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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).  
There exist a lot of different approaches for each of those tasks.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
One approach popular for requirements analysis is Use Case analysis.  
Techniques like Code refactoring can enhance readability.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
This is interpreted into machine code.  
One approach popular for requirements analysis is Use Case analysis.  
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.  
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Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
 Computer programmers are those who write computer software.  
Integrated development environments (IDEs) aim to integrate all such help.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.