Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks..  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
 Computer programmers are those who write computer software.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
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.  
Programming languages are essential for software development.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 Following a consistent programming style often helps readability.  
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.