

Following a consistent programming style often helps readability. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. However, readability is more than just programming style. However, Charles Babbage had already written his first program for the Analytical Engine in 1837. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming 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. 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. High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. 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. 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. 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. Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display. Use of a static code analysis tool can help detect some possible problems. Programming languages are essential for software development. Code-breaking algorithms have also existed for centuries. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. Various visual programming languages have also been developed with the intent to resolve readability concerns by adopting non-traditional approaches to code structure and display. 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. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. In 1206, the Arab engineer Al-Jazari invented a programmable drum machine where a musical mechanical automaton could be made to play different rhythms and drum patterns, via pegs and cams.