Provided the functions in a library follow the appropriate run-time conventions (e..g., method of passing arguments), then these functions may be written in any other language.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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.  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
 Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code.  
There are many approaches to the Software development process.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
 It is very difficult to determine what are the most popular modern programming languages.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).