Programming languages are essential for software development..  
 These compiled languages allow the programmer to write programs in terms that are syntactically richer, and more capable of abstracting the code, making it easy to target varying machine instruction sets via compilation declarations and heuristics.  
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.  
 Following a consistent programming style often helps readability.  
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.  
Sometimes software development is known as software engineering, especially when it employs formal methods or follows an engineering design process.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
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.  
 High-level languages made the process of developing a program simpler and more understandable, and less bound to the underlying hardware.  
 Debugging is often done with IDEs. Standalone debuggers like GDB are also used, and these often provide less of a visual environment, usually using a command line.  
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.  
  
 Computer programming or coding is the composition of sequences of instructions, called programs, that computers can follow to perform tasks.  
 Computer programmers are those who write computer software.  
They are the building blocks for all software, from the simplest applications to the most sophisticated ones.  
 Programs were mostly entered using punched cards or paper tape.