For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash..  
 Code-breaking algorithms have also existed for centuries.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
However, readability is more than just programming style.  
Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language.  
 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.  
There exist a lot of different approaches for each of those tasks.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
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.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.