By the late 1960s, data storage devices and computer terminals became inexpensive enough that programs could be created by typing directly into the computers.  
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.  
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.  
Proficient programming thus usually requires expertise in several different subjects, including knowledge of the application domain, specialized algorithms, and formal logic.  
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.  
Compiling takes the source code from a low-level programming language and converts it into machine code.  
This can be a non-trivial task, for example as with parallel processes or some unusual software bugs.  
Their jobs usually involve:  
 Although programming has been presented in the media as a somewhat mathematical subject, some research shows that good programmers have strong skills in natural human languages, and that learning to code is similar to learning a foreign language.  
There exist a lot of different approaches for each of those tasks.  
The Unified Modeling Language (UML) is a notation used for both the OOAD and MDA.  
There are many approaches to the Software development process.  
 Whatever the approach to development may be, the final program must satisfy some fundamental properties.  
 Machine code was the language of early programs, written in the instruction set of the particular machine, often in binary notation.  
 Tasks accompanying and related to programming include testing, debugging, source code maintenance, implementation of build systems, and management of derived artifacts, such as the machine code of computer programs.  
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