It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages..  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 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.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
 Computer programmers are those who write computer software.  
 Programmable devices have existed for centuries.  
  
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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
There are many approaches to the Software development process.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.