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)..  
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.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
Integrated development environments (IDEs) aim to integrate all such help.  
Programming languages are essential for software development.  
 Programmable devices have existed for centuries.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 Different programming languages support different styles of programming (called programming paradigms).  
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.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.