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..  
Techniques like Code refactoring can enhance readability.  
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.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
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.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.  
One approach popular for requirements analysis is Use Case analysis.  
 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.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.