for centuries.