Pseudo Char Driver:-
Every driver is a module , but not vice versa

Char Devices
Block Devices

Device Driver:-
* Char Drivers
* Block Drivers
* Network Drivers
* Misc / sub systems

Device Special Files (Device Node Files):-
Interfacing drivers with userspace

ls /dev

/dev/ttyS0 ==> Regular UART Driver
/dev/ttyUSB0 ==> USB-UART
/dev/i2c-dev
/dev/spidev

Books:-
* Linux Device Drivers (LDD), 3/e, by Rubini
* Linux Kernel Development(LKD), 3/e, Robert Love

ls -l /dev/ttyS0
ls -l /dev/lp0

ls -l /dev/sda* # Internal HDD, SATA
ls - /dev/sdb* # USB Storage/Pen Drive
ls -l /dev/mmcblk0 # SD Card

First letter in "ls -l" output

stat /dev/ttyS0
stat /dev/sda1

Device ID ==> Major number + Minor number

cat /proc/devices

Activity:-
* Driver code upto Step-3
* User space code
* Pre-read list and kfifo APIs
(for list links given in Yammer)
* System call impl

cscope - vi
:q

alloc_chrdev_region
copy_to_user
cdev_init

struct task_struct {
struct file_operations {
struct inode {

sched.h

```
fd=open("/dev/psample", O_RDWR);
if(fd<0) {
        perror("open");
}

char str[]="abcdxyz";
nbytes=write(fd,str,7);
if(nbytes<0) {
        perror("write");
}

char buf[64];
int maxlen=64;
nbytes=read(fd,buf,maxlen);
if(nbytes<0) {
        perror("write");
}

write(1,buf,maxlen); (or) buf[nbytes]='\0'; puts(buf);

close(fd);
```