

It is usually easier to code in "high-level" languages than in "low-level" ones. One approach popular for requirements analysis is Use Case analysis. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). Many applications use a mix of several languages in their construction and use. Unreadable code often leads to bugs, inefficiencies, and duplicated code. However, readability is more than just programming style. Techniques like Code refactoring can enhance readability. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. Integrated development environments (IDEs) aim to integrate all such help. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). It affects the aspects of quality above, including portability, usability and most importantly maintainability. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language. 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. FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research. However, readability is more than just programming style. 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. One approach popular for requirements analysis is Use Case analysis. Computer programmers are those who write computer software. 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. However, readability is more than just programming style.