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.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
This is interpreted into machine code.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Integrated development environments (IDEs) aim to integrate all such help.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
 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.  
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.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Relatedly, software engineering combines engineering techniques and principles with software development.