

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. 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. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. 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. It affects the aspects of quality above, including portability, usability and most importantly maintainability. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics. However, readability is more than just programming style. Whatever the approach to development may be, the final program must satisfy some fundamental properties. One approach popular for requirements analysis is Use Case analysis. The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine. Programmable devices have existed for centuries. It is usually easier to code in "high-level" languages than in "low-level" ones. 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. 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. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). Computer programmers are those who write computer software. Programming languages are essential for software development. Many applications use a mix of several languages in their construction and use. However, readability is more than just programming style. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.