

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. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). Scripting and breakpointing is also part of this process. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. Computer programmers are those who write computer software. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. Following a consistent programming style often helps readability. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. 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. 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 programmers are those who write computer software. Whatever the approach to development may be, the final program must satisfy some fundamental properties. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. 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. Ideally, the programming language best suited for the task at hand will be selected. Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL). Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. 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 is very difficult to determine what are the most popular modern programming languages. 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. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. 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. Some of these factors include: The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills. Some of these factors include: The presentation aspects of this (such as indents, line breaks, color highlighting, and so on) are often handled by the source code editor, but the content aspects reflect the programmer's talent and skills. It is very difficult to determine what are the most popular modern programming languages.