

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. Programmable devices have existed for centuries. 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. 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 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. 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. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Techniques like Code refactoring can enhance readability. Different programming languages support different styles of programming (called programming paradigms). Programmable devices have existed for centuries. Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code. 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. Computer programmers are those who write computer software. Use of a static code analysis tool can help detect some possible problems. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. One approach popular for requirements analysis is Use Case analysis. Integrated development environments (IDEs) aim to integrate all such help. 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. However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages. Whatever the approach to development may be, the final program must satisfy some fundamental properties. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA).