Programming languages are essential for software development..  
 Computer programmers are those who write computer software.  
 It is very difficult to determine what are the most popular modern programming languages.  
Use of a static code analysis tool can help detect some possible problems.  
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.  
 Programs were mostly entered using punched cards or paper tape.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
One approach popular for requirements analysis is Use Case analysis.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Many applications use a mix of several languages in their construction and use.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
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.