These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics..  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
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.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Ideally, the programming language best suited for the task at hand will be selected.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Many applications use a mix of several languages in their construction and use.  
 Different programming languages support different styles of programming (called programming paradigms).  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
 Code-breaking algorithms have also existed for centuries.