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Due: Dec 3rd, 2023 (11:59 PM EST)

CS-GY 6233 – Fall 2023

Homework # 5

Unix tail command

General Notes

Read the assignment requirements carefully, especially what to include in your final submission for each part.

Refer to the submission instructions on the bottom of this document.

NOTE: This assignment is to be done SOLO.

Implementing tail command in xv6

The traditional UNIX `tail` utility can print out lines from the end of a file. If the number of lines is not given (i.e `tail FILE`), `tail` would print out the last 10 lines of its input. We can also specify the number of lines to be printed by calling `tail -NUM FILE`, for example `tail -2 README` to print the last 2 lines of the file `README`.

Write a `tail` program for `xv6`. If a filename is provided on the command line, then `tail` should open it, read and print the last `NUM` lines (no extra blank lines), and then close it. If no filename is provided, `tail` should read from standard input.

Here are some of the examples of usage of `tail` command:

```
L$ tail README
To build xv6 on an x86 ELF machine (like Linux or FreeBSD), run "make".
On non-x86 or non-ELF machines (like OS X, even on x86), you will
need to install a cross-compiler gcc suite capable of producing x86 ELF
binaries. See http://pdos.csail.mit.edu/6.828/2014/tools.html.
Then run "make TOOLPREFIX=i386-jos-elf-".

To run xv6, install the QEMU PC simulators. To run in QEMU, run "make qemu".

To create a typeset version of the code, run "make xv6.pdf". This
requires the "mpage" utility. See http://www.mesa.nl/pub/mpage/.
```

```
L$ tail -2 README
To create a typeset version of the code, run "make xv6.pdf". This
requires the "mpage" utility. See http://www.mesa.nl/pub/mpage/.
```

```
L$ grep the README |tail
If you are compiling natively, will need to add a plugin to your vscode. To install the necessary dependencies for debug
ging in vscode, press 'ctrl p' then enter 'ext install webfreak.debug'.
Version 6 (v6). xv6 loosely follows the structure and style of v6,
xv6 borrows code from the following sources:
    JOS (asm.h, elf.h, mmu.h, bootasm.S, ide.c, console.c, and others)
    Plan 9 (entryother.S, mp.h, mp.c, lapic.c)
In addition, we are grateful for the bug reports and patches contributed by
The code in the files that constitute xv6 is
To run xv6, install the QEMU PC simulators. To run in QEMU, run "make qemu".
To create a typeset version of the code, run "make xv6.pdf". This
requires the "mpage" utility. See http://www.mesa.nl/pub/mpage/.
```

Submission:

- Please upload "tail.c" to Brightspace.
- Note: this assignment is to be submitted solo (not in groups)