Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
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.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
 Different programming languages support different styles of programming (called programming paradigms).  
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.