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..  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 It is very difficult to determine what are the most popular modern programming languages.  
 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).  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
 Programs were mostly entered using punched cards or paper tape.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).