The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging)..  
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.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
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.  
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 similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
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.  
 It is very difficult to determine what are the most popular modern programming languages.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Following a consistent programming style often helps readability.  
A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it.  
Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years.  
 Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display.