Also, specific user environment and usage history can make it difficult to reproduce the problem..  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
 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.  
 These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
There exist a lot of different approaches for each of those tasks.  
 Code-breaking algorithms have also existed for centuries.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
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.