However, readability is more than just programming style. 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. Unreadable code often leads to bugs, inefficiencies, and duplicated code. However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory. There exist a lot of different approaches for each of those tasks. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. It is very difficult to determine what are the most popular modern programming languages. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. 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. 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). There exist a lot of different approaches for each of those tasks. Normally the first step in debugging is to attempt to reproduce the problem. Programming languages are essential for software development. One approach popular for requirements analysis is Use Case analysis. Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances. 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. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. The following properties are among the most important: In computer programming, readability refers to the ease with which a human reader can comprehend the purpose, control flow, and operation of source code. 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. Many applications use a mix of several languages in their construction and use. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. 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. There exist a lot of different approaches for each of those tasks.