Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic. Many applications use a mix of several languages in their construction and use. Many programmers use forms of Agile software development where the various stages of formal software development are more integrated together into short cycles that take a few weeks rather than years. 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. Different programming languages support different styles of programming (called programming paradigms). After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. 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. Unreadable code often leads to bugs, inefficiencies, and duplicated code. 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. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. 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. Programmable devices have existed for centuries. Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages. It is usually easier to code in "high-level" languages than in "low-level" ones. In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages. One approach popular for requirements analysis is Use Case analysis. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. It is very difficult to determine what are the most popular modern programming languages. 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. Computer programmers are those who write computer software. There are many approaches to the Software development process. 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.