Compiling takes the source code from a low-level programming language and converts it into machine code.  
One approach popular for requirements analysis is Use Case analysis.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
Some of these factors include:  
 The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills.  
To produce machine code, the source code must either be compiled or transpiled.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
There exist a lot of different approaches for each of those tasks.  
For example, COBOL is still strong in corporate data centers often on large mainframe computers, Fortran in engineering applications, scripting languages in Web development, and C in embedded software.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
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.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
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