As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices..  
There exist a lot of different approaches for each of those tasks.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
Programming languages are essential for software development.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
 These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
 Computer programmers are those who write computer software.  
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.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.