File System Project Report

Members:

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I. Implementation

We have developed a simple in-memory file system for Xinu where we have defined our versions of the various file operations such as create, open, close, read, write and seek. These functions work similar to the actual Xinu file system operations.

• fs create

This file operation creates a file named 'Test_File' . On successful creation of this file, it returns the file descriptor.

• fs_open

This file operation opens the file with the specified name and returns the allocated file descriptor to the caller.

• fs_close

This file operation closes the file. The return value is 'OK' if the file is closed successfully.

• fs read

This operation reads nbytes from the file with the specified file descriptor into the buffer.

• fs_write

This operation writes nbytes to the file with the specified file descriptor from the buffer

• fs_seek

This operations allows the process to seek to a specified location in the file.

II. Lessons learnt.

Understood the detailed working of the various file operations of Xinu.

III. Team Contributions.

Both members worked together on this assignment.

IV. Output:

xsh \$ fstest -f

Obtained inode.

```
Size updated to 5 blocks.
2500 bytes are written!
# of bytes = 1
# of bytes = 512
# of bytes = 512
# of bytes = 452
Reading data:
tuvwxyz{|}~!"#$%&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^ `abcdefghijklmnopgrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^ `abcdefghijklmnopgrstuvw
xyz{|}~!"#$%&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^{\_`abcdefghijklmnopqrstuvw}\\
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
klmnopgrstuvwxvz\{l\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^ `abcdefghijklmnopgrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^ `abcdefghijklmnopgrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^ `abcdefghijklmnopqrstuvw
xyz\{|\}\sim!"#$\%\&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPORSTUVWX
1477 bytes of data read
000000000
000000000
000000000
000000000
0000000000
000000000
```