Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Many applications use a mix of several languages in their construction and use.  
One approach popular for requirements analysis is Use Case analysis.  
However, while these might be considered part of the programming process, often the term software development is more likely used for this larger overall process – whereas the terms programming, implementation, and coding tend to be focused on the actual writing of code.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
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.  
Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.  
This is interpreted into machine code.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.