Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
To produce machine code, the source code must either be compiled or transpiled.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
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.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
To produce machine code, the source code must either be compiled or transpiled.  
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).  
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.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.