

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. 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. Many factors, having little or nothing to do with the ability of the computer to efficiently compile and execute the code, contribute to readability. Techniques like Code refactoring can enhance readability. 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. One approach popular for requirements analysis is Use Case analysis. Use of a static code analysis tool can help detect some possible problems. Techniques like Code refactoring can enhance readability. It is very difficult to determine what are the most popular modern 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. Programming languages are essential for software development. 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. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices. 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. For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash. Whatever the approach to development may be, the final program must satisfy some fundamental properties. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. 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. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. Following a consistent programming style often helps readability. As early as the 9th century, a programmable music sequencer was invented by the Persian Banu Musa brothers, who described an automated mechanical flute player in the Book of Ingenious Devices. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. Programs were mostly entered using punched cards or paper tape.