Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards. They are the building blocks for all software, from the simplest applications to the most sophisticated ones. It involves designing and implementing algorithms, step-by-step specifications of procedures, by writing code in one or more programming languages. 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. New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation). Techniques like Code refactoring can enhance readability. It is very difficult to determine what are the most popular modern programming languages. The first compiler related tool, the A-0 System, was developed in 1952 by Grace Hopper, who also coined the term 'compiler'. He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm. There are many approaches to the Software development process. Provided the functions in a library follow the appropriate run-time conventions (e.g., method of passing arguments), then these functions may be written in any other language. There exist a lot of different approaches for each of those tasks. 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. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. Ideally, the programming language best suited for the task at hand will be selected. Methods of measuring programming language popularity include: counting the number of job advertisements that mention the language, the number of books sold and courses teaching the language (this overestimates the importance of newer languages), and estimates of the number of existing lines of code written in the language (this underestimates the number of users of business languages such as COBOL). 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. 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. In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks. However, Charles Babbage had already written his first program for the Analytical Engine in 1837. 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. Programmers typically use high-level programming languages that are more easily intelligible to humans than machine code, which is directly executed by the central processing unit. Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.