

Normally the first step in debugging is to attempt to reproduce the problem. 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). Techniques like Code refactoring can enhance readability. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Many applications use a mix of several languages in their construction and use. Code-breaking algorithms have also existed for centuries. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. One approach popular for requirements analysis is Use Case analysis. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Programmable devices have existed for centuries. Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. It is very difficult to determine what are the most popular modern programming languages. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. Following a consistent programming style often helps readability. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. It is usually easier to code in "high-level" languages than in "low-level" ones. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. 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. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. Allen Downey, in his book *How To Think Like A Computer Scientist*, writes: Many computer languages provide a mechanism to call functions provided by shared libraries.