CS4375-13948 Fall 2023
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Homework Report
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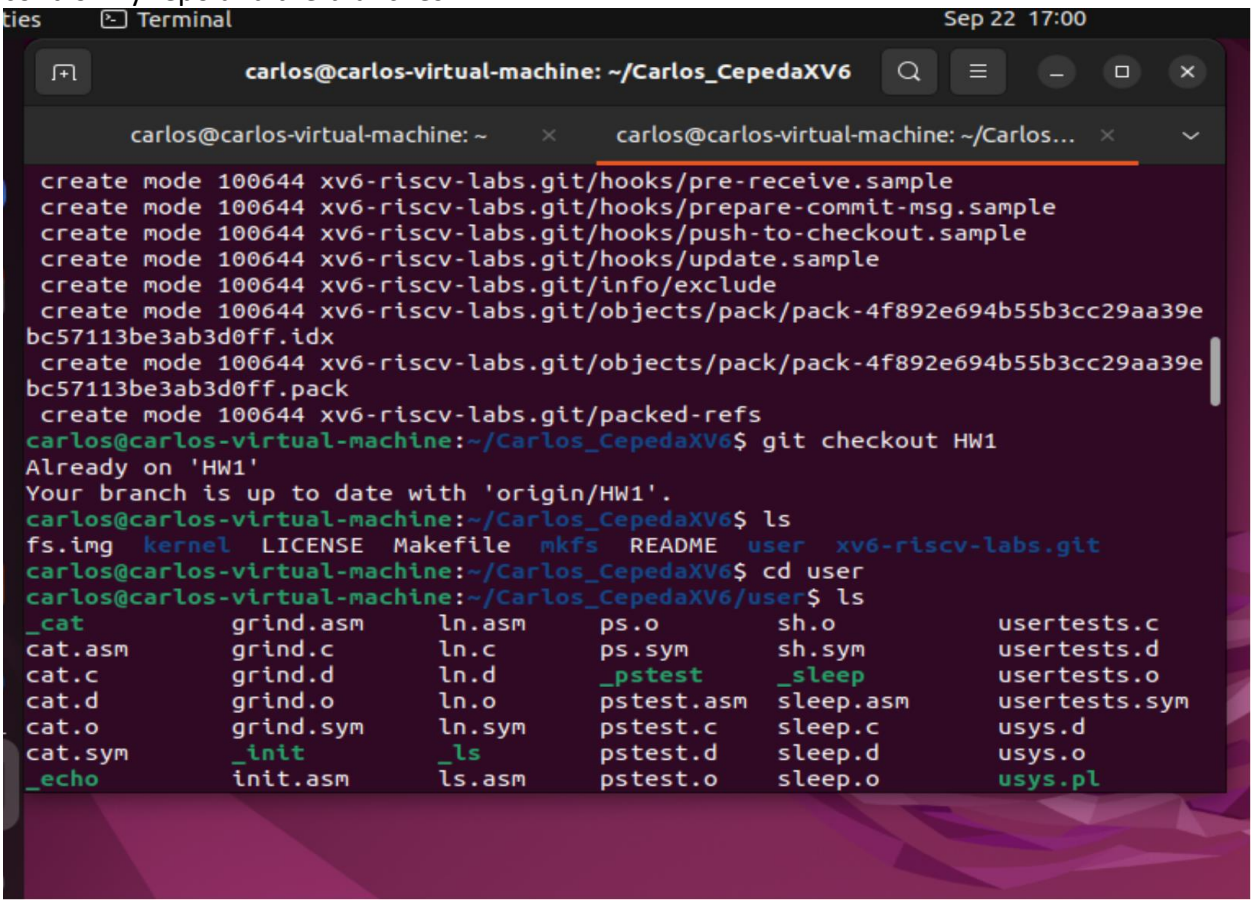
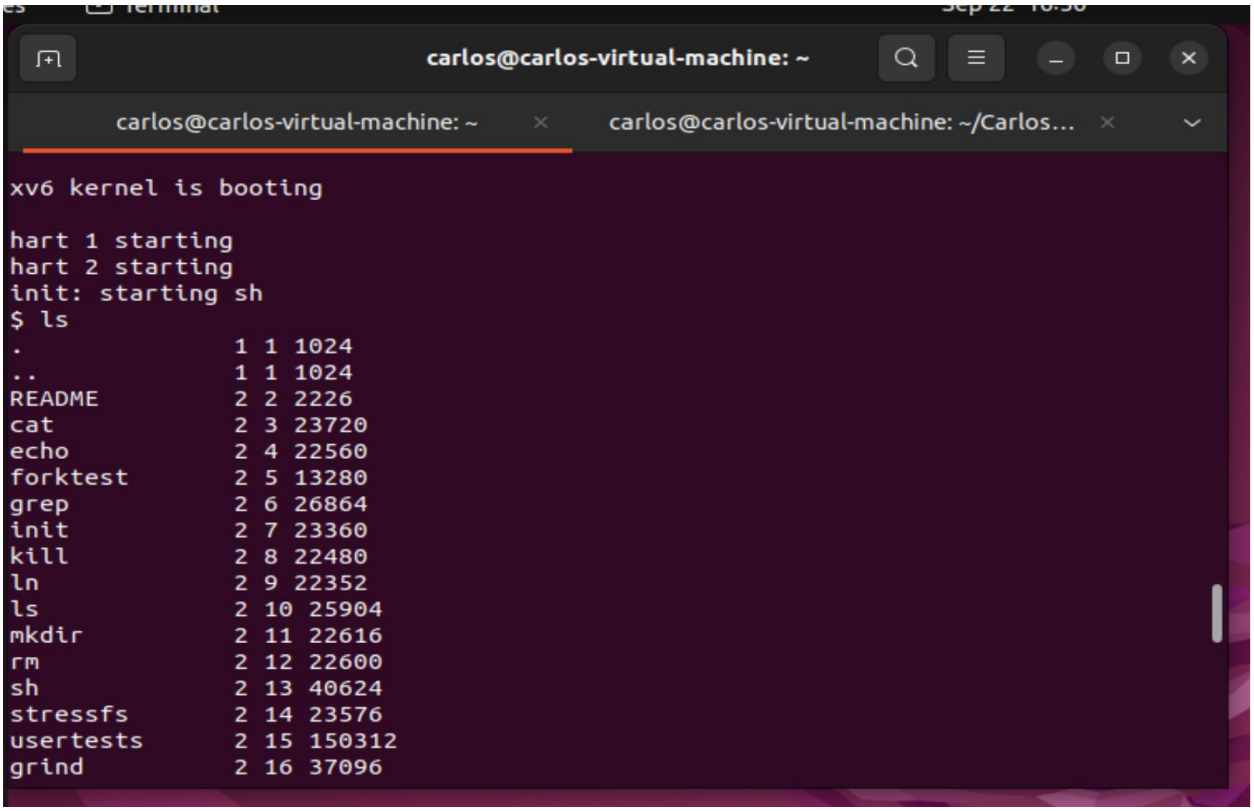
HW 1: Introduction to xv6

Task 1. Boot xv6 and explore utilities

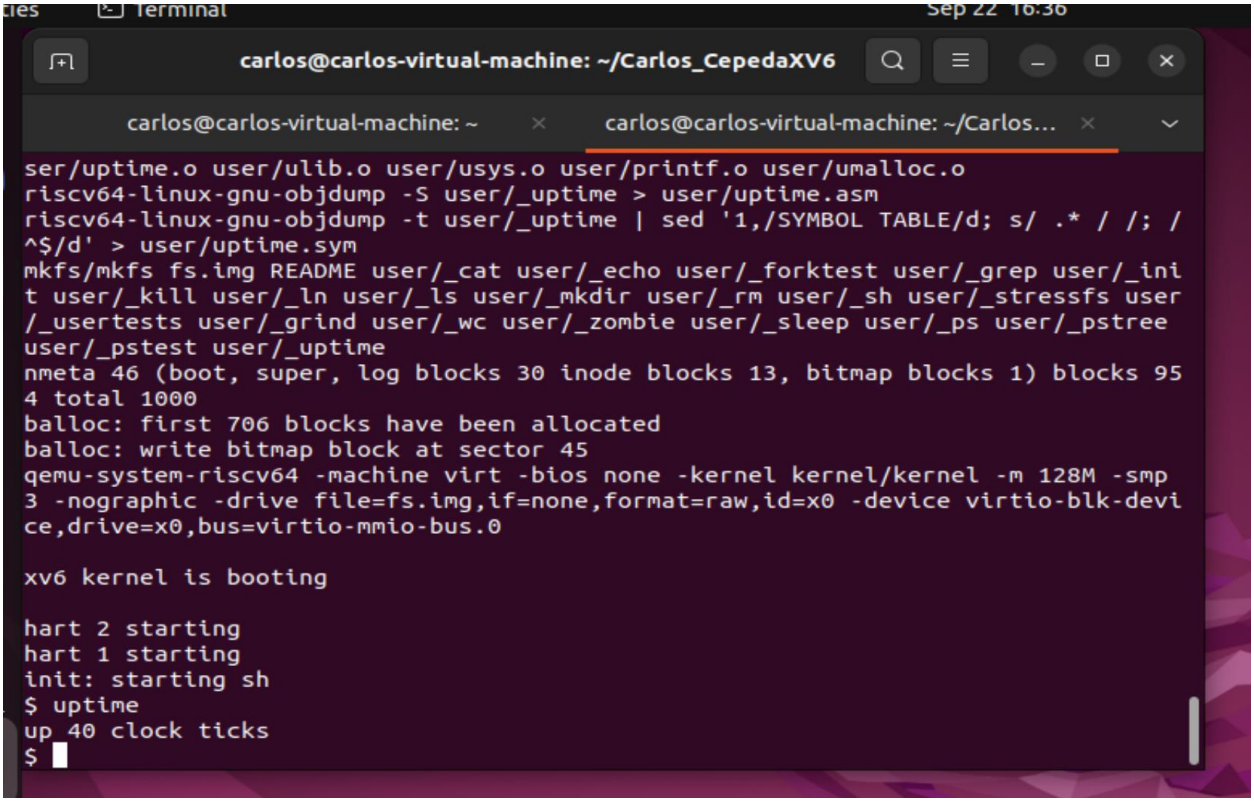
I'm using VMware workstation pro, and installed ubuntu into it. It took a long time to set up since I don't have a very powerful laptop. I started playing to remember how to move around bash. Using ls to get see all the files, cd .., cd ~, cd path. Also using git and it's commands to control my repo and the branches.





Task 2. Implement the uptime utility.

Once everything was setup creating the file was not hard. This gave me a a good understanding of how we're going to be conducting the homework and projects for the class. For the most part the only thing I had an issue with was understanding the instructions. But with the help of other students, we realized what needed to be done. The coding part was straightforward.


Terminal
Sep 22 16:36
carlos@carlos-virtual-machine: ~/Carlos_CepedaXV6
carlos@carlos-virtual-machine: ~
carlos@carlos-virtual-machine: ~/Carlos...
ser/uptime.o user/ulib.o user/usys.o user/printf.o user/umalloc.o
riscv64-linux-gnu-objdump -S user/_uptime > user/uptime.asm
riscv64-linux-gnu-objdump -t user/_uptime | sed '1,/SYMBOL TABLE/d; s/ .* / /; /
^$/d' > user/uptime.sym
mkfs/mkfs fs.img README user/_cat user/_echo user/_forktest user/_grep user/_ini
t user/_kill user/_ln user/_ls user/_mkdir user/_rm user/_sh user/_stressfs user
/_usertests user/_grind user/_wc user/_zombie user/_sleep user/_ps user/_pstree
user/_pstest user/_uptime
nmeta 46 (boot, super, log blocks 30 inode blocks 13, bitmap blocks 1) blocks 95
4 total 1000
balloc: first 706 blocks have been allocated
balloc: write bitmap block at sector 45
qemu-system-riscv64 -machine virt -bios none -kernel kernel/kernel -m 128M -smp
3 -nographic -drive file=fs.img,if=none,format=raw,id=x0 -device virtio-blk-devi
ce,drive=x0,bus=virtio-mmio-bus.0
xv6 kernel is booting
hart 2 starting
hart 1 starting
init: starting sh
$ uptime
up 40 clock ticks
$