There are many approaches to the Software development process.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
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.  
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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
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.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.