Normally the first step in debugging is to attempt to reproduce the problem.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
There exist a lot of different approaches for each of those tasks.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
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.  
Techniques like Code refactoring can enhance readability.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
For this purpose, algorithms are classified into orders using so-called Big O notation, which expresses resource use, such as execution time or memory consumption, in terms of the size of an input.  
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.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.