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.  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
Techniques like Code refactoring can enhance readability.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
However, readability is more than just programming style.  
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.  
However, readability is more than just programming style.  
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In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
To produce machine code, the source code must either be compiled or transpiled.  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.