Some text editors such as Emacs allow GDB to be invoked through them, to provide a visual environment.  
There exist a lot of different approaches for each of those tasks.  
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.  
One approach popular for requirements analysis is Use Case analysis.  
Normally the first step in debugging is to attempt to reproduce the problem.  
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.  
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.  
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.  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
However, with the concept of the stored-program computer introduced in 1949, both programs and data were stored and manipulated in the same way in computer memory.  
Unreadable code often leads to bugs, inefficiencies, and duplicated code.  
The choice of language used is subject to many considerations, such as company policy, suitability to task, availability of third-party packages, or individual preference.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
 The first step in most formal software development processes is requirements analysis, followed by testing to determine value modeling, implementation, and failure elimination (debugging).  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.