Experiment

1. 在右侧 telnet 连接的终端中装载内核模块，创建 `chrdev`，读取文件

completion.rs U　task.rs　init U　hosts　profile

linux > samples > rust > completion > completion.rs > {} impl file::Operations for RustCompletion > write

```rust
impl file::Operations for RustCompletion {
    type Data = ();

    fn open(_context: &Self::OpenData, _file: &file::File) →
        pr_info!("open is invoked\n");
        Ok(())
    }

    fn write(
            _data: <Self::Data as kernel::PointerWrapper>::Bor
            _file: &file::File,
            _reader: &mut impl kernel::io_buffer::IoBufferRead
            _offset: u64,
        ) → Result<usize> {
        pr_info!("write is invoked\n");
        pr_info!("process {} wakening the readers...\n", Task:

        let a : *mut bindings::completion;
        {
            let compl: Guard<'static, Mutex<Option<…>>, …> = G
            a = compl.deref().as_ref().map_or(null(), |p| p )
        }

        unsafe{ bindings::complete(arg1: a)};


        Ok(_reader.len())
```

问题 2　输出　调试控制台　终端　端口 1　GITLENS

```
[    1.670406] cfg80211: Loaded X.509 cert 'sforshee: 00b28ddf47aef9cea7'
[    1.671772] platform regulatory.0: Direct firmware load for regulatory.db f
[    1.672287] cfg80211: failed to load regulatory.db
[    1.673467] ALSA device list:
[    1.673683]   No soundcards found.
[    1.714198] Freeing unused kernel image (initmem) memory: 1328K
[    1.715282] Write protecting the kernel read-only data: 24576k
[    1.718496] Freeing unused kernel image (text/rodata gap) memory: 2032K
[    1.719573] Freeing unused kernel image (rodata/data gap) memory: 824K
[    1.835747] x86/mm: Checked W+X mappings: passed, no W+X pages found.
[    1.836495] Run /init as init process
[    1.853755] mount (70) used greatest stack depth: 14160 bytes left
[    1.884988] ip (73) used greatest stack depth: 12920 bytes left
[    1.912408] tsc: Refined TSC clocksource calibration: 3494.358 MHz
[    1.912642] clocksource: tsc: mask: 0xffffffffffffffff max_cycles: 0x325e7f
[    1.912909] clocksource: Switched to clocksource tsc
[    2.252938] input: ImExPS/2 Generic Explorer Mouse as /devices/platform/i80
[    3.898942] e1000: eth0 NIC Link is Up 1000 Mbps Full Duplex, Flow Control:
[    3.903708] IPv6: ADDRCONF(NETDEV_CHANGE): eth0: link becomes ready
mount: mounting host_machine:/home/y4ng/project/cicv/cicv-r4l-3-Yang2096/r4l_e
~ # [   48.593773] rust_completion: open is invoked
[   48.594495] rust_completion: read is invoked
[   48.594637] rust_completion: process 83 is going to sleep
```

..initramfs/dev　telnet

```
~ # insmod completion.ko
~ # mknod /dev/cicv c 248 0
~ # cat /dev/cicv
```

2. 在左侧 vscode 终端中写入 device，可看到右侧阻塞住的进程得以继续运行