Use of a static code analysis tool can help detect some possible problems.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
However, while these might be considered part of the programming process, often the term software development is more likely used for this larger overall process – whereas the terms programming, implementation, and coding tend to be focused on the actual writing of code.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
Integrated development environments (IDEs) aim to integrate all such help.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Scripting and breakpointing is also part of this process.  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
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.  
There are many approaches to the Software development process.