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.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
Integrated development environments (IDEs) aim to integrate all such help.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
 Programmable devices have existed for centuries.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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.  
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 this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
There are many approaches to the Software development process.  
One approach popular for requirements analysis is Use Case analysis.  
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.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit.