There are many approaches to the Software development process.  
One approach popular for requirements analysis is Use Case analysis.  
However, while these might be considered part of the programming process, often the term software development is more likely used for this larger overall process – whereas the terms programming, implementation, and coding tend to be focused on the actual writing of code.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Relatedly, software engineering combines engineering techniques and principles with software development.  
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.  
Also, those involved with software development may at times engage in reverse engineering, which is the practice of seeking to understand an existing program so as to re-implement its function in some way.  
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.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
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.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
There exist a lot of different approaches for each of those tasks.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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.  
One approach popular for requirements analysis is Use Case analysis.