Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications..  
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).  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 Auxiliary tasks accompanying and related to programming include analyzing requirements, testing, debugging (investigating and fixing problems), implementation of build systems, and management of derived artifacts, such as programs' machine code.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
One approach popular for requirements analysis is Use Case analysis.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se.  
 The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.