To produce machine code, the source code must either be compiled or transpiled.  
Many applications use a mix of several languages in their construction and use.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
Programming languages are essential for software development.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
Many applications use a mix of several languages in their construction and use.  
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.  
Integrated development environments (IDEs) aim to integrate all such help.  
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.  
Integrated development environments (IDEs) aim to integrate all such help.  
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.  
One approach popular for requirements analysis is Use Case analysis.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.