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..  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Ideally, the programming language best suited for the task at hand will be selected.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
 Code-breaking algorithms have also existed for centuries.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 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.  
 Different programming languages support different styles of programming (called programming paradigms).  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.