

# File Management System

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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 :-

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Command Type          Command
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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 Akshay Parit. I am from Kolhapur(Maharashtra)."
File Created...

Do you want to Continue?[Y/N]y
Command$ pf file1
My Name is Akshay Parit. I am from Kolhapur(Maharashtra).
Do you want to Continue?[Y/N]y
Command$ mf file2 "Hello sir, I would like to work in your company."
File Created...

Do you want to Continue?[Y/N]Y
Command$ ls
file1 file2

Do you want to Continue?[Y/N]y
Command$ rf file2 file3
Do you want to Continue?[Y/N]y
Command$ ls
file1 file3

Do you want to Continue?[Y/N]y
Command$ df file1
File Deleted!

Do you want to Continue?[Y/N]y
Command$ ls
file3

```