Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment..  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
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.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
 Following a consistent programming style often helps readability.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
 Programmable devices have existed for centuries.  
 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).  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 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.  
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.  
Scripting and breakpointing is also part of this process.