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..  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
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.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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.  
However, readability is more than just programming style.  
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.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
 Programmable devices have existed for centuries.  
  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.