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 following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
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 text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.