It is usually easier to code in "high-level" languages than in "low-level" ones.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
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.  
Techniques like Code refactoring can enhance readability.  
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.  
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.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
To produce machine code, the source code must either be compiled or transpiled.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
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.