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.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Techniques like Code refactoring can enhance readability.  
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).  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Use of a static code analysis tool can help detect some possible problems.  
 Code-breaking algorithms have also existed for centuries.  
 Computer programmers are those who write computer software.  
To produce machine code, the source code must either be compiled or transpiled.  
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The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
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.