

# DEVICE DRIVERS – LAB EXERCISE 2

Submitted By:

Kiran Thomas Cherian

CED18I028

## OBJECTIVE:

Write a C program to print your machine's "System Configuration". You have all liberty to decide which to add/delete in output.

Linux Distribution Used:

MX Linux 19.1 (Running on Virtual machine)

## CODE:

```
#include<stdio.h>

#include<stdlib.h>

#include<errno.h>

#include<sys/utsname.h>

int main(){

printf("\n\n\tSystem info\n\n");

struct utsname var;

uname(&var);

printf("System Name = %s\n", var.sysname);

printf("Node Name = %s\n", var.nodename);

printf("Version = %s\n", var.version);

printf("Release = %s\n", var.release);

printf("Machine = %s\n", var.machine);

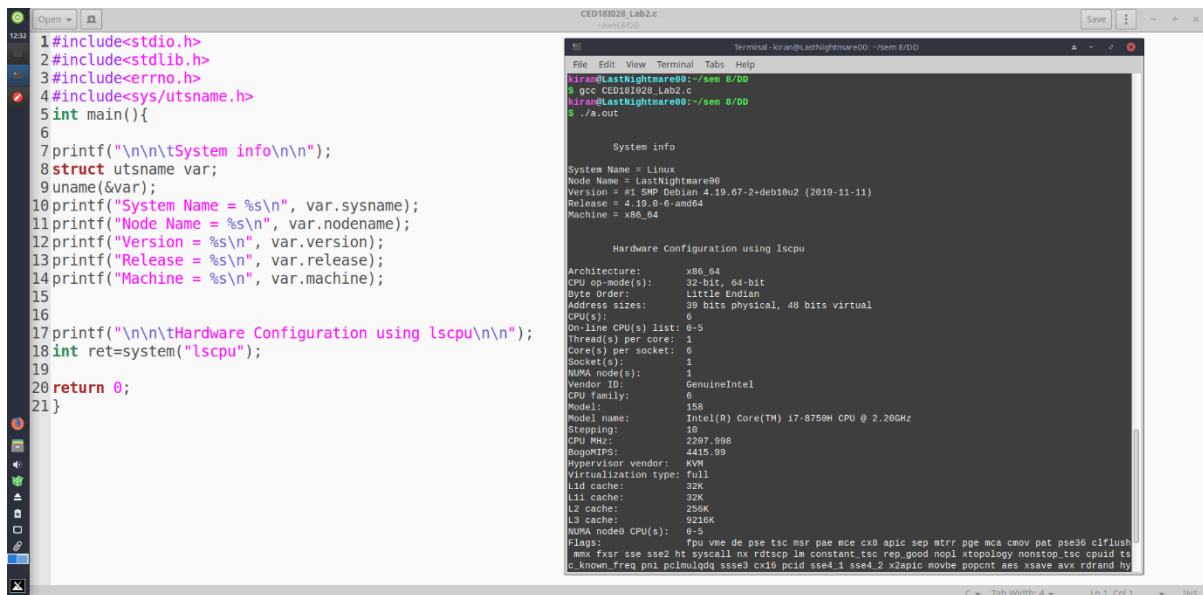

printf("\n\n\tHardware Configuration using lscpu\n\n");

int ret=system("lscpu");

return 0;

}
```

# OUTPUT SCREENSHOTS:



The screenshot shows a code editor with a C program that prints system and hardware information. The code is as follows:

```
1#include<stdio.h>
2#include<stdlib.h>
3#include<errno.h>
4#include<sys/utsname.h>
5int main(){
6
7printf("\n\n\tSystem info\n\n");
8struct utsname var;
9uname(&var);
10printf("System Name = %s\n", var.sysname);
11printf("Node Name = %s\n", var.nodename);
12printf("Version = %s\n", var.version);
13printf("Release = %s\n", var.release);
14printf("Machine = %s\n", var.machine);
15
16
17printf("\n\n\tHardware Configuration using lscpu\n\n");
18int ret=system("lscpu");
19
20return 0;
21}
```

The terminal window shows the output of the program:

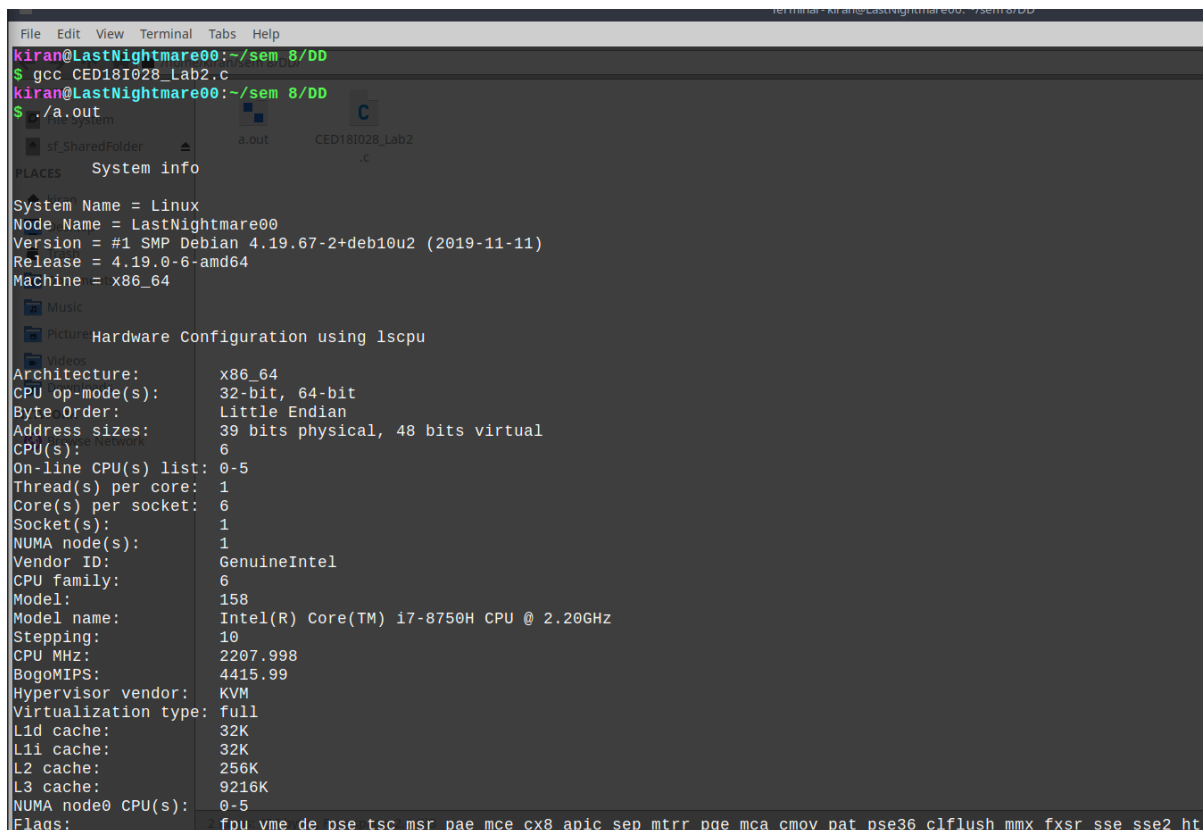
```
kiran@LastNightmare00:~/sem 8/DD
$ gcc CED181028_Lab2.c
$ ./a.out

System info

System Name = Linux
Node Name = LastNightmare00
Version = #1 SMP Debian 4.19.67-2+deb10u2 (2019-11-11)
Release = 4.19.0-6-amd64
Machine = x86_64

Hardware Configuration using lscpu

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
Address sizes:         39 bits physical, 48 bits virtual
CPU(s):                6
On-line CPU(s) list:   0-5
Thread(s) per core:    1
Core(s) per socket:    6
Socket(s):             1
NUMA node(s):          1
Vendor ID:              GenuineIntel
CPU family:            6
Model:                 158
Model name:             Intel(R) Core(TM) i7-8750H CPU @ 2.20GHz
Stepping:              10
CPU MHz:               2207.998
BogoMIPS:              4415.99
Hypervisor vendor:     KVM
Virtualization type:    full
L1d cache:             32K
L1i cache:             32K
L2 cache:              256K
L3 cache:              9216K
NUMA node0 CPU(s):     0-5
Flags:                 fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush
                        mmx fxsr sse sse2 ht syscall lm constant tsc rep_good nopl xtopology nonstop tsc cpuid ts
                        c known_freq pni pclmulqdq ssse3 cx16 pcid sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx rd
                        rand hy
```



The screenshot shows a terminal window with the same output as the previous one, but with a file explorer overlay on the left side. The file explorer shows the following files and folders:

- sf\_sharedFolder
- a.out
- CED181028\_Lab2
- .c

The terminal output is the same as the previous one, showing system and hardware information.