Trial-and-error/divide-and-conquer is needed: the programmer will try to remove some parts of the original test case and check if the problem still exists.  
There exist a lot of different approaches for each of those tasks.  
Many applications use a mix of several languages in their construction and use.  
To produce machine code, the source code must either be compiled or transpiled.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
The source code of a program is written in one or more languages that are intelligible to programmers, rather than machine code, which is directly executed by the central processing unit.  
It is usually easier to code in "high-level" languages than in "low-level" ones.  
Ideally, the programming language best suited for the task at hand will be selected.  
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.  
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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
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.  
 Code-breaking algorithms have also existed for centuries.