Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
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.  
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.  
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.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
Programming languages are essential for software development.  
 Tasks accompanying and related to programming include testing, debugging, source code maintenance, implementation of build systems, and management of derived artifacts, such as the machine code of computer programs.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.