Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation..  
However, readability is more than just programming style.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
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.  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
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.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Integrated development environments (IDEs) aim to integrate all such help.  
 Following a consistent programming style often helps readability.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
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.  
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.  
 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).