As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices..  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
There are many approaches to the Software development process.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Integrated development environments (IDEs) aim to integrate all such help.  
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.  
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.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Code-breaking algorithms have also existed for centuries.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.