A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
Techniques like Code refactoring can enhance readability.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
Programming languages are essential for software development.  
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.  
  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.