There exist a lot of different approaches for each of those tasks..  
Compilers harnessed the power of computers to make programming easier by allowing programmers to specify calculations by entering a formula using infix notation.  
 Different programming languages support different styles of programming (called programming paradigms).  
 Following a consistent programming style often helps readability.  
 Computer programmers are those who write computer software.  
 New languages are generally designed around the syntax of a prior language with new functionality added, (for example C++ adds object-orientation to C, and Java adds memory management and bytecode to C++, but as a result, loses efficiency and the ability for low-level manipulation).  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Ideally, the programming language best suited for the task at hand will be selected.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
When debugging the problem in a GUI, the programmer can try to skip some user interaction from the original problem description and check if remaining actions are sufficient for bugs to appear.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
 In the 1880s, Herman Hollerith invented the concept of storing data in machine-readable form.  
Integrated development environments (IDEs) aim to integrate all such help.  
One approach popular for requirements analysis is Use Case analysis.  
In the 9th century, the Arab mathematician Al-Kindi described a cryptographic algorithm for deciphering encrypted code, in A Manuscript on Deciphering Cryptographic Messages.