

CH3 Project2

In this project, you will write a kernel module that uses /proc file system for displaying a task's information in a Linux system.

Be sure to review the programming project in Chap.2 before you begin this project

It can be completed using the Linux virtual machine provided with the textbook

Part I – Writing to the /proc file system Part II – Reading from the /proc file system

install

```
make MODULE_NAME=task_info  
sudo insmod task_info.ko
```

exec

```
# write pid into file  
echo 1 > /proc/task_info  
# see the task info  
cat /proc/task_info
```

uninstall

```
sudo rmmod task_info  
make clean
```

screenshot

```
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ sudo insmod task_info.ko
[sudo] password for huhuhu:
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ echo 1 > /proc/task_info
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ cat /proc/task_info
command = [systemd], pid = [1], state = [S]
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ echo 1436 > /proc/task_info
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ cat /proc/task_info
command = [fish], pid = [1436], state = [S]
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ sudo rmmod task_info
huhuhu ~/code/POSIxat/CH3_project2 ch3-p2 ✚1
$ make clean
make -C /lib/modules/6.8.1-arch1-1/build M=/home/hu
huhu/code/POSIxat/CH3_project2 clean
make[1]: Entering directory '/usr/lib/modules/6.8.1
-arch1-1/build'
  CLEAN   /home/huhuhu/code/POSIxat/CH3_project2/Mo
dule.symvers
make[1]: Leaving directory '/usr/lib/modules/6.8.1-
arch1-1/build'
```

```
huhuhu ~
$ sudo dmesg -W
[sudo] password for huhuhu:
[ 1439.811096] /proc/task_info created
[ 1452.374588] pid is 1
[ 1476.397327] pid is 1436
[ 1491.316760] Removing /proc/task_info
█
```