However, readability is more than just programming style.  
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).  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
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.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
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.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 Programmable devices have existed for centuries.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.