However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
Many applications use a mix of several languages in their construction and use.  
Programming languages are essential for software development.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Many applications use a mix of several languages in their construction and use.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
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.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
Programming languages are essential for software development.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
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.  
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.