After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug..  
 Different programming languages support different styles of programming (called programming paradigms).  
It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages.  
There exist a lot of different approaches for each of those tasks.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
 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.  
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 affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
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.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
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.