There exist a lot of different approaches for each of those tasks..  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
Use of a static code analysis tool can help detect some possible problems.  
Integrated development environments (IDEs) aim to integrate all such help.  
Proficient programming usually requires expertise in several different subjects, including knowledge of the application domain, details of programming languages and generic code libraries, specialized algorithms, and formal logic.  
Some languages are more prone to some kinds of faults because their specification does not require compilers to perform as much checking as other languages.  
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.  
 Implementation techniques include imperative languages (object-oriented or procedural), functional languages, and logic languages.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 After the bug is reproduced, the input of the program may need to be simplified to make it easier to debug.  
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.  
Programming languages are essential for software development.  
 It is very difficult to determine what are the most popular modern programming languages.  
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.