To produce machine code, the source code must either be compiled or transpiled.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
However, readability is more than just programming style.  
 Different programming languages support different styles of programming (called programming paradigms).  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
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.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
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.