It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
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.  
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.  
This is interpreted into machine code.  
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Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
To produce machine code, the source code must either be compiled or transpiled.  
The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.