

```
struct IO FILE {
 int _flags; /* High-order
tdefine _IO_file_flags _flags
 /* The following pointers co
 /* Note: Tk uses the IO re
 char* _IO_read_ptr; /* Curre
 char* IO read end; /* End o
 char* _IO_read_base; /* Sta
 char* IO write base; /* Sta
 char* _IO_write_ptr; /* Cur
 char* _IO_write_end; /* End
 char* _IO_buf_base; /* Start
 char* _IO_buf_end; /* End o
 /* The following fields are
 char * IO save base; /* Poir
 char *_I0_backup_base; /* F
 char *_IO_save_end; /* Point
 struct _IO_marker *_markers;
 struct IO FILE * chain;
 int _fileno;
```

IO_FILE

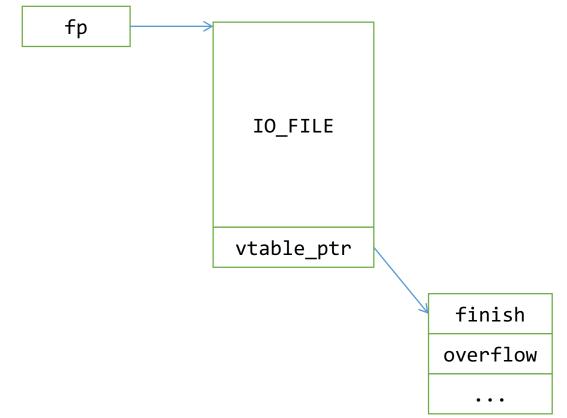
vtable_ptr

finish

overflow

. . .

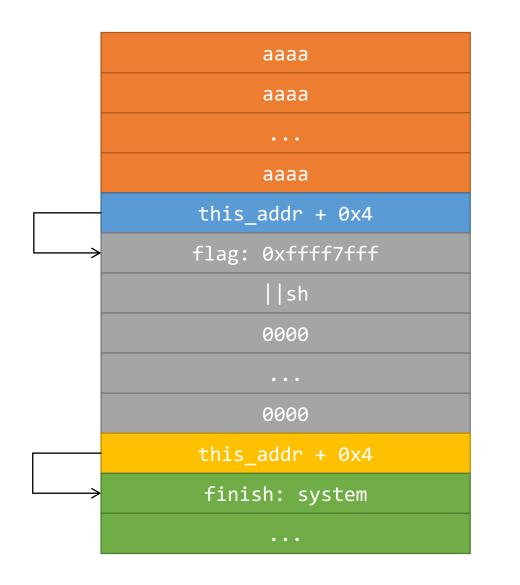
```
struct _IO_jump_t _IO_file_jumps libio_vtable =
 JUMP INIT DUMMY,
 JUMP_INIT(finish, _IO_file_finish),
 JUMP_INIT(overflow, _IO_file_overflow),
 JUMP_INIT(underflow, _IO_file_underflow),
 JUMP INIT(uflow, IO default uflow),
 JUMP INIT(pbackfail, IO default pbackfail),
 JUMP_INIT(xsputn, _IO_file_xsputn),
 JUMP_INIT(xsgetn, _IO_file_xsgetn),
 JUMP_INIT(seekoff, _IO_new_file_seekoff),
 JUMP_INIT(seekpos, _IO_default_seekpos),
 JUMP_INIT(setbuf, _IO_new_file_setbuf),
 JUMP_INIT(sync, _IO_new_file_sync),
 JUMP_INIT(doallocate, _IO_file_doallocate),
 JUMP INIT(read, IO file read),
 JUMP INIT(write, IO new file write),
 JUMP_INIT(seek, _IO_file_seek),
 JUMP_INIT(close, _IO_file_close),
 JUMP INIT(stat, IO file stat),
 JUMP_INIT(showmanyc, _IO_default_showmanyc),
 JUMP_INIT(imbue, _IO_default_imbue)
libc_hidden_data_def (_IO_file_jumps)
```



fclose() 步骤

利用IO_FILE.flag和其他一些东西 如果符合条件,就执行vtable.finish(fp)

这题我没有深究 flag不变就可以执行vtable.finish(fp) 具体作用以后再研究



name

fp

IO_FILE

vtable_ptr

func in vtable

最终执行finish(fp)

等于 system("0xffff7fff||sh")