Relatedly, software engineering combines engineering techniques and principles with software development.  
There are many approaches to the Software development process.  
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.  
Scripting and breakpointing is also part of this process.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
Trade-offs from this ideal involve finding enough programmers who know the language to build a team, the availability of compilers for that language, and the efficiency with which programs written in a given language execute.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
Text editors were also developed that allowed changes and corrections to be made much more easily than with punched cards.  
Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
Scripting and breakpointing is also part of this process.  
Normally the first step in debugging is to attempt to reproduce the problem.  
To produce machine code, the source code must either be compiled or transpiled.  
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.  
Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a particular programming language, commonly referred to as coding).  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.