CMPE 283 ASSIGNMENT 1

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**GITHUB REPO:** [**https://github.com/ayushman264/linux**](https://github.com/ayushman264/linux)

Steps/Commands followed for the assignment:

1. Installed ubuntu on VMWare fusion and booted the machine.
2. Installed git using command sudo apt install git
3. Forked the repo (mlarkin2015/linux)
4. Cloned the forked repo to local machine
5. Created new directory.
6. Modified the code given by professor and added both code and makefile to the directory.
7. sudo apt-get update
8. sudo apt-get install build-essential fakeroot libssl-dev libncurses5-dev kernel-package bc flex
9. cp /boot/config-$(uname -r) .config
10. make menuconfig
11. sudo make -j 6 && sudo make modules\_install -j 6 && sudo make install -j 6
12. Reboot the machine for changes to apply, check using uname -r
13. make clean
14. make all
15. sudo insmod cmpe283-1.ko
16. dmesg
17. Got the expected output.
18. Git add –all
19. Git push

Output:

[  993.334276] CMPE 283 Assignment 1 Module Start  
[  993.334278] Pinbased Controls MSR: 0x0  
[  993.334279]   External-interrupt exiting: Can set=No, Can clear=Yes  
[  993.334280]   NMI exiting: Can set=No, Can clear=Yes  
[  993.334280]   Virtual NMIs: Can set=No, Can clear=Yes  
[  993.334281]   Activate VMX preemption timer: Can set=No, Can clear=Yes  
[  993.334281]   Process posted interrupts: Can set=No, Can clear=Yes  
[  993.334282]  
               Procbased Controls MSR: 0x0  
[  993.334283]   Interrupt-window exiting: Can set=No, Can clear=Yes  
[  993.334283]   Use TSC offsetting: Can set=No, Can clear=Yes  
[  993.334284]   HLT exiting: Can set=No, Can clear=Yes  
[  993.334284]   INVLPG exiting: Can set=No, Can clear=Yes  
[  993.334285]   MWAIT exiting: Can set=No, Can clear=Yes  
[  993.334285]   RDPMC exiting: Can set=No, Can clear=Yes  
[  993.334286]   RDTSC exiting: Can set=No, Can clear=Yes  
[  993.334341]   CR3-load exiting: Can set=No, Can clear=Yes  
[  993.334342]   CR3-store exiting: Can set=No, Can clear=Yes  
[  993.334343]   CR8-load exiting: Can set=No, Can clear=Yes  
[  993.334343]   CR8-store exiting: Can set=No, Can clear=Yes  
[  993.334344]   Use TPR shadow: Can set=No, Can clear=Yes  
[  993.334344]   NMI-window exiting: Can set=No, Can clear=Yes  
[  993.334345]   MOV-DR exiting: Can set=No, Can clear=Yes  
[  993.334345]   Unconditional I/O exiting: Can set=No, Can clear=Yes  
[  993.334346]   Use I/O bitmaps: Can set=No, Can clear=Yes  
[  993.334346]   Monitor trap flag: Can set=No, Can clear=Yes  
[  993.334347]   Use MSR bitmaps: Can set=No, Can clear=Yes  
[  993.334347]   MONITOR exiting: Can set=No, Can clear=Yes  
[  993.334347]   PAUSE exiting: Can set=No, Can clear=Yes  
[  993.334348]   Activate secondary controls: Can set=No, Can clear=Yes  
[  993.334348]  
               Bit 31 is not set  
[  993.334350]  
               VMX Exit Controls MSR: 0x0  
[  993.334350]   Save debug controls: Can set=No, Can clear=Yes  
[  993.334351]   Host address-space size: Can set=No, Can clear=Yes  
[  993.334351]   Load IA32\_PERF\_GLOB AL\_CTRL: Can set=No, Can clear=Yes  
[  993.334352]   Acknowledge interrupt on exit: Can set=No, Can clear=Yes  
[  993.334352]   Save IA32\_PAT: Can set=No, Can clear=Yes  
[  993.334353]   Load IA32\_PAT: Can set=No, Can clear=Yes  
[  993.334353]   Save IA32\_EFER: Can set=No, Can clear=Yes  
[  993.334353]   Load IA32\_EFER: Can set=No, Can clear=Yes  
[  993.334354]   Save VMX-preemption timer value: Can set=No, Can clear=Yes  
[  993.334354]   Clear IA32\_BNDCFGS: Can set=No, Can clear=Yes  
[  993.334355]   Conceal VMX from PT: Can set=No, Can clear=Yes  
[  993.334355]   Clear IA32\_RTIT\_CTL: Can set=No, Can clear=Yes  
[  993.334356]   Load CET state: Can set=No, Can clear=Yes  
[  993.334357]  
               VMX Entry Controls MSR: 0x0  
[  993.334357]   Load debug controls: Can set=No, Can clear=Yes  
[  993.334358]   IA-32e mode guest: Can set=No, Can clear=Yes  
[  993.334358]   Entry to SMM: Can set=No, Can clear=Yes  
[  993.334359]   Deactivate dual-monitor treatment: Can set=No, Can clear=Yes  
[  993.334359]   Load IA32\_PERF\_GLOBAL\_CTRL: Can set=No, Can clear=Yes  
[  993.334360]   Load IA32\_PAT: Can set=No, Can clear=Yes  
[  993.334360]   Load IA32\_EFER: Can set=No, Can clear=Yes  
[  993.334361]   Load IA32\_BNDCFGS: Can set=No, Can clear=Yes  
[  993.334361]   Conceal VMX from PT: Can set=No, Can clear=Yes  
[  993.334362]   Load IA32\_RTIT\_CTL: Can set=No, Can clear=Yes

[  993.334362]   Load CET state: Can set=No, Can clear=Yes

[  991.640259] CMPE 283 Assignment 1 Module Exits