Use of a static code analysis tool can help detect some possible problems..  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
 Following a consistent programming style often helps readability.  
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.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 Different programming languages support different styles of programming (called programming paradigms).  
Normally the first step in debugging is to attempt to reproduce the problem.  
 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.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Ideally, the programming language best suited for the task at hand will be selected.