High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware. These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics. Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users. Code-breaking algorithms have also existed for centuries. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. A study found that a few simple readability transformations made code shorter and drastically reduced the time to understand it. Following a consistent programming style often helps readability. This can be a non-trivial task, for example as with parallel processes or some unusual software bugs. Many applications use a mix of several languages in their construction and use. Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation. 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). Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment. When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear. However, readability is more than just programming style. Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation. In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form. In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them. The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging). Computer programmers are those who write computer software. 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. 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. After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug. Programming languages are essential for software development. Normally the first step in debugging is to attempt to reproduce the problem.