Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
This is interpreted into machine code.  
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.  
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.  
Use of a static code analysis tool can help detect some possible problems.  
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.  
However, while these might be considered part of the programming process, often the term software development is more likely used for this larger overall process – whereas the terms programming, implementation, and coding tend to be focused on the actual writing of code.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
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.  
Many applications use a mix of several languages in their construction and use.