CSE 430: Operating Systems
Spring 2015

Class: 25
Date: 4/16

Input/Output (I/O)

- networking
- file systems
- I/O buffers

... peripheral...
disk storage

- magnetic disks
- solid state disks
file system

→ a software component in kernel that manages files & directories (folders)
Fill descriptor.

pseudo

Read

Close

(application)

Check system calls.
\[ \text{fd} = \text{open (file, mode)} \]

\[ \text{file descriptor} \]

\[ \text{else} \rightarrow \text{error} \]

\[ \text{otherwise} \]

\[ \text{pointer} \]
(512)

\[ n \text{ is a constant} \]

Let \( n \) be the constant

\[ [n] \text{ byte address} \]

pointer to buffer

read \( m = \text{read}(fd, \text{buf}, n) \) bytes to

front of buffer
map

[Diagram]

reset/mute

big

file pointer

(indекс)

adjust addresses

\[ N = \text{index}(FG, \text{buf}, n) \]
\[ \frac{5.12 \text{ kg}}{\text{dish block}} \] 

\[ \frac{4096 \text{ ft}^2 \text{ block}}{(512) (512)} \] 

- Seal

- NAND (512)

- Read (512)

The factors named by
A set of functions in the kernel
Files are stored in a 'file system'
EXT4
EXT3
Vfat
FAT 32
FAT 1

File system
Unix File System

File descriptor (FD)

inode

Disk

Area

Inode

Block
indices link

of the

direct access

direct links

10

13 weeks

approach
Recursive name finding

\( \text{name} \leftarrow \text{name} \)