By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
This is interpreted into machine code.  
Integrated development environments (IDEs) aim to integrate all such help.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
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.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
This is interpreted into machine code.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
 Different programming languages support different styles of programming (called programming paradigms).  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.