Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
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).  
Ideally, the programming language best suited for the task at hand will be selected.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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Compiling takes the source code from a low-level programming language and converts it into machine code.  
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 Programs were mostly entered using punched cards or paper tape.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
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Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.