Many applications use a mix of several languages in their construction and use.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
This is interpreted into machine code.  
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.  
One approach popular for requirements analysis is Use Case analysis.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 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.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Ideally, the programming language best suited for the task at hand will be selected.  
Many applications use a mix of several languages in their construction and use.  
Integrated development environments (IDEs) aim to integrate all such help.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
 Programs were mostly entered using punched cards or paper tape.