

Memory Tools

Memory debugger

“A memory debugger is a programming tool for finding memory leaks and buffer overflows. These are due to bugs related to the allocation and deallocation of dynamic memory. Programs written in languages that have garbage collection, such as managed code, might also need memory debuggers, e.g. for memory leaks due to "living" references in collections.”

https://en.wikipedia.org/wiki/Memory_debugger

Memory leak

“In computer science, a memory leak is a type of resource leak that occurs when a computer program incorrectly manages memory allocations[1] in such a way that memory which is no longer needed is not released. In object-oriented programming, a memory leak may happen when an object is stored in memory but cannot be accessed by the running code.[2] A memory leak has symptoms similar to a number of other problems (see below) and generally can only be diagnosed by a programmer with access to the program's source code.”

https://en.wikipedia.org/wiki/Memory_leak

Buffer overflow

“In computer security and programming, a buffer overflow, or buffer overrun, is an anomaly where a program, while writing data to a buffer, overruns the buffer's boundary and overwrites adjacent memory locations. This is a special case of the violation of memory safety.

Buffer overflows can be triggered by inputs that are designed to execute code, or alter the way the program operates. This may result in erratic program behavior, including memory access errors, incorrect results, a crash, or a breach of system security. Thus, they are the basis of many software vulnerabilities and can be maliciously exploited.”

https://en.wikipedia.org/wiki/Buffer_overflow

List of memory debugging tools

https://en.wikipedia.org/wiki/Memory_debugger#List_of_memory_debugging_tools