Following a consistent programming style often helps readability..  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 Programmable devices have existed for centuries.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
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.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 Code-breaking algorithms have also existed for centuries.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Many applications use a mix of several languages in their construction and use.  
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.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.