Unreadable code often leads to bugs, inefficiencies, and duplicated code..  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
 Different programming languages support different styles of programming (called programming paradigms).  
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.  
 Code-breaking algorithms have also existed for centuries.  
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.  
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.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 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.  
 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.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.