It is usually easier to code in "high-level" languages than in "low-level" ones.  
For example, when a bug in a compiler can make it crash when parsing some large source file, a simplification of the test case that results in only few lines from the original source file can be sufficient to reproduce the same crash.  
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.  
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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.  
This is interpreted into machine code.  
Also, specific user environment and usage history can make it difficult to reproduce the problem.  
Scripting and breakpointing is also part of this process.  
It affects the aspects of quality above, including portability, usability and most importantly maintainability.  
Normally the first step in debugging is to attempt to reproduce the problem.  
 The first computer program is generally dated to 1843, when mathematician Ada Lovelace published an algorithm to calculate a sequence of Bernoulli numbers, intended to be carried out by Charles Babbage's Analytical Engine.  
 A similar technique used for database design is Entity-Relationship Modeling (ER Modeling).  
He gave the first description of cryptanalysis by frequency analysis, the earliest code-breaking algorithm.  
 Different programming languages support different styles of programming (called programming paradigms).