Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages..  
Integrated development environments (IDEs) aim to integrate all such help.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
  
Programming languages are essential for software development.  
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.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
Techniques like Code refactoring can enhance readability.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 Programs were mostly entered using punched cards or paper tape.