

Different programming languages support different styles of programming (called programming paradigms). The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems. Programs were mostly entered using punched cards or paper tape. Popular modeling techniques include Object-Oriented Analysis and Design (OOAD) and Model-Driven Architecture (MDA). Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. Languages form an approximate spectrum from "low-level" to "high-level"; "low-level" languages are typically more machine-oriented and faster to execute, whereas "high-level" languages are more abstract and easier to use but execute less quickly. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. Programming languages are essential for software development. 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. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. One approach popular for requirements analysis is Use Case analysis. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. 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. The academic field and the engineering practice of computer programming are both largely concerned with discovering and implementing the most efficient algorithms for a given class of problems. One approach popular for requirements analysis is Use Case analysis. Programmable devices have existed for centuries. However, readability is more than just programming style. By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers. 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 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. Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.