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..  
 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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Following a consistent programming style often helps readability.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 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.  
 Computer programmers are those who write computer software.  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Use of a static code analysis tool can help detect some possible problems.  
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.