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.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Programming languages are essential for software development.  
Normally the first step in debugging is to attempt to reproduce the problem.  
There exist a lot of different approaches for each of those tasks.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 Programs were mostly entered using punched cards or paper tape.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.