To produce machine code, the source code must either be compiled or transpiled.  
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.  
Normally the first step in debugging is to attempt to reproduce the problem.  
Use of a static code analysis tool can help detect some possible problems.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability.  
Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
To produce machine code, the source code must either be compiled or transpiled.  
Relatedly, software engineering combines engineering techniques and principles with software development.