

File I/O Overview

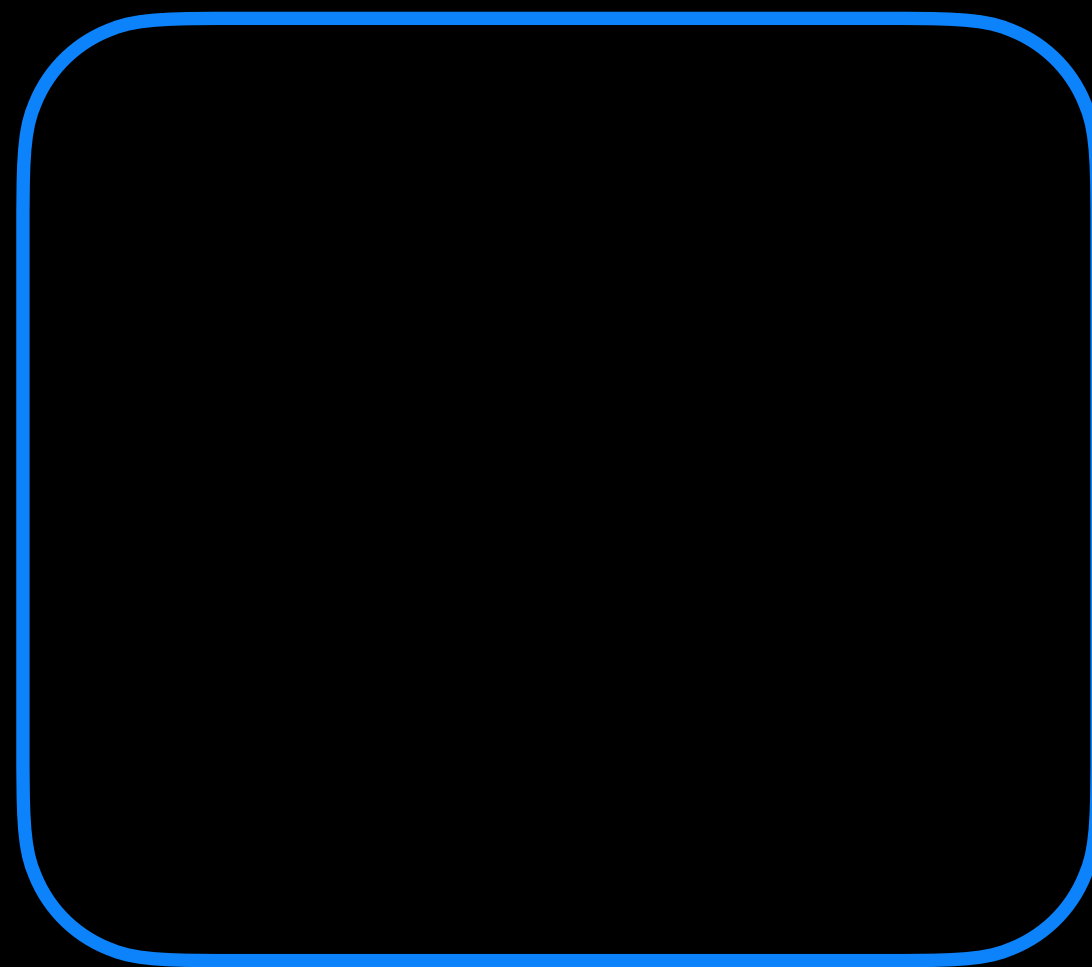
kernel space

user space

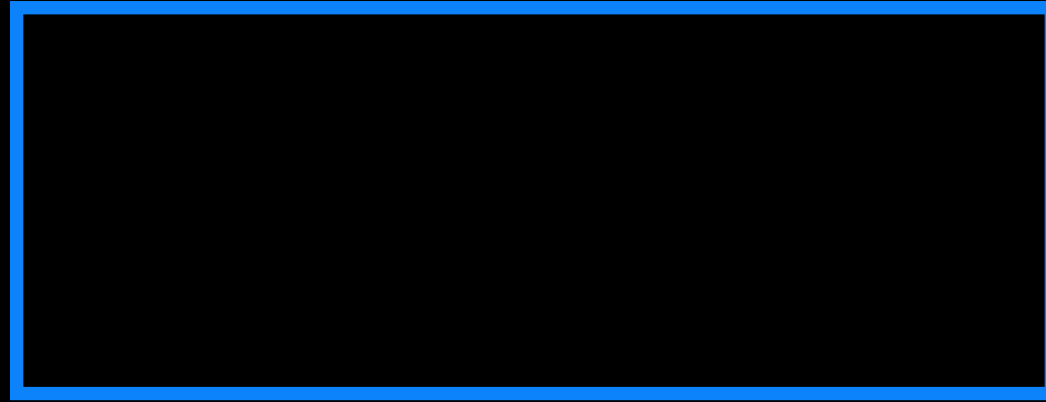
kernel space

user space

process



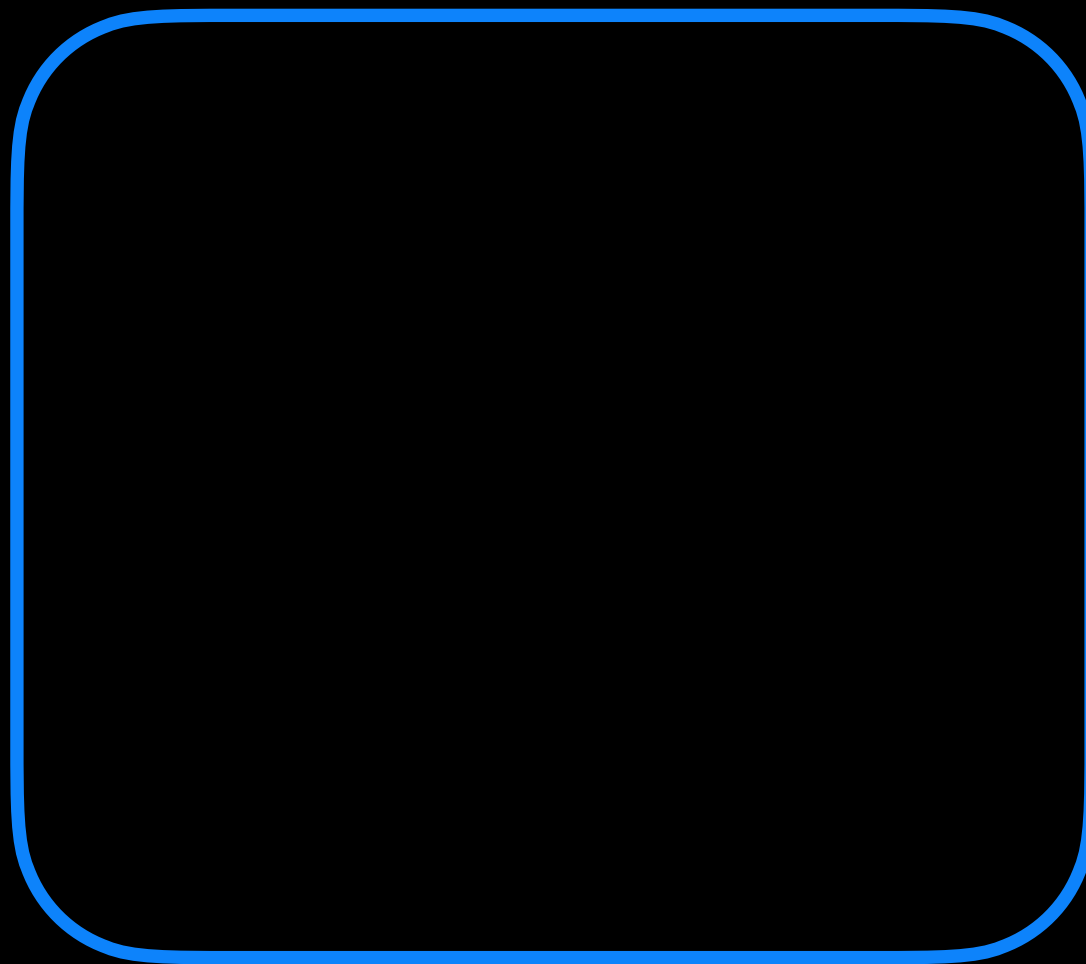
process info

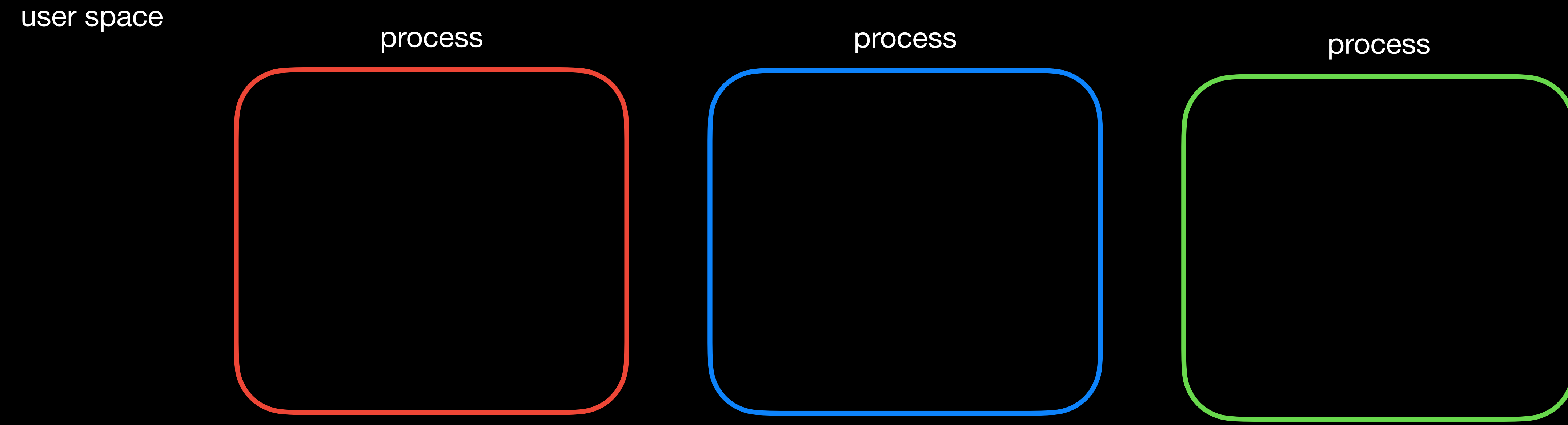
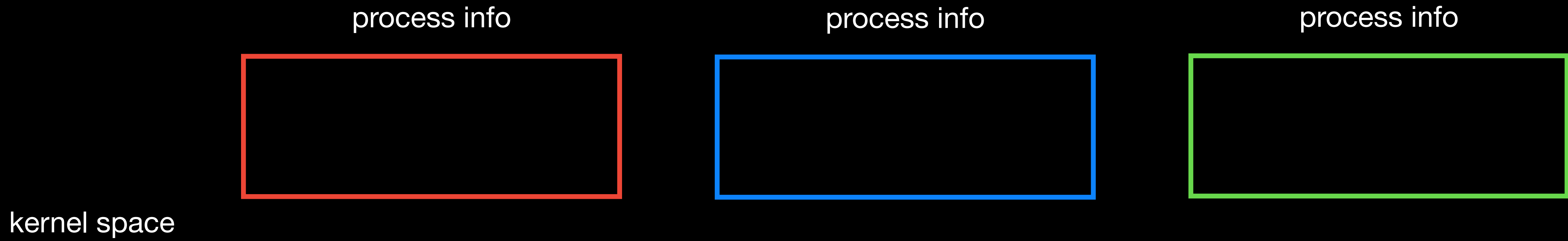


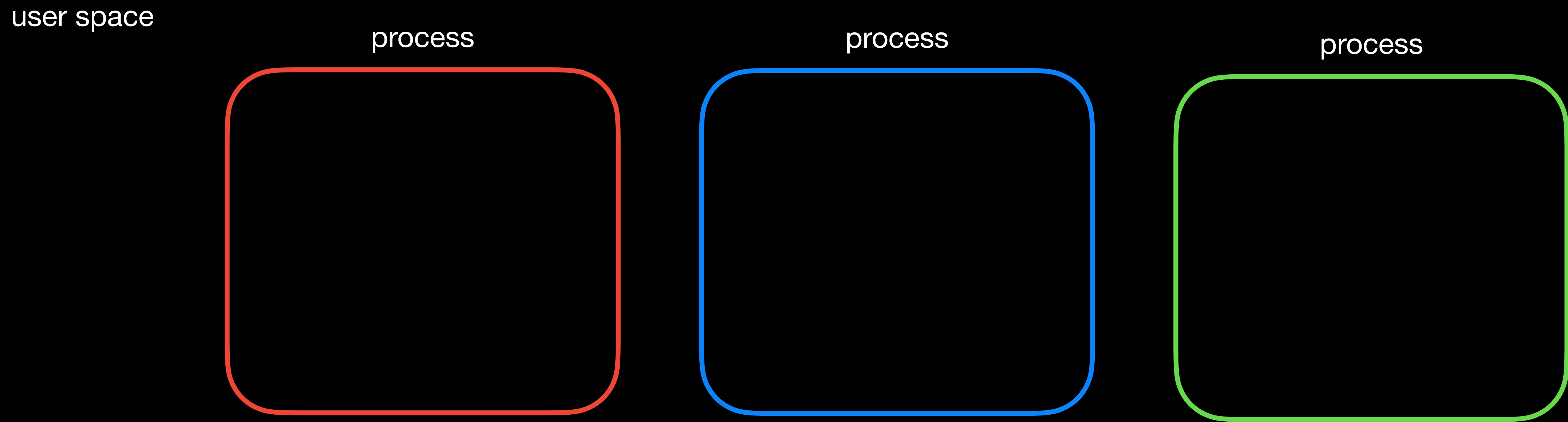
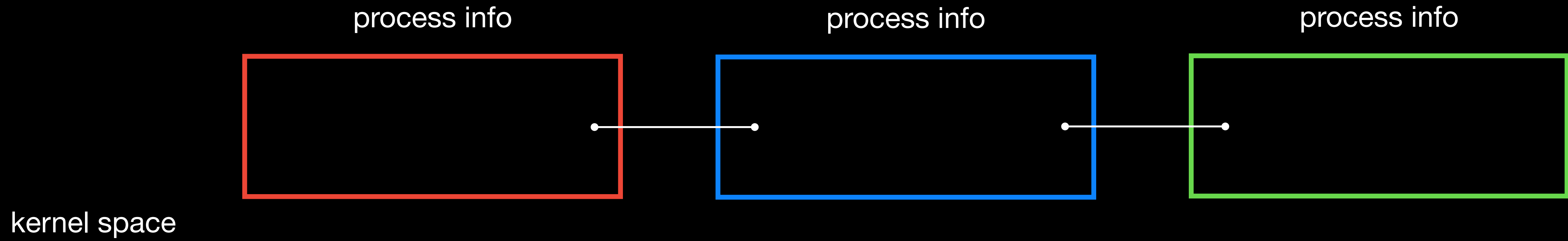
kernel space

user space

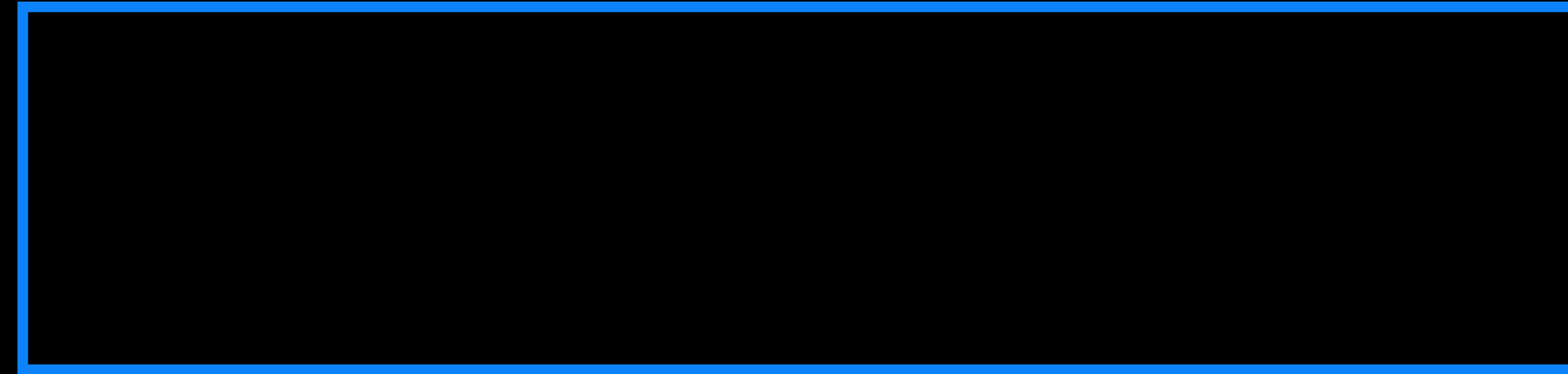
process







process info



kernel space

user space

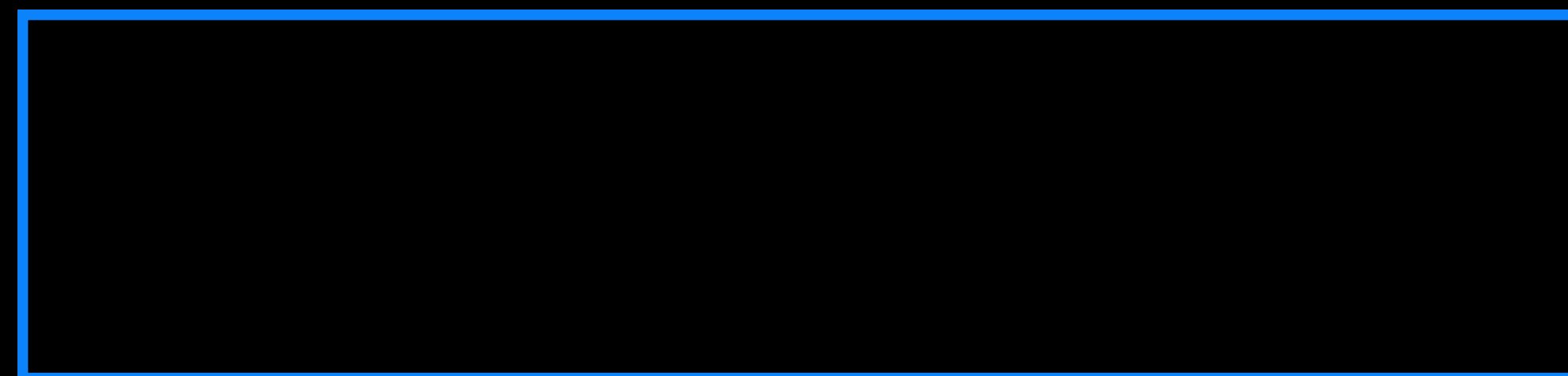
process

```
open("foo.txt", flags)
```

system-wide table of open files

file description		
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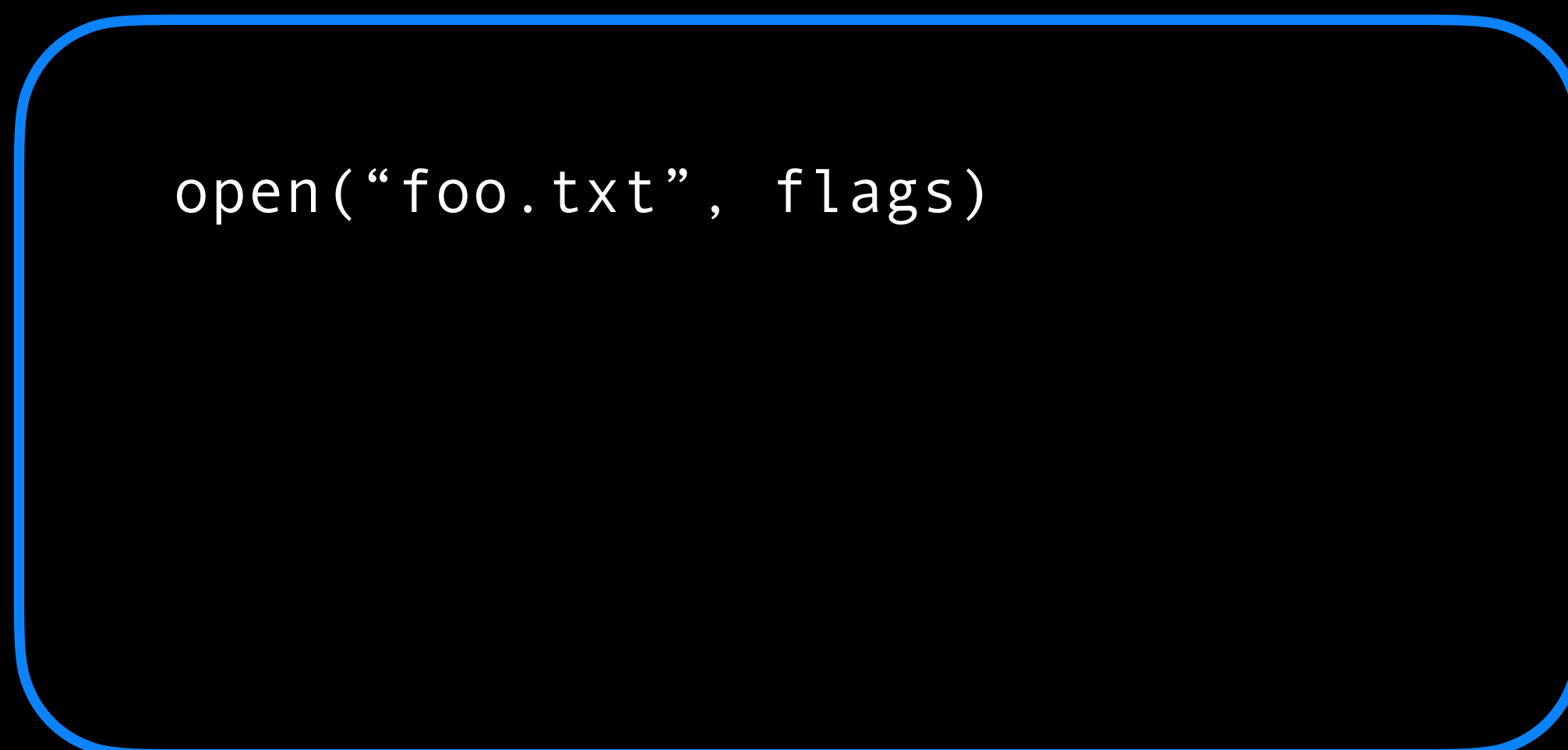
process info



kernel space

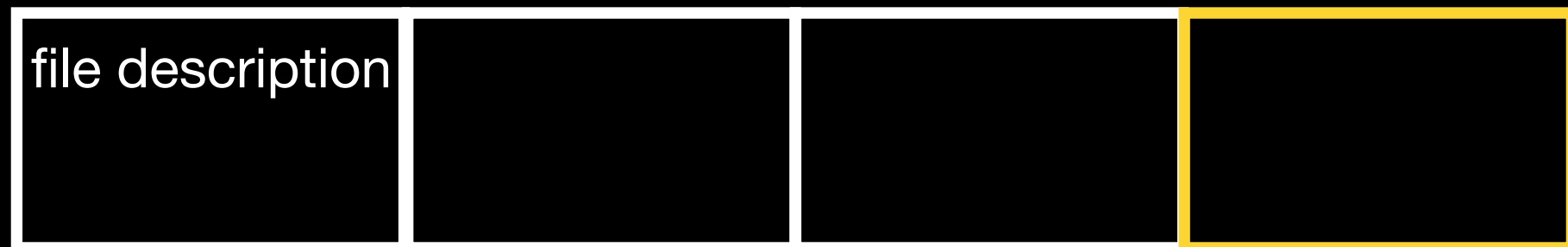
user space

process

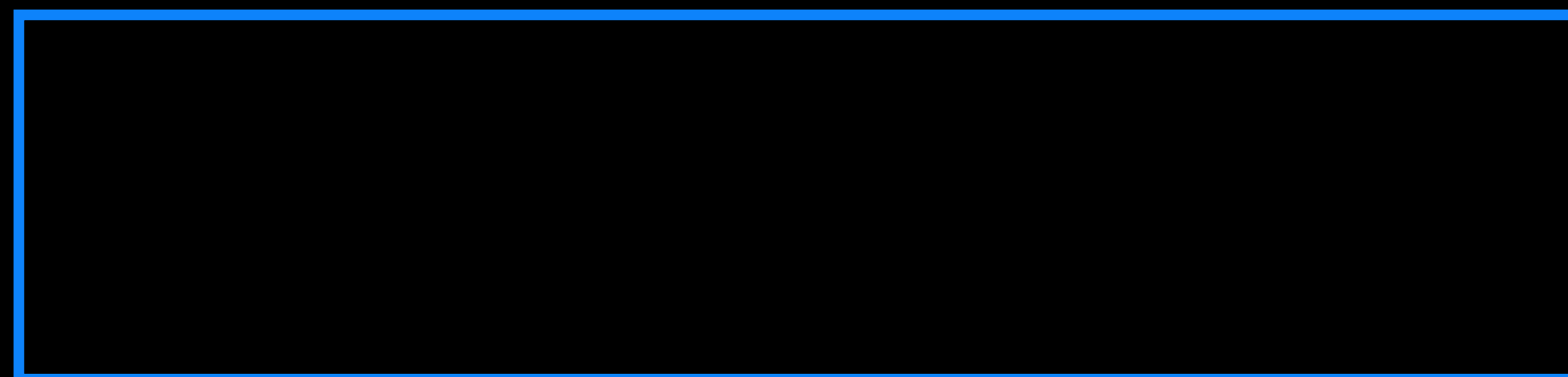


system-wide table of open files

1 add file description for "foo.txt"



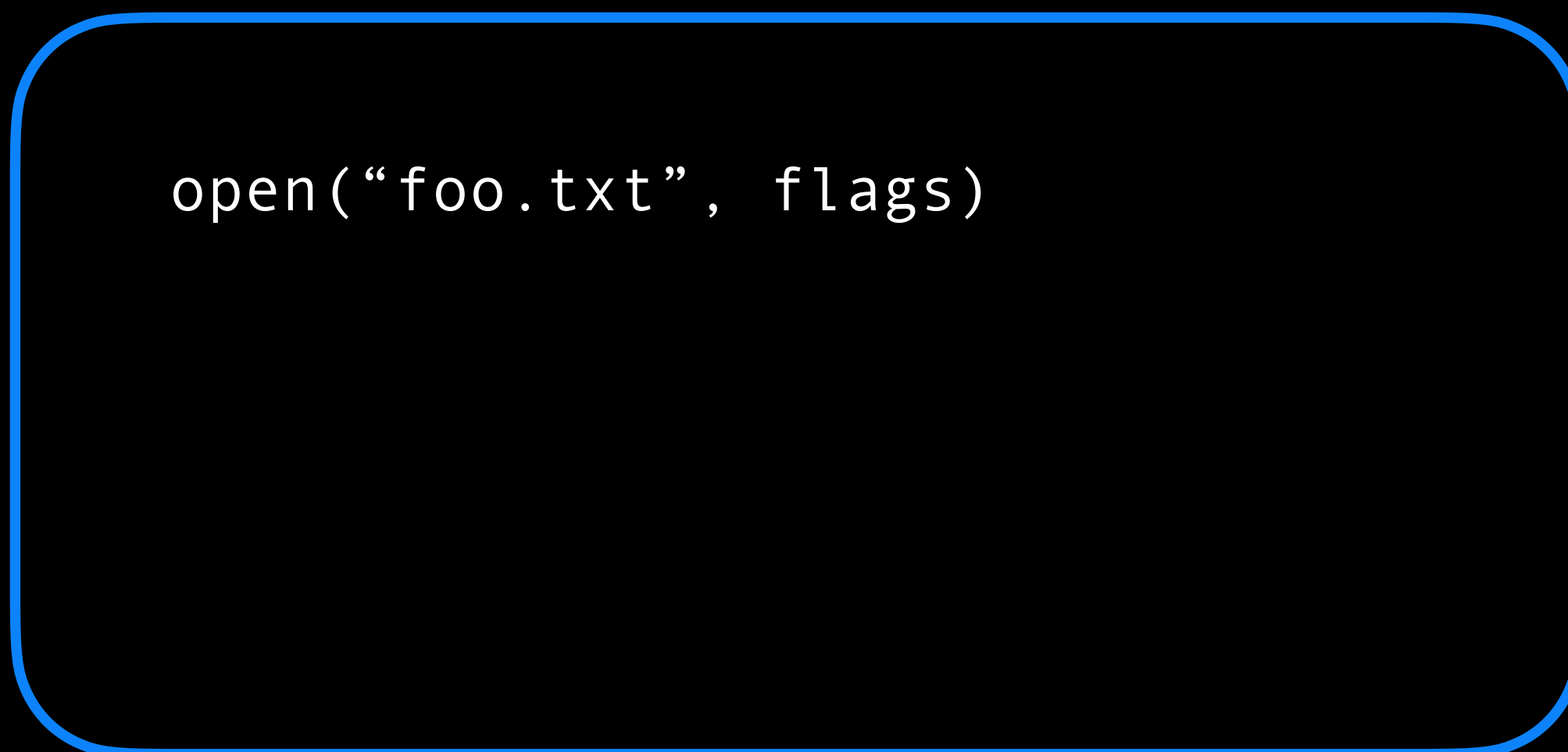
process info



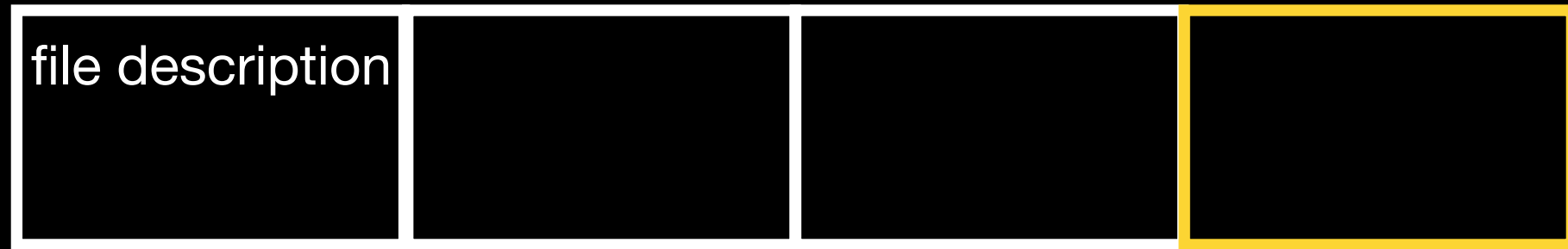
kernel space

user space

process

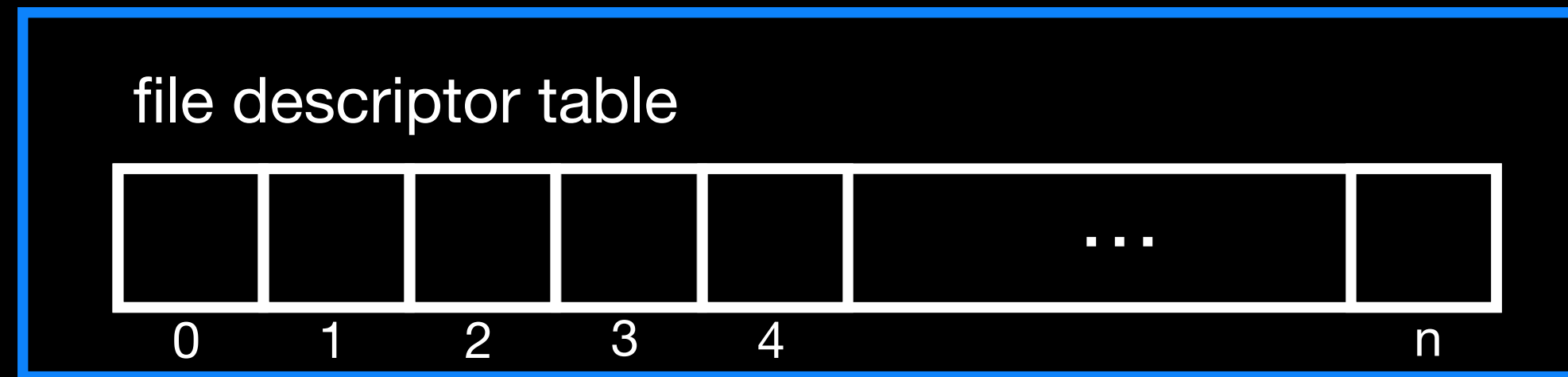


system-wide table of open files



1 add file description for "foo.txt"

process info

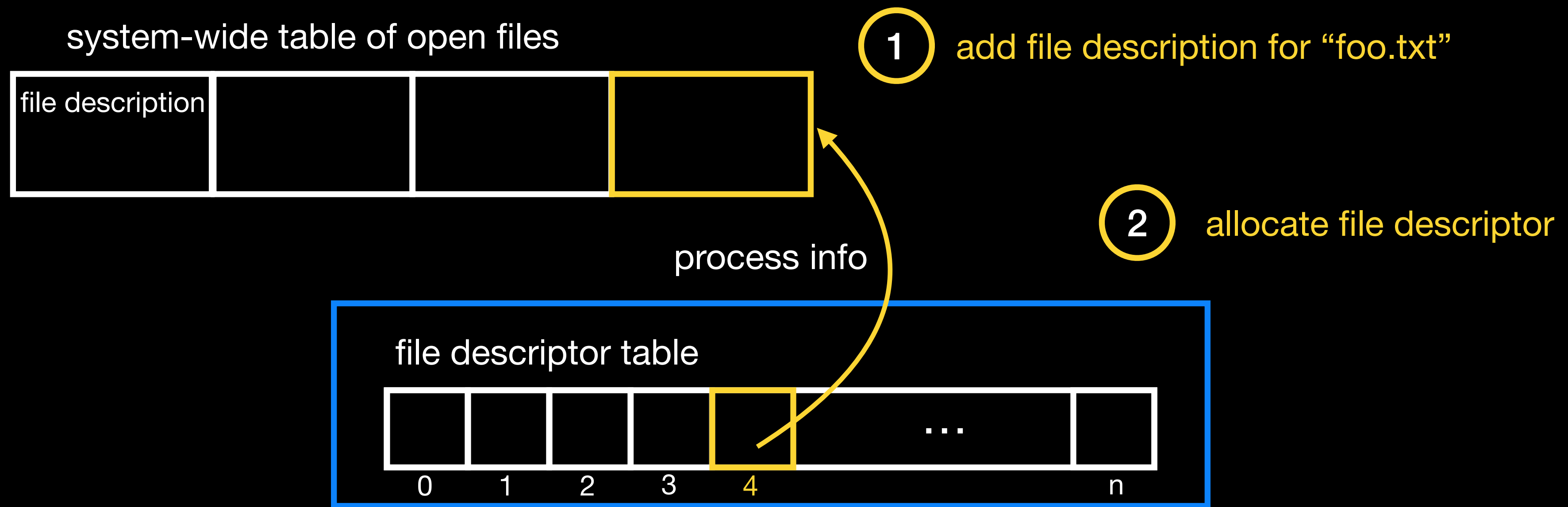


kernel space

user space

process

```
open("foo.txt", flags)
```

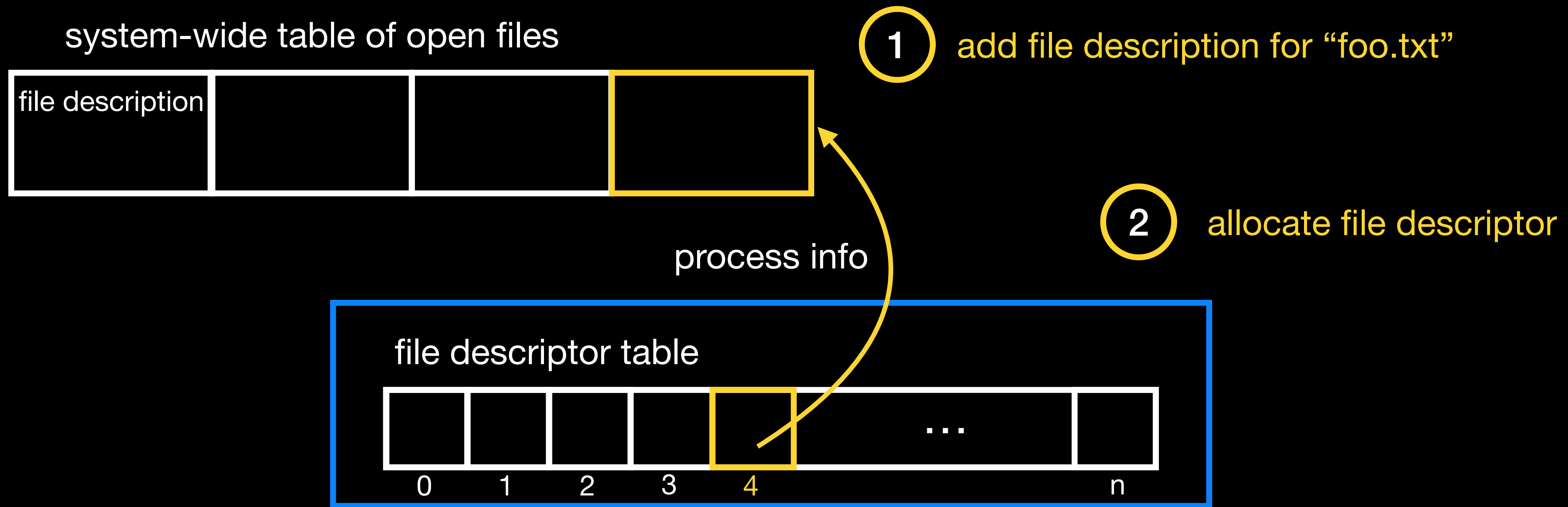


kernel space

user space

process

```
open("foo.txt", flags)
```



kernel space

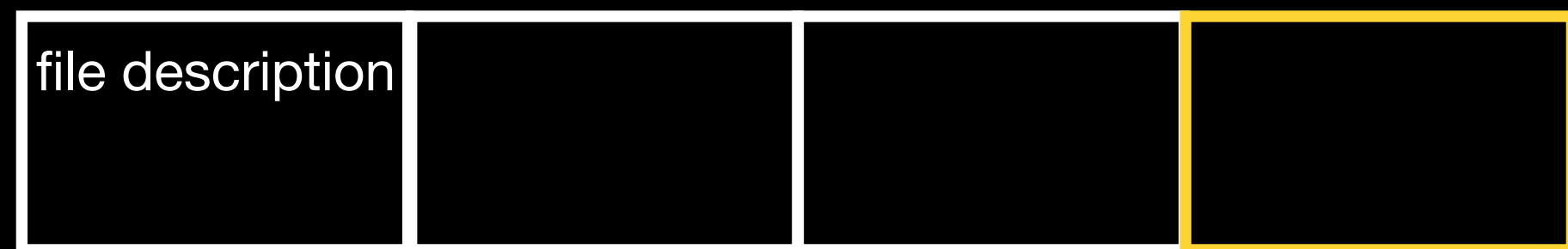
user space

process

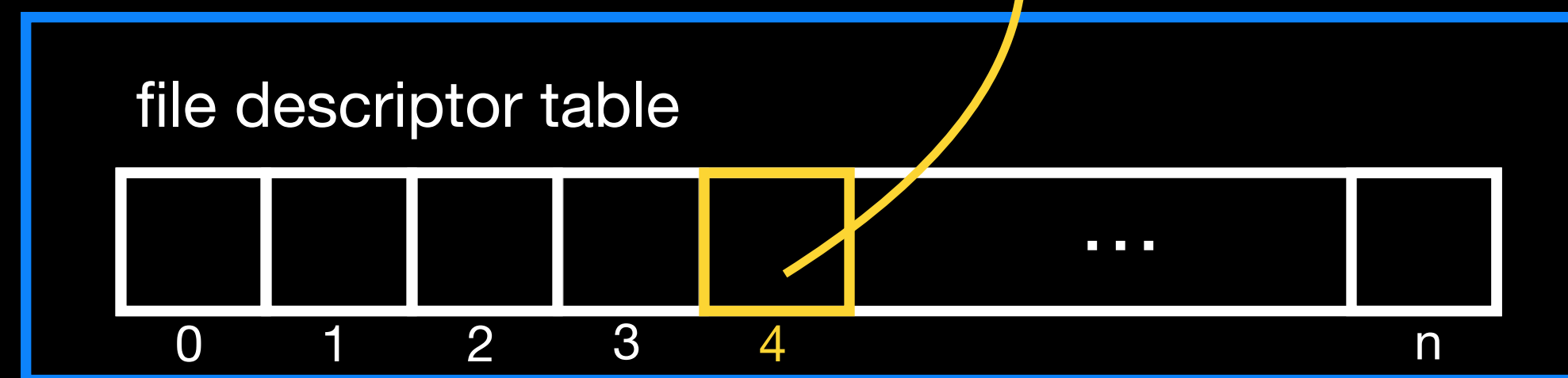
3 return file descriptor

```
open("foo.txt", flags) → 4
```

system-wide table of open files



process info



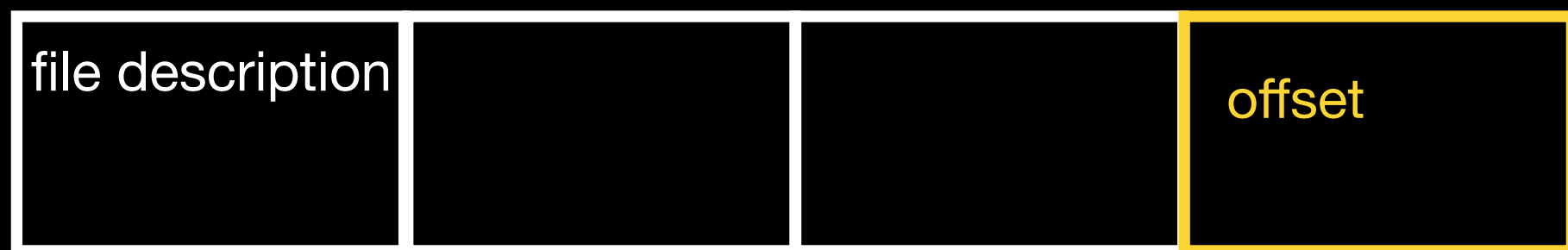
kernel space

user space

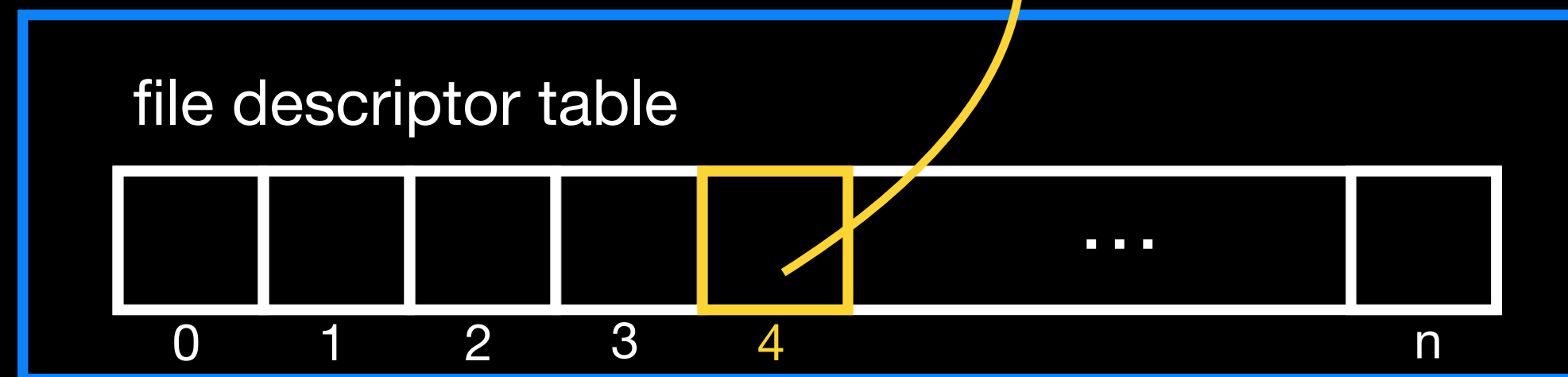
process

```
open("foo.txt", flags) → 4  
read(4, buf, count)
```

system-wide table of open files



process info



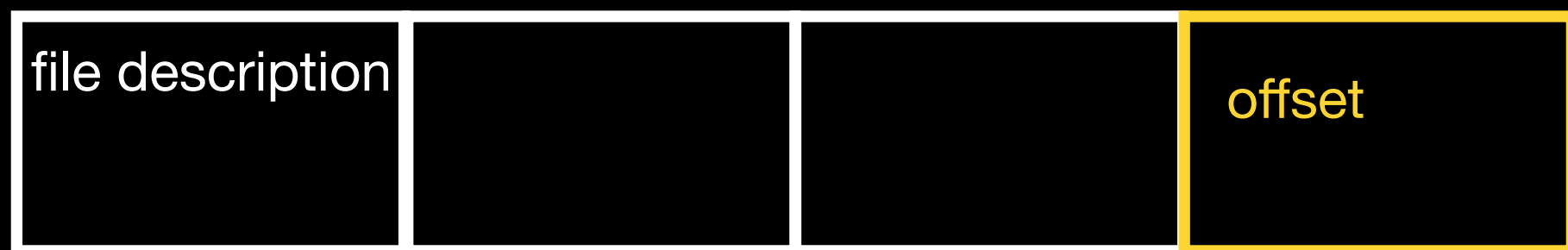
kernel space

user space

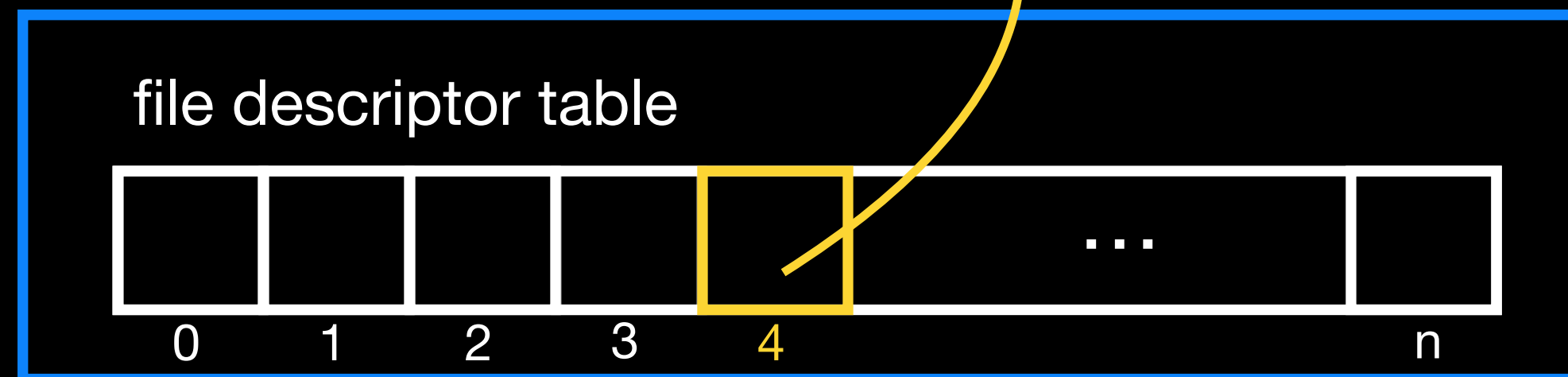
process

```
open("foo.txt", flags) → 4  
read(4, buf, count)
```

system-wide table of open files



process info



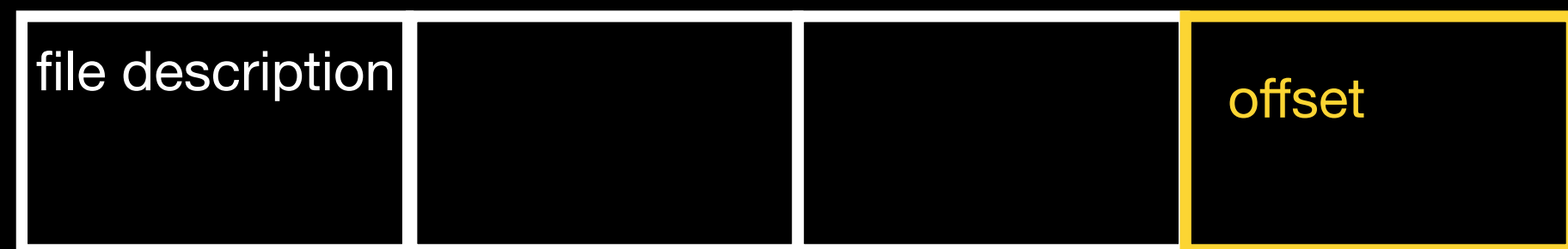
kernel space

user space

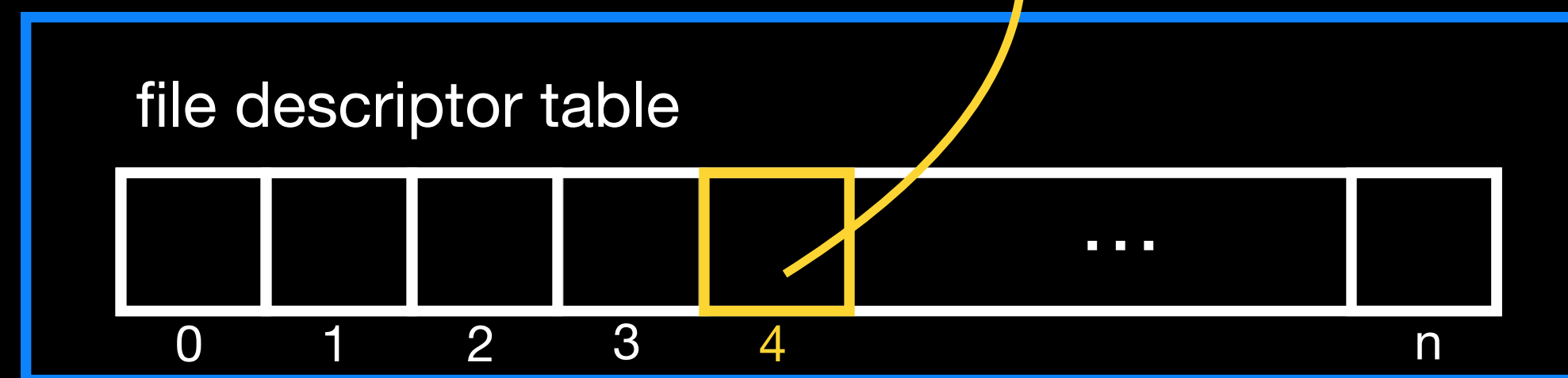
process

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open("foo.txt", flags) → 4  
read(4, buf, count)  
write(4, buf, count)
```

system-wide table of open files



process info



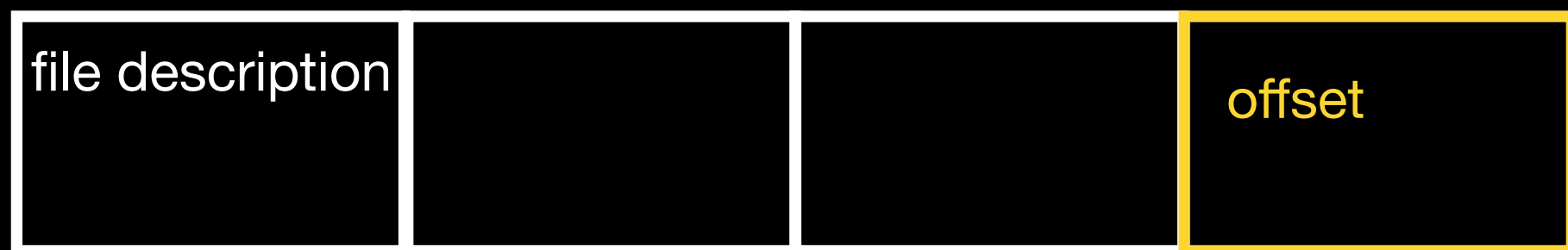
kernel space

user space

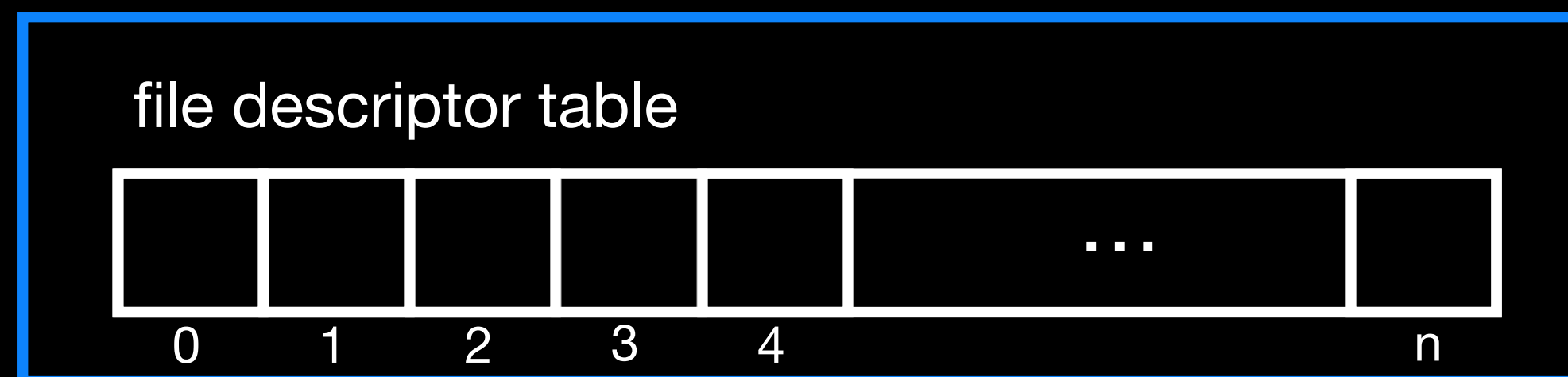
process

```
open("foo.txt", flags) → 4  
read(4, buf, count)  
write(4, buf, count)  
close(4)
```


system-wide table of open files



process info



kernel space

user space

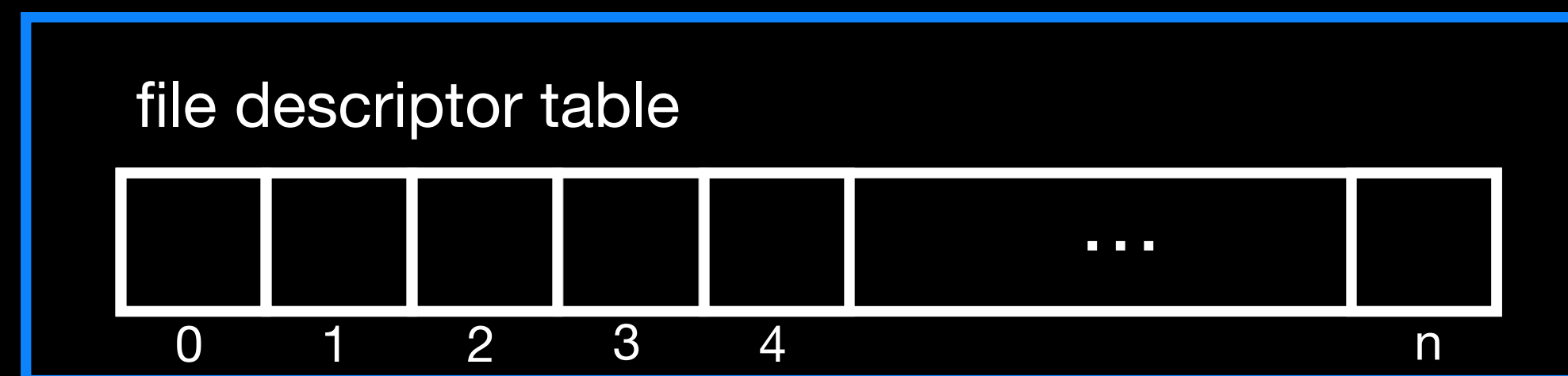
process

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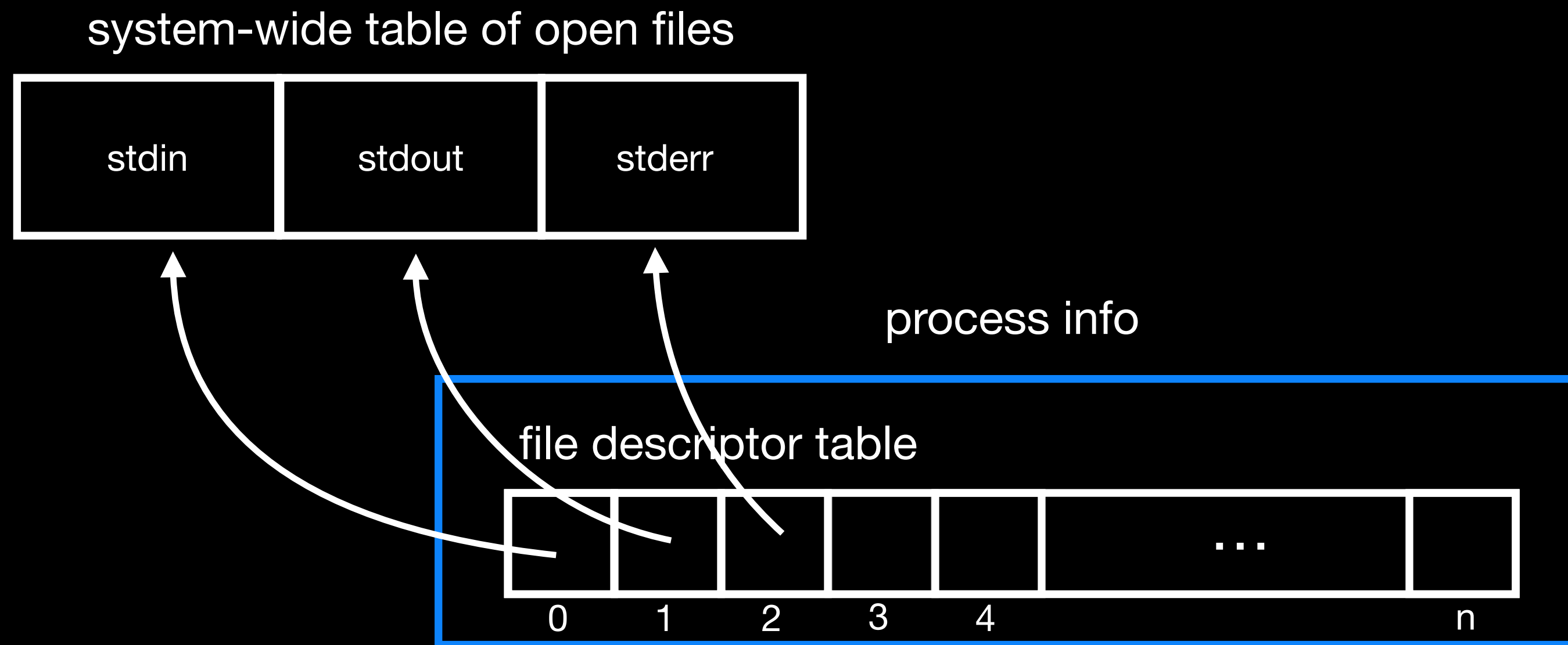


kernel space

user space

process

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open("foo.txt", flags) → 4  
read(4, buf, count)  
write(4, buf, count)  
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close(4)
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