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..  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 It is very difficult to determine what are the most popular modern programming languages.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
One approach popular for requirements analysis is Use Case analysis.  
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.  
  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.