Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit..  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
Programming languages are essential for software development.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Scripting and breakpointing is also part of this process.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
The following properties are among the most important:  
  
 In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.