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.  
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.  
Programming languages are essential for software development.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
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.  
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.  
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.  
One approach popular for requirements analysis is Use Case analysis.  
Techniques like Code refactoring can enhance readability.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
However, readability is more than just programming style.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 Tasks accompanying and related to programming include testing, debugging, source code maintenance, implementation of build systems, and management of derived artifacts, such as the machine code of computer programs.