Code-breaking algorithms have also existed for centuries..  
  
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.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
However, readability is more than just programming style.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
 Programmable devices have existed for centuries.  
Integrated development environments (IDEs) aim to integrate all such help.  
 Programs were mostly entered using punched cards or paper tape.  
Programming languages are essential for software development.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
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.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.