Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code..  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
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.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
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.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 Programs were mostly entered using punched cards or paper tape.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 Computer programmers are those who write computer software.