In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages..  
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.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
Scripting and breakpointing is also part of this process.  
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.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.  
Some of these factors include:  
 The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills.  
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.  
 Programmable devices have existed for centuries.  
There are many approaches to the Software development process.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Techniques like Code refactoring can enhance readability.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.