In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams..  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
 Different programming languages support different styles of programming (called programming paradigms).  
Many applications use a mix of several languages in their construction and use.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
Normally the first step in debugging is to attempt to reproduce the problem.  
 Programmable devices have existed for centuries.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Some of these factors include:  
 The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.