CS314 : Operating Systems Lab

Lab 9

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1 Page Replacement policies

1.1 File Created

For this, the changes were made in the common_open() function inside the file `open.c` present at location: minix/servers/vfs/open.c

printf("file created: %llu", vp->v_inode_nr);

From figure, we can see that we created a new file using "touch file" command.

1.2 File Written

For this, the changes were made in the read_write() function inside the file `read.c` present at location: minix/servers/vfs/read.c

printf("file write: %llu; nbytes = %zu; offset = %llu", vp->v_inode_nr, size, f->filp_pos);

From figure, we can see that we wrote into the file using "echo "Hello World" > file" command.

1.3   File Read

```
# echo "hello world" > file
file write: 2; nbytes = 12; offset = 12
# cat file
Minix: PID 226 created
Minix (200010004): PID 201 swapped in
file read: 2; nbytes = 4096; offset = 12
hello world
file read: 2; nbytes = 4096; offset = 12
Minix: PID 226 exited
#
```

For this, the changes were made in the read_write() function inside the file `read.c` present at location: minix/servers/vfs/read.c

printf("file read: %llu; nbytes = %zu; offset = %llu", vp->v_inode_nr, size, f->filp_pos);

From figure, we can see that we read the file using "cat file" command.

1.4   File Deleted

```
# rm file
Minix: PID 228 created
Minix (200010004): PID 203 swapped in
file deleted: 2
Minix: PID 228 exited
#
```

For this, the changes were made in the do_unlink() function inside the file `link.c` present at location: minix/servers/vfs/link.c

printf("file deleted: %llu", vp->v_inode_nr);

From figure, we can see that we deleted a file using "rm file" command.