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..  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
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.  
 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).  
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.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
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.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.