Use of a static code analysis tool can help detect some possible problems.  
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.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
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.  
One approach popular for requirements analysis is Use Case analysis.  
Many applications use a mix of several languages in their construction and use.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Normally the first step in debugging is to attempt to reproduce the problem.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
However, readability is more than just programming style.  
Integrated development environments (IDEs) aim to integrate all such help.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.