Unreadable code often leads to bugs, inefficiencies, and duplicated code..  
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.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
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.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
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.  
 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.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
 Different programming languages support different styles of programming (called programming paradigms).  
 Debugging is a very important task in the software development process since having defects in a program can have significant consequences for its users.  
 Some languages are very popular for particular kinds of applications, while some languages are regularly used to write many different kinds of applications.  
However, because an assembly language is little more than a different notation for a machine language, two machines with different instruction sets also have different assembly languages.