

Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. Use of a static code analysis tool can help detect some possible problems. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. 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. 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. Programmable devices have existed for centuries. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. Scripting and breakpointing is also part of this process. Whatever the approach to development may be, the final program must satisfy some fundamental properties. 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. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. Also, specific user environment and usage history can make it difficult to reproduce the problem. Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute. Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute. 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. 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. 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. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. Computer programmers are those who write computer software. Also, specific user environment and usage history can make it difficult to reproduce the problem. Integrated development environments (IDEs) aim to integrate all such help. Programming languages are essential for software development. 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. Use of a static code analysis tool can help detect some possible problems.