A similar technique used for database design is Entity-Relationship Modeling (ER Modeling)..  
 Different programming languages support different styles of programming (called programming paradigms).  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
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.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
 Programmable devices have existed for centuries.  
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.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
There are many approaches to the Software development process.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
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.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.