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..  
 Different programming languages support different styles of programming (called programming paradigms).  
Ideally, the programming language best suited for the task at hand will be selected.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Use of a static code analysis tool can help detect some possible problems.  
 Programs were mostly entered using punched cards or paper tape.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
 It is very difficult to determine what are the most popular modern programming languages.  
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.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
Programming languages are essential for software development.