Integrated development environments (IDEs) aim to integrate all such help..  
  
Ideally, the programming language best suited for the task at hand will be selected.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
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.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 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.  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
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.  
 Code-breaking algorithms have also existed for centuries.