Whatever the approach to development may be, the final program must satisfy some fundamental properties..  
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.  
 Computer programmers are those who write computer software.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Scripting and breakpointing is also part of this process.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
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.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
Programming languages are essential for software development.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).