However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory..  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
One approach popular for requirements analysis is Use Case analysis.  
There exist a lot of different approaches for each of those tasks.  
  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.