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.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Programming languages are essential for software development.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Programming languages are essential for software development.  
Techniques like Code refactoring can enhance readability.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.