For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software..  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
 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.  
 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).  
 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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Integrated development environments (IDEs) aim to integrate all such help.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
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.  
 Computer programmers are those who write computer software.  
 It is very difficult to determine what are the most popular modern programming languages.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
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.  
Scripting and breakpointing is also part of this process.  
It is usually easier to code in "high-level" languages than in "low-level" ones.