

Most ISAs have two levels privilege

1. privileged: can do anything, touch any I/O registers, execute all possible instructions, and so forth; this is for the operating system
2. Unprivileged: for user programs; not allowed to touch other programs' memory, other users' memory, I/O registers, the operating system memory or code, certain instructions (like return from interrupt)

How does unprivileged code do I/O? Using OS subroutines, such as GETC, OUT, PUTS