Integrated development environments (IDEs) aim to integrate all such help.  
To produce machine code, the source code must either be compiled or transpiled.  
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.  
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.  
Assembly languages were soon developed that let the programmer specify instruction in a text format (e.g., ADD X, TOTAL), with abbreviations for each operation code and meaningful names for specifying addresses.  
Transpiling on the other hand, takes the source-code from a high-level programming language and converts it into bytecode.  
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.  
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The purpose of programming is to find a sequence of instructions that will automate the performance of a task (which can be as complex as an operating system) on a computer, often for solving a given problem.  
One approach popular for requirements analysis is Use Case analysis.  
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.  
There exist a lot of different approaches for each of those tasks.  
 Different programming languages support different styles of programming (called programming paradigms).