



Sunbeam Institute of Information Technology
Pune and Karad

Module - Concepts of Operating System

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File - types, permissions, groups

type: - rwXrwXr-X no. of hard links: 1 sunbeam sunbeam size(bytes): 16753 Mar 29 05:49 sample.txt
 permissions: user/owner group timestamp

File types :

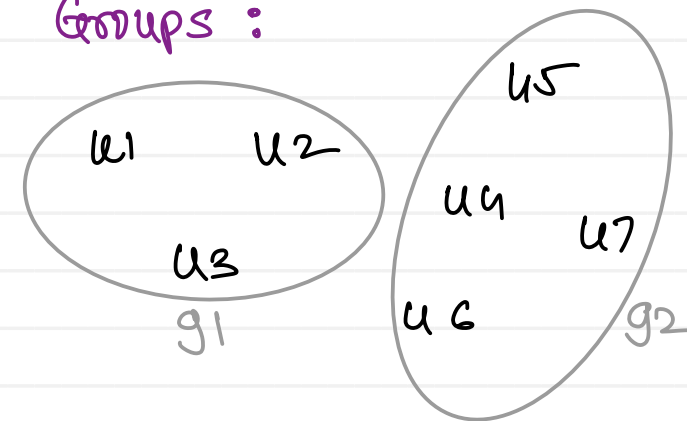
1. Regular file (-)
2. Directory file (d)
3. Link file (l)
4. Pipe file (p)
5. Socket file (s)
6. Character special file (c)
7. Block special file (b)

Permissions :

r - read
 w - write
 x - execute

rwX rwX r-X
 user/owner group others

Groups :



file : sample.txt
 owner / user : u1 : (rwX)
 file group : g1 : (rwX)
 others : u4-u7 : (r-X)

chmod command

permissions – mode / access

`chmod ± r/w/x filename`

+ : add

- : remove

`chmod +x sample.txt`
`chmod -r sample.txt`

`chmod u/g/o ± r/w/x filename`

u – user / owner

g – group

o – others

`chmod u+w sample.txt`
`chmod o-r sample.txt`
`chmod g+rw sample.txt`

mode < human format : rw- rw- r--
Number format : 110 110 100 (664)

Existing mode : rw- rw- r--

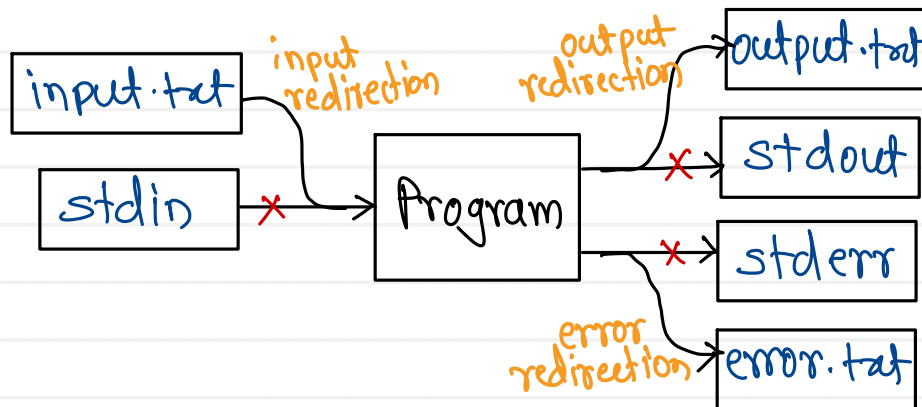
add x to user, remove w from group

New mode : rwx r-- r--
111 100 100
(744)

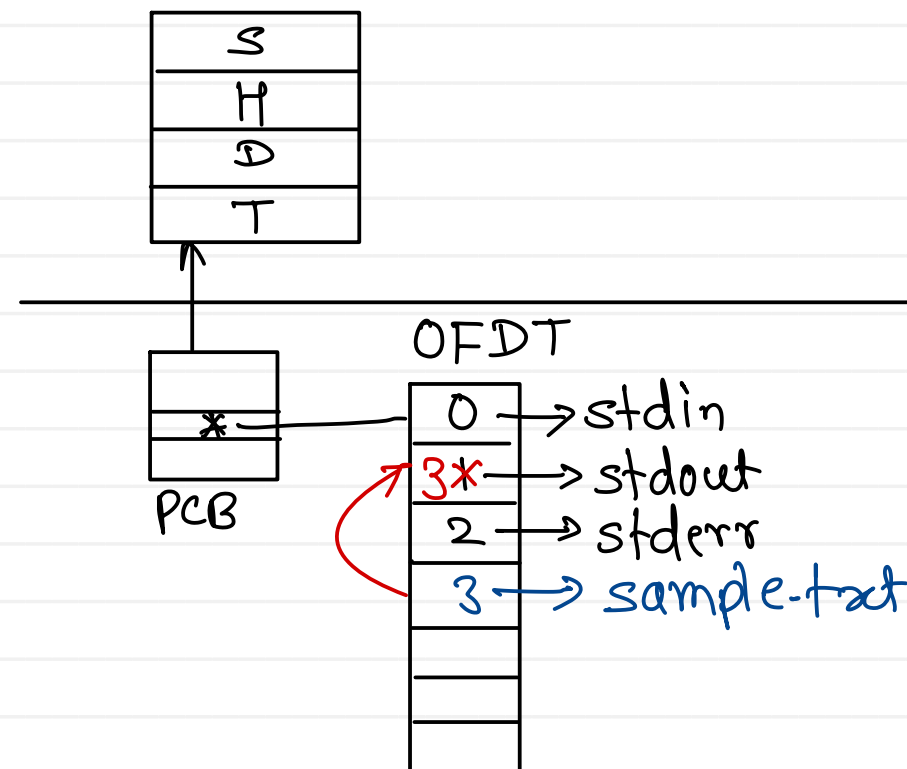
`chmod 744 sample.txt`

`chmod mode filename`

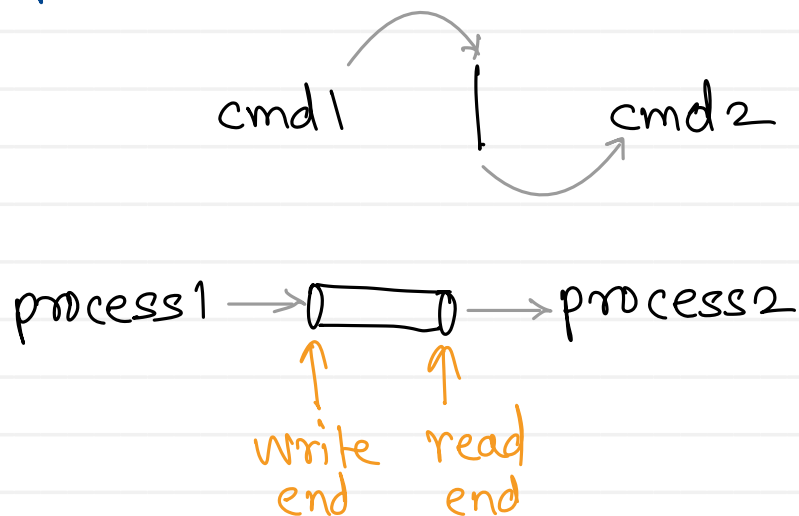
- Each program opens three standard files
 1. Stdin
 2. Stdout
 3. stderr
- Input output is done with these files only.
- But we can change direction of input/output/error to some user defined file and it is called as "redirection"



cat > sample.txt

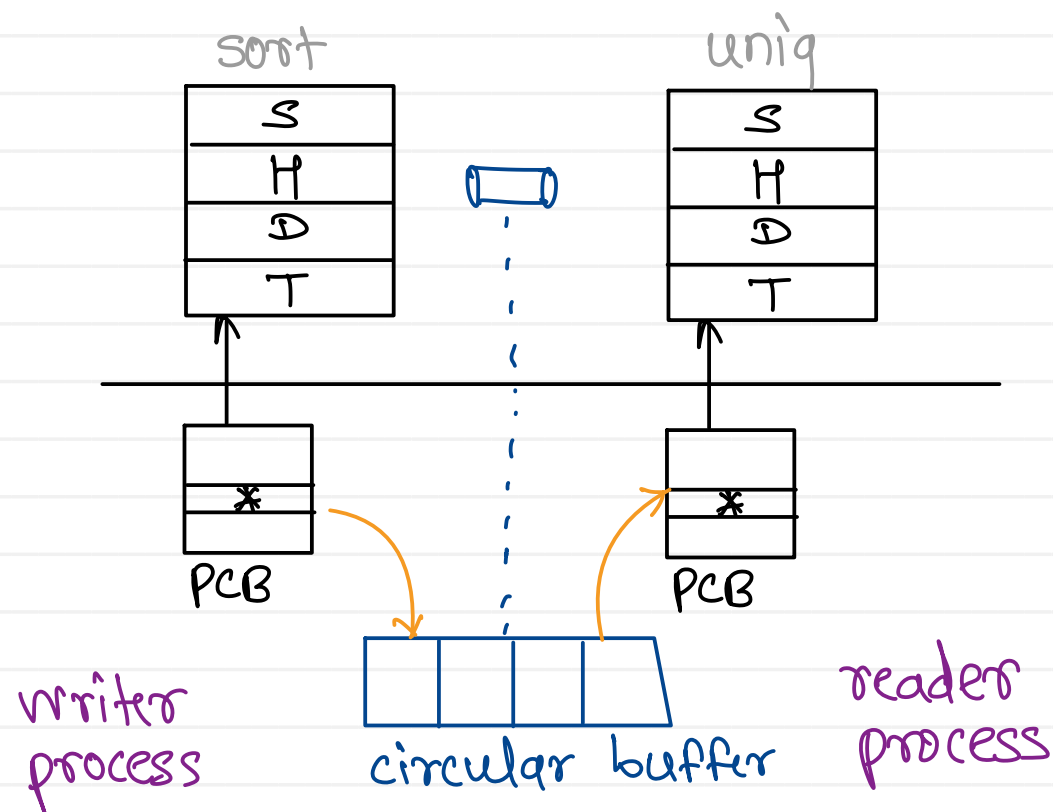


- pipe used to combine multiple commands where output of first command is given to input of second command.
- pipe is one of the IPC mechanism



- pipes are always unidirectional.

sort numbers.txt | uniq





Thank you!!!

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