Compiling takes the source code from a low-level programming language and converts it into machine code.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Techniques like Code refactoring can enhance readability.  
There are many approaches to the Software development process.  
One approach popular for requirements analysis is Use Case analysis.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research.  
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Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
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Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).