Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Integrated development environments (IDEs) aim to integrate all such help.  
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).  
Programming languages are essential for software development.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
There are many approaches to the Software development process.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Integrated development environments (IDEs) aim to integrate all such help.