In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams..  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Some of these factors include:  
 The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills.  
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.  
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.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
 Following a consistent programming style often helps readability.  
 Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
 Different programming languages support different styles of programming (called programming paradigms).  
Integrated development environments (IDEs) aim to integrate all such help.  
 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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
 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.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.