The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'..  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 It is very difficult to determine what are the most popular modern programming languages.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
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).  
 Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code.  
Integrated development environments (IDEs) aim to integrate all such help.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
 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.  
Programming languages are essential for software development.  
As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices.  
 Following a consistent programming style often helps readability.  
Techniques like Code refactoring can enhance readability.