

# File Management System

Sub:- System Lab (CS 558 )

Group :- 4

Group Member:-

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- ❖ Implement a simple file system which makes the following assumptions
    - ➔ There is only a single level root directory.
    - ➔ The root directory can have any number of files of any size.
    - ➔ Each file has a unique name.
    - ➔ Each disk block which stores the file is of size 4 Bytes.
    - ➔ A file can be created, deleted, or renamed at any time.
  - ❖ The layout of the Implementation will be like this
    - ➔ The contents of a file are given as input in the command line and the file system will create as many disk blocks as necessary with the contents of the file in the form of .txt files with disk numbers as their names.
    - ➔ Every file should have an inode pointing to all the disk blocks that store the file.
    - ➔ When a file is renamed, it should still have the same inode number.
    - ➔ When a file is deleted, all the corresponding disk blocks should be deleted from the file system and its meta-data (name and inode number) should be deleted from the directory.
    - ➔ When a file is read, all the contents of the input file are supposed to be retrieved correctly.

❖ Following Tasks are Implemented

➔ **mf file-name "filecontents"**: Should create the file with the given file-name and file contents.

Example : mf File1 "This is file 1"

➔ **df file-name** : Should delete the file from the directory.

Example : df File1

➔ **rf file-name1 file-name2** : Should rename the file from file1 to file2.

➔ **pf file-name** : Should display all the contents of the file correctly.

Example : "This is file 1".

➔ **ls** : Should display all the file-names and their inode number correctly.

❖ Executable code :-

D:\System Lab\Assignment\_2\_codes\Assignment\_2\_codes\File System.exe

Command Type	Command
1 Create File	mf file-name "file-contents"
2 Delete File	df file-name
3 Rename File	rf file-name1 file-name2
4 Print File	pf file-name
5 All File names	ls

Command\$ mf file1 "My Name is Rittick Mondal"  
File Created...

Do you want to Continue?[Y/N]y

Command\$ pf file1

My Name is Rittick Mondal

Do you want to Continue?[Y/N]y

Command\$ mf file2 "Hello Everyone"  
File Created...

Do you want to Continue?[Y/N]y

Command\$ pf file2

Hello Everyone

Do you want to Continue?[Y/N]y

Command\$ ls

file1 file2

Do you want to Continue?[Y/N]y

Command\$ rf file2 file22

Do you want to Continue?[Y/N]y

Command\$ ls

file1 file22

Do you want to Continue?[Y/N]df file22

Command\$ Wrong Command

Do you want to Continue?[Y/N]y

Command\$ ls

file1 file22