High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware..  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Programming languages are essential for software development.  
 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.  
 Different programming languages support different styles of programming (called programming paradigms).  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Scripting and breakpointing is also part of this process.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
  
The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'.  
Many applications use a mix of several languages in their construction and use.  
 It is very difficult to determine what are the most popular modern programming languages.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.