Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. A similar technique used for database design is Entity-Relationship Modeling (ER Modeling). Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications. The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. It is very difficult to determine what are the most popular modern programming languages. 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. Many applications use a mix of several languages in their construction and use. 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. 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, readability is more than just programming style. Readability is important because programmers spend the majority of their time reading, trying to understand, reusing and modifying existing source code, rather than writing new source code. 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. 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. Computer programmers are those who write computer software. Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists. The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA. Code-breaking algorithms have also existed for centuries. Scripting and breakpointing is also part of this process. Use of a static code analysis tool can help detect some possible problems. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. It is usually easier to code in "high-level" languages than in "low-level" ones. Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. 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.