Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks..  
While these are sometimes considered programming, often the term software development is used for this larger overall process – with the terms programming, implementation, and coding reserved for the writing and editing of code per se.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Techniques like Code refactoring can enhance readability.  
By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.  
However, Charles Babbage had already written his first program for the Analytical Engine in 1837.  
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.  
 Different programming languages support different styles of programming (called programming paradigms).  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
 Allen Downey, in his book How To Think Like A Computer Scientist, writes:  
 Many computer languages provide a mechanism to call functions provided by shared libraries.  
 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.  
Expert programmers are familiar with a variety of well-established algorithms and their respective complexities and use this knowledge to choose algorithms that are best suited to the circumstances.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.