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).  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
This is interpreted into machine code.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
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This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
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.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 Different programming languages support different styles of programming (called programming paradigms).  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.