However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
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.  
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.  
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.  
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.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
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.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
However, while these might be considered part of the programming process, often the term software development is more likely used for this larger overall process – whereas the terms programming, implementation, and coding tend to be focused on the actual writing of code.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 It is very difficult to determine what are the most popular modern programming languages.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.