Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation..  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
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.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
However, readability is more than just programming style.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
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.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
Normally the first step in debugging is to attempt to reproduce the problem.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 It is very difficult to determine what are the most popular modern programming languages.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.