Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment..  
Later a control panel (plug board) added to his 1906 Type I Tabulator allowed it to be programmed for different jobs, and by the late 1940s, unit record equipment such as the IBM 602 and IBM 604, were programmed by control panels in a similar way, as were the first electronic computers.  
 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.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
In 1801, the Jacquard loom could produce entirely different weaves by changing the "program" – a series of pasteboard cards with holes punched in them.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Use of a static code analysis tool can help detect some possible problems.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 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.  
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.  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.