Filesystem Assignment

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Explanation:

We have implemented an in memory file system i.e. file read and write happens in main memory and not on disk.

We have followed following steps,

1. Created xsh\_fstest.c file in shell folder and added corresponding entries In shell.c and shprototypes.h files.
2. Copied given bs.c file under system folder.
3. Copied given fs.h file under include folder.
4. Copied given fs.c file under system folder and implemented following functions in it,
5. Create “fileop” command for testing.

5.1 fs\_create(char \*filename, int mode)

- Creats the file.

5.2 fs\_open(char \*filename, int flags)

- Checks if file is open and makes changes in file table.

5.3 fs\_close(int fd)

- Closes the file by looking at oft

5.4 fs\_seek(int fd, int offset)

- Set the pointer as per offset.

5.5 fs\_read(int fd, void \*buf, int nbytes)

- Reads the file

5.6 fwrite(int fd, void \*buf, int nbytes)

- Writes the file.

Final Output: 600 Total number of bytes written to the file:

File closed after writing.

R Dev : 0

R Offset : 0

fileptr set to 600R Dev : 0

R Offset : 88

Data read in file:

Total number of bytes read: 0.

File closed Successfully.

Free mask bits:

1100000000000000001100000000000000000000000000000000000000000000

0000000000000000000000000000000000000000000000000000000000000000

0000000000000000000000000000000000000000000000000000000000000000

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0000000000000000000000000000000000000000000000000000000000000000

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0000000000000000000000000000000000000000000000000000000000000000

Teamwork: Abhijit: File open, read, create

Rohit: File close, fseek, write