These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics..  
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.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
 It is very difficult to determine what are the most popular modern programming languages.  
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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 Programmable devices have existed for centuries.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL).  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.