There are many approaches to the Software development process..  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
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.  
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.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
 Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 Following a consistent programming style often helps readability.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.