In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages..  
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.  
 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).  
One approach popular for requirements analysis is Use Case analysis.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
There exist a lot of different approaches for each of those tasks.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
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.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.