It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages..  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
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.  
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 the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
Scripting and breakpointing is also part of this process.  
Integrated development environments (IDEs) aim to integrate all such help.  
There exist a lot of different approaches for each of those tasks.  
 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.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
 These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
 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).