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. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. 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. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. FORTRAN, the first widely used high-level language to have a functional implementation, came out in 1957, and many other languages were soon developed—in particular, COBOL aimed at commercial data processing, and Lisp for computer research. 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. Scripting and breakpointing is also part of this process. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. 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. Following a consistent programming style often helps readability. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. It is usually easier to code in "high-level" languages than in "low-level" ones. Integrated development environments (IDEs) aim to integrate all such help. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. Normally the first step in debugging is to attempt to reproduce the problem. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. 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. Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process. 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.