One approach popular for requirements analysis is Use Case analysis..  
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.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
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.  
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.  
 Different programming languages support different styles of programming (called programming paradigms).  
There exist a lot of different approaches for each of those tasks.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Programming languages are essential for software development.  
Normally the first step in debugging is to attempt to reproduce the problem.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
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.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.