Invoking a System Call

5) the system call function executes and (possibly returns value by pushing them onto the stack of the interrupted program

prog

stack

user mode

kernel mode

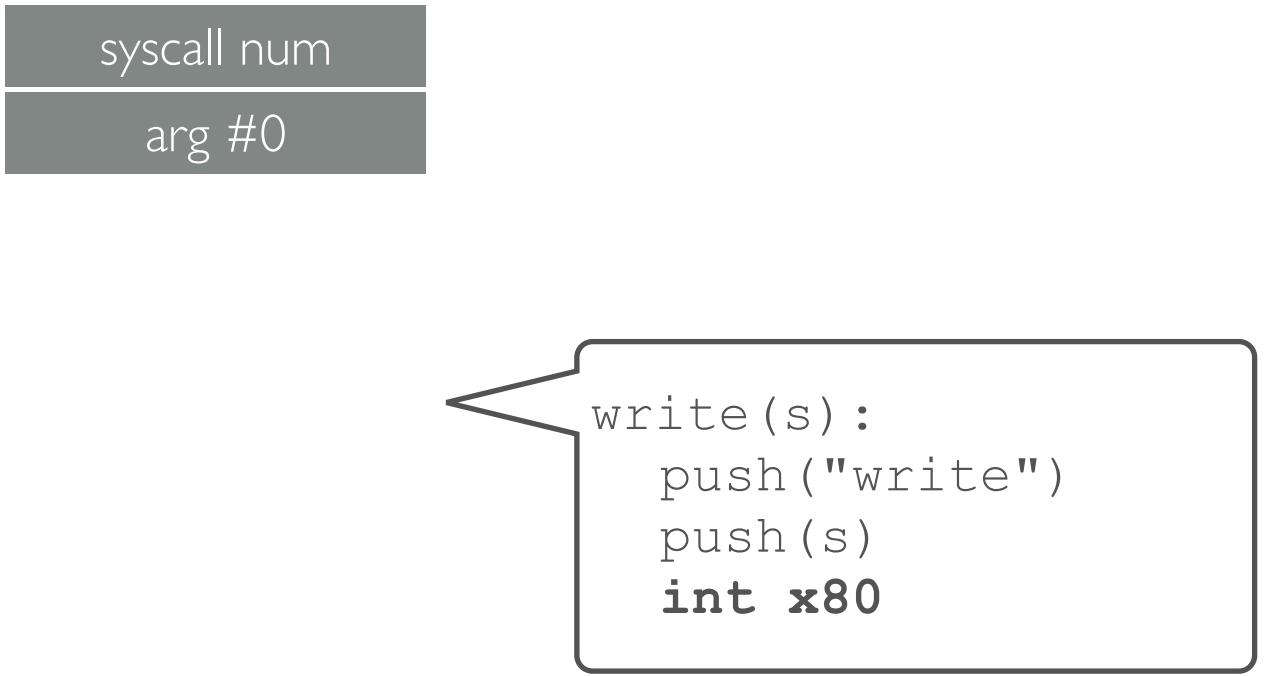

...
write("hello world")

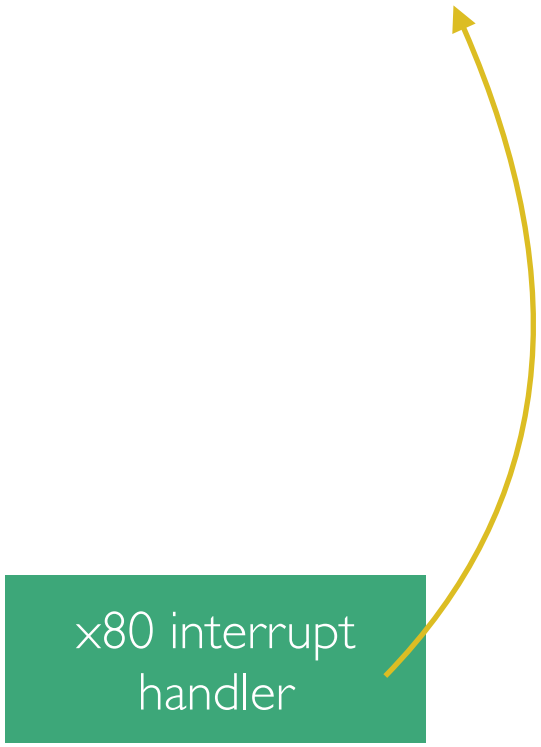

kernel

process

1) the program calls a library function

2) the library function pushes the syscall number and its arguments onto the stack and triggers a software interrupt



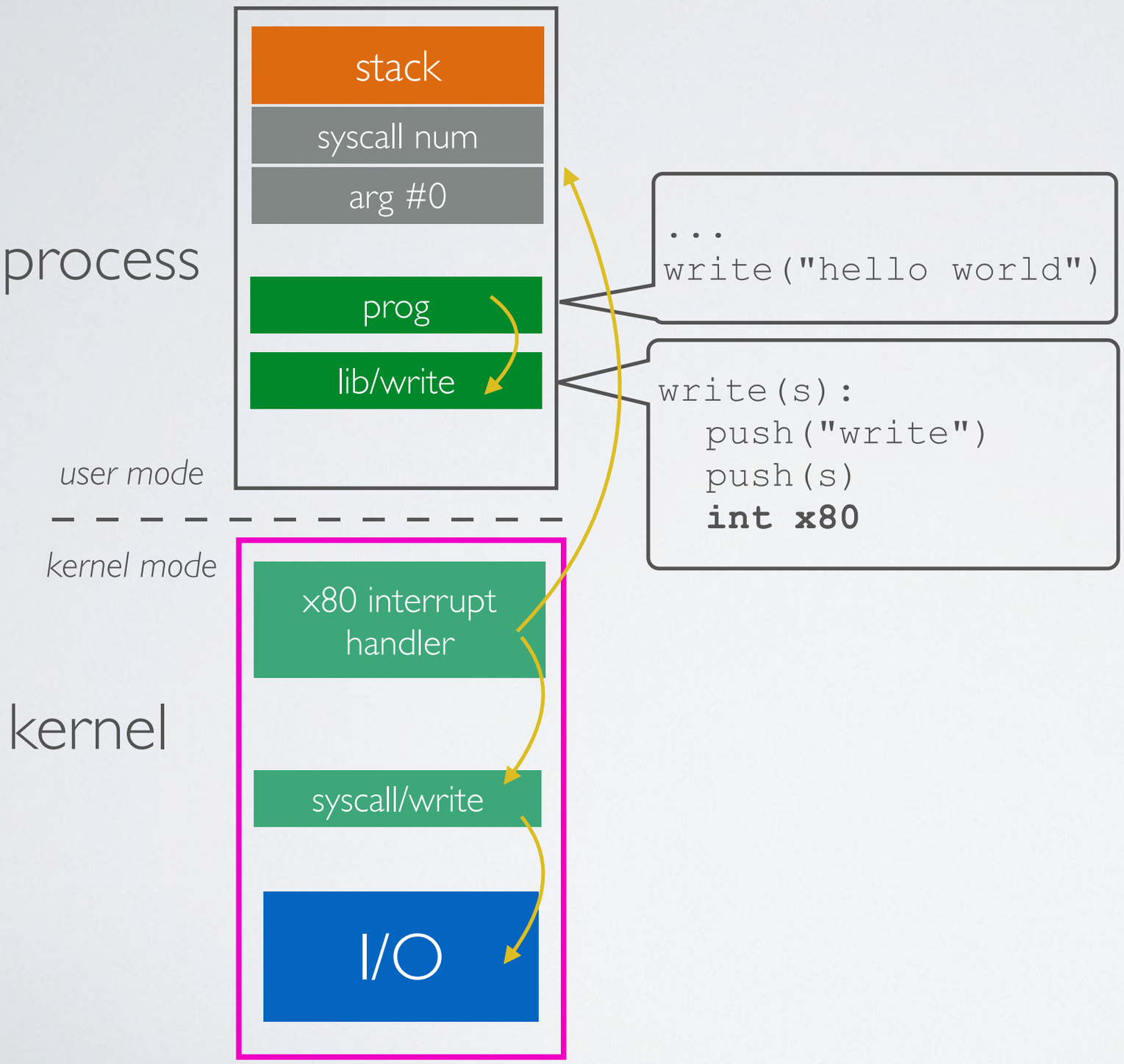


3) the interrupt handler reads the stack of the interrupted program to extract the system call number and the arguments

4) the interrupt handler calls the corresponding kernel system call function


I/O

Invoking a System Call



1) the program calls a library function

2) the library function pushes the syscall number and its arguments onto the stack and triggers a software interrupt

3) the interrupt handler reads the stack of the interrupted program to extract the system call number and the arguments

4) the interrupt handler calls the corresponding kernel system call function

5) the system call function executes and (possibly returns value by pushing them onto the stack of the interrupted program

Process