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..  
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.  
However, readability is more than just programming style.  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 Programs were mostly entered using punched cards or paper tape.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
 Code-breaking algorithms have also existed for centuries.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se.  
One approach popular for requirements analysis is Use Case analysis.  
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.