

However, readability is more than just programming style. Code-breaking algorithms have also existed for centuries. Ideally, the programming language best suited for the task at hand will be selected. 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. 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. There are many approaches to the Software development process. Scripting and breakpointing is also part of this process. 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. Scripting and breakpointing is also part of this process. 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. 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. Scripting and breakpointing is also part of this process. Allen Downey, in his book *How To Think Like A Computer Scientist*, writes: Many computer languages provide a mechanism to call functions provided by shared libraries. Programmable devices have existed for centuries. 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. 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*. Whatever the approach to development may be, the final program must satisfy some fundamental properties. 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. Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. 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. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. 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. Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.