Also, specific user environment and usage history can make it difficult to reproduce the problem..  
Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit.  
There are many approaches to the Software development process.  
 Computer programmers are those who write computer software.  
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.  
 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.  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
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.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
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.  
 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.  
Normally the first step in debugging is to attempt to reproduce the problem.