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..  
 Programs were mostly entered using punched cards or paper tape.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
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.  
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.  
Integrated development environments (IDEs) aim to integrate all such help.  
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.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
 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.  
 Programmable devices have existed for centuries.