

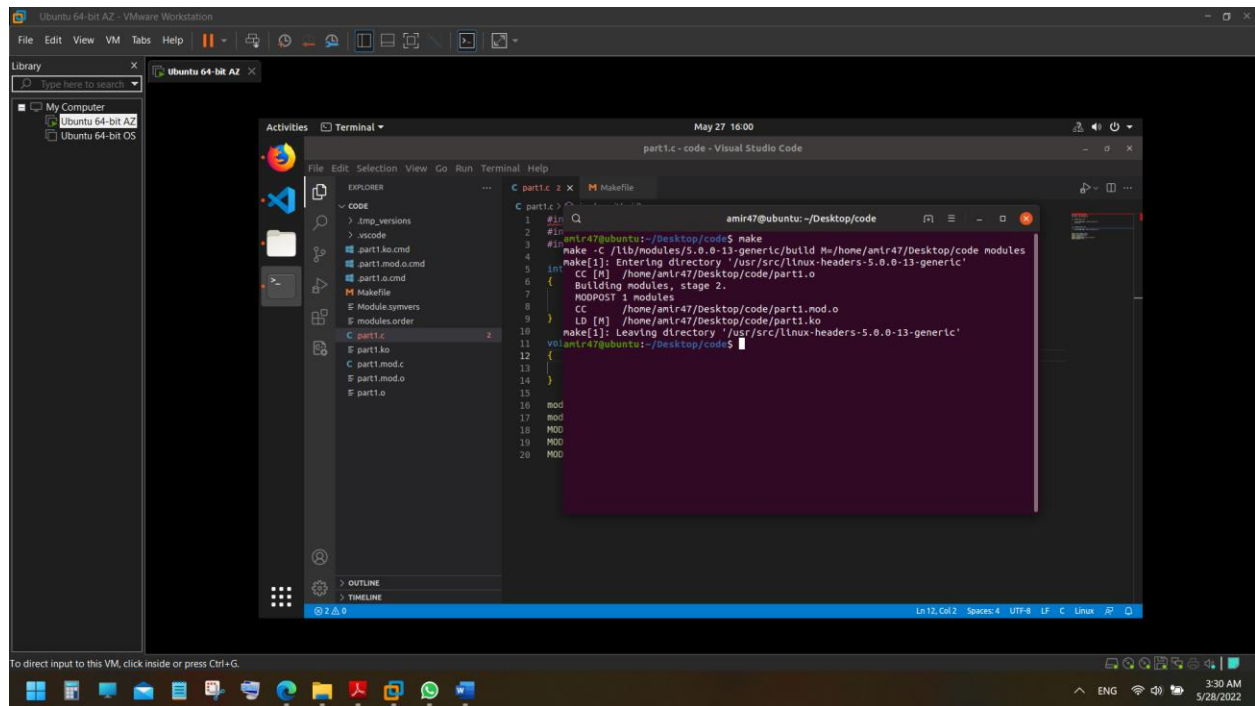
## Part1:

لیست ماژول ها:

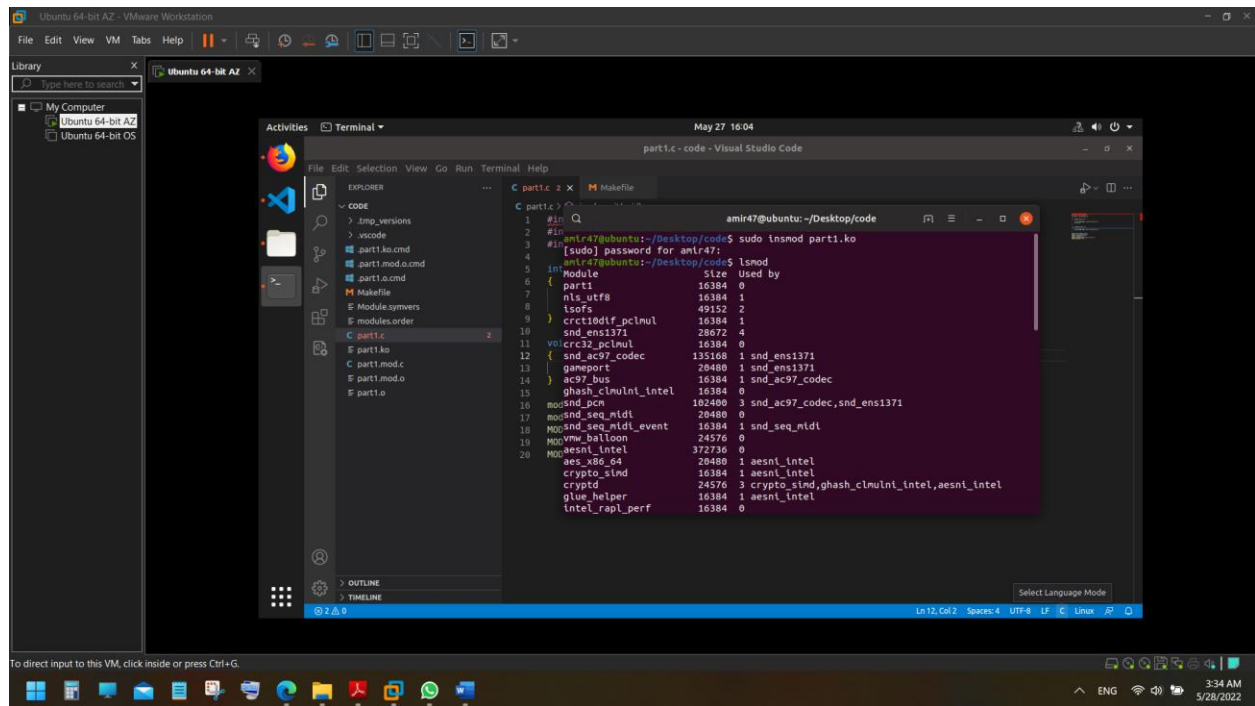
The following table represents the output of the `lsmod` command shown in the screenshots.

Module	Size	Used by
nls_utf8	16384	1
lsufs	49152	2
crct10dif_pclmul	16384	1
snd_ens1371	28672	4
crc32_pclmul	16384	0
snd_ac97_codec	135168	1 snd_ens1371
gapeport	20480	1 snd_ens1371
ac97_bus	16384	1 snd_ac97_codec
ghash_clmulnt_intel	16384	0
snd_pcm	102400	3 snd_ac97_codec, snd_ens1371
snd_seq_midi	20480	0
snd_seq_midi_event	16384	1 snd_seq_midi
vmw_balloon	24576	0
aesni_intel	372736	0
aes_x86_64	20480	1 aesni_intel
crypto_simd	16384	1 aesni_intel
crypto	24576	3 crypto_simd, ghash_clmulnt_intel, aesni_intel
glue_helper	16384	1 aesni_intel
intel_rapl_perf	16384	0
snd_rawmidi	36864	2 snd_seq_midi, snd_ens1371
input_leds	16384	0
joydev	24576	0
serio_raw	20480	0
snd_seq	69632	2 snd_seq_midi, snd_seq_midi_event
snd_seq_device	16384	3 snd_seq, snd_seq_midi, snd_rawmidi
snd_timer	36864	3 snd_seq, snd_pcm
vmwgfx	290816	5
snd	81920	13 snd_seq, snd_seq_device, snd_timer, snd_ac97_codec, snd_pcm, snd_rawmidi, snd_ens1371
ttn	102400	1 vmwgfx
drm_kms_helper	180224	1 vmwgfx
soundcore	16384	1 snd
drm	475136	8 vmwgfx, drm_kms_helper, ttn
fb_sys_fops	16384	1 drm_kms_helper
syscopyarea	16384	1 drm_kms_helper
sysfillrect	16384	1 drm_kms_helper
sysimgblt	16384	1 drm_kms_helper
vmw_vnc1	69632	1 vmw_balloon
nac_hld	16384	0
sch_fq_codel	20480	2
parport_pc	40960	0
ppdev	24576	0
lp	20480	0
parport	53248	3 parport_pc, lp, ppdev
ip_tables	28672	0
x_tables	40960	1 ip_tables
autofs4	45856	2
hid_generic	16384	0
usbhid	53248	0
hid	126976	2 usbhid, hid_generic
ahci	40960	2
libahci	32768	1 ahci
mptspl	24576	1
mptscsih	36864	1 mptspl
mptbase	94208	2 mptspl, mptscsih
e1000	139264	0
sssi_transport_spt	32768	1 mptspl
t2c_piix4	28672	0
pata_acpi	16384	0
psmouse	151552	0
floppy	81920	0

## ساخت فایل ماژول:



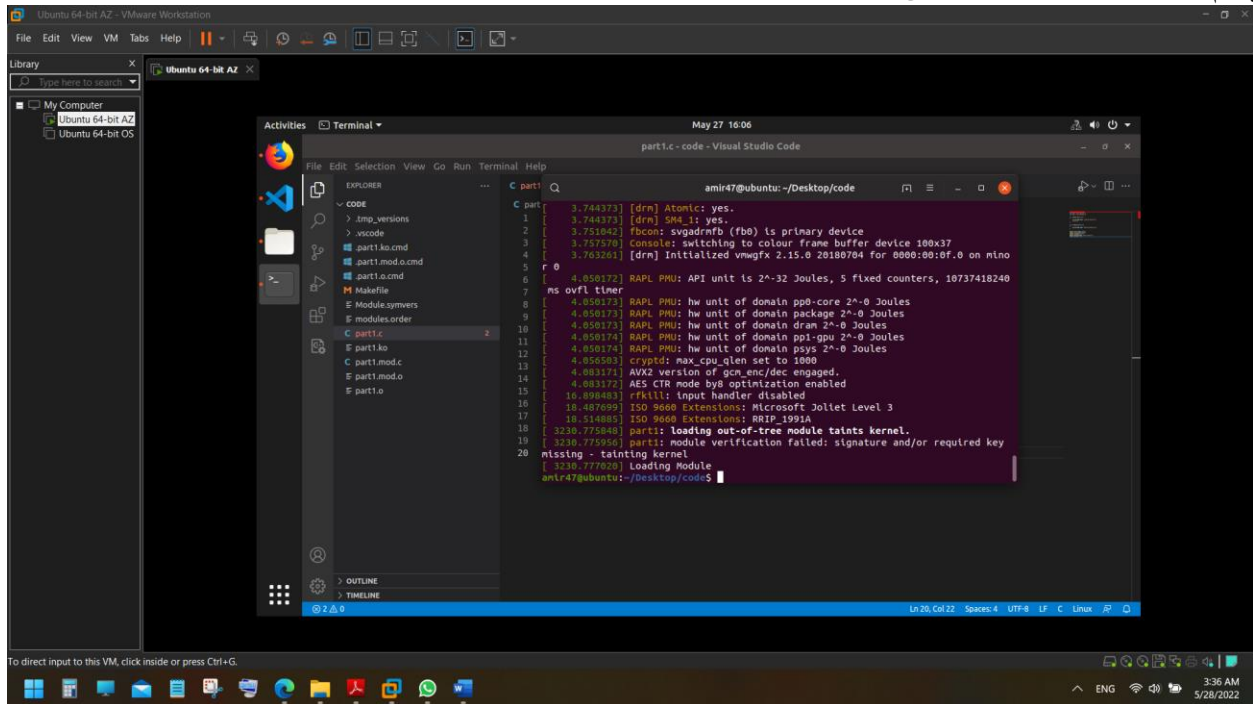
ماژول بارگذاری شد و در لیست ماژول ها قابل مشاهده است:



The screenshot shows a VMware Workstation interface with an Ubuntu 64-bit VM. The terminal window is open, displaying the output of the `lsmod` command. The output lists loaded kernel modules and their dependencies.

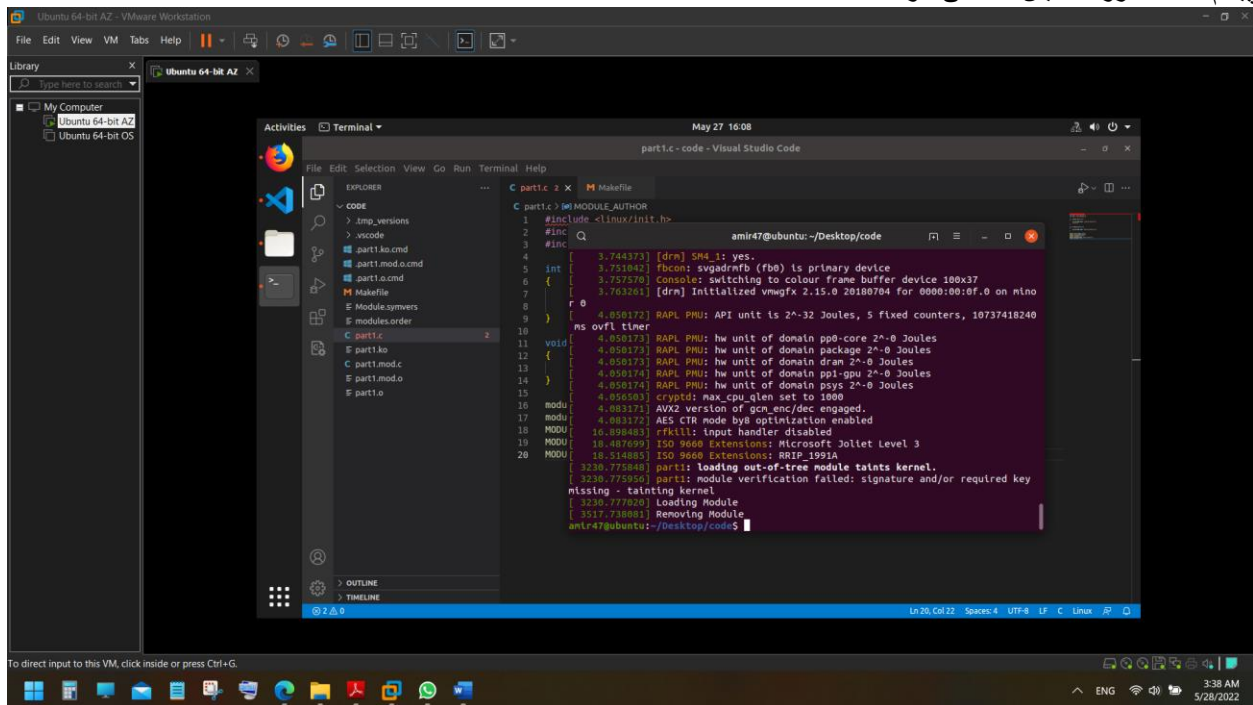
```
amir47@ubuntu:~/Desktop/code$ lsmod
Module                  Size  Used by
part1                    16384  0
nls_utf8                 16384  1
isofs                    49152  2
crct10dif_pclmul         16384  1
snd_ens1371              28672  4
vcrc32_pclmul            16384  0
snd_ac97_codec           135168  1 snd_ens1371
gameport                 28480  1 snd_ens1371
ac97_bus                  16384  1 snd_ac97_codec
ghash_clmulni_intel      16384  0
modsnd_pcn               102400  3 snd_ac97_codec,snd_ens1371
modsnd_seq_midi          28480  0
modsnd_seq_midi_event    16384  1 snd_seq_midi
modvmw_balloon           24576  0
modaesni_intel           372736  0
aes_x86_64               28480  1 aesni_intel
crypto_sind               16384  1 aesni_intel
crypto                    24576  3 crypto_sind,ghash_clmulni_intel,aesni_intel
glue_helper               16384  1 aesni_intel
intel_rapl_perf           16384  0
```

پیغام بارگذاری ماژول نمایش داده می شود:



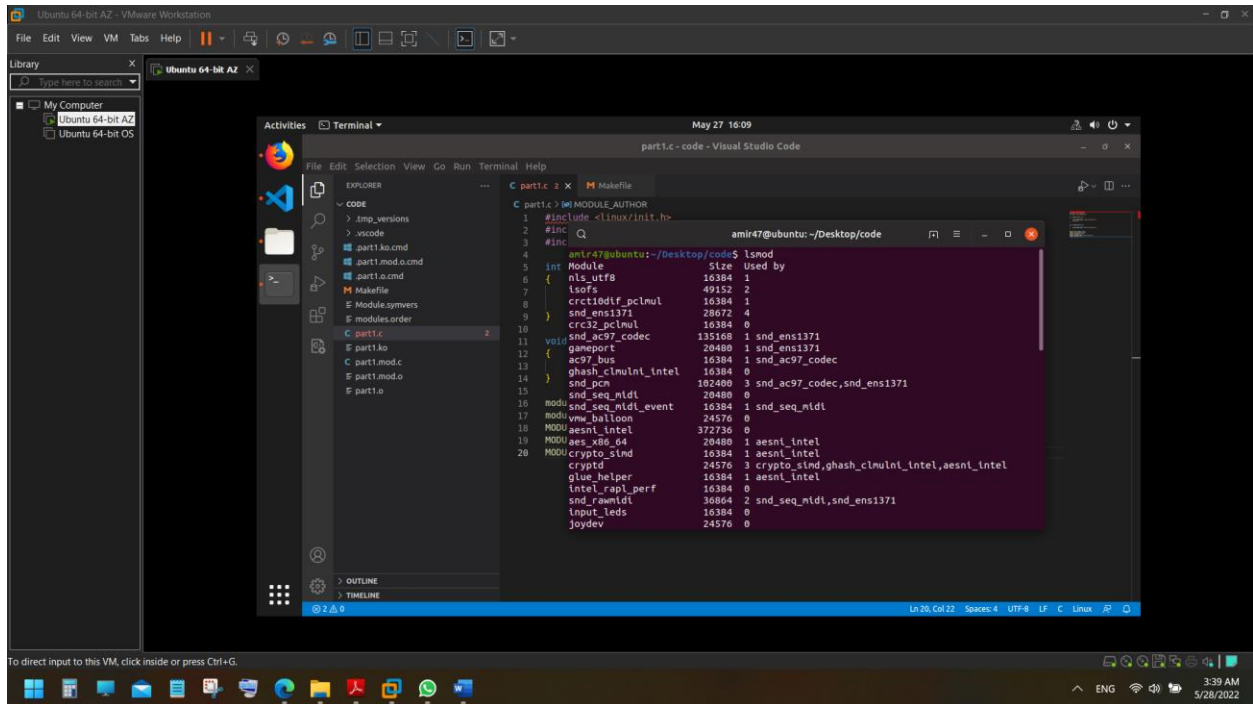
```
part.c: code - Visual Studio Code
1 3.744373 [drm] Atomic: yes.
2 3.744373 [drm] SM4_1: yes.
3 3.751042 fbcon: svgadrmfb (fb0) is primary device
4 3.757570 Console: switching to colour frame buffer device 100x37
5 3.763261 [drm] Initialized vmwgfx 2.15.0 20180704 for 0000:00:0f:0 on mmo
6 4.050172 RAPL PMU: API unit is 2^-32 Joules, 5 fixed counters, 10737418240
7 4.050173 RAPL PMU: hw unit of domain pp0-core 2^-0 Joules
8 4.050173 RAPL PMU: hw unit of domain package 2^-0 Joules
9 4.050173 RAPL PMU: hw unit of domain dram 2^-0 Joules
10 4.050174 RAPL PMU: hw unit of domain ppi-gpu 2^-0 Joules
11 4.050174 RAPL PMU: hw unit of domain psys 2^-0 Joules
12 4.050503 cryptd: max_cpu_qlen set to 1000
13 4.083171 AVX2 version of gcm_enc/dec engaged.
14 4.083172 AES CTR mode by8 optimization enabled
15 16.898483 rfkll: input handler disabled
16 18.487699 ISO 9660 Extensions: Microsoft Joliet Level 3
17 18.514885 ISO 9660 Extensions: RRIIP_1991A
18 3230.775940 partii: loading out-of-tree module taints kernel.
19 3230.775950 partii: module verification failed: signature and/or required key
20 missing - tainting kernel
[ 3230.777820] Loading Module
amir47@ubuntu:~/Desktop/code$
```

پیغام حذف ماژول نمایش داده می شود:



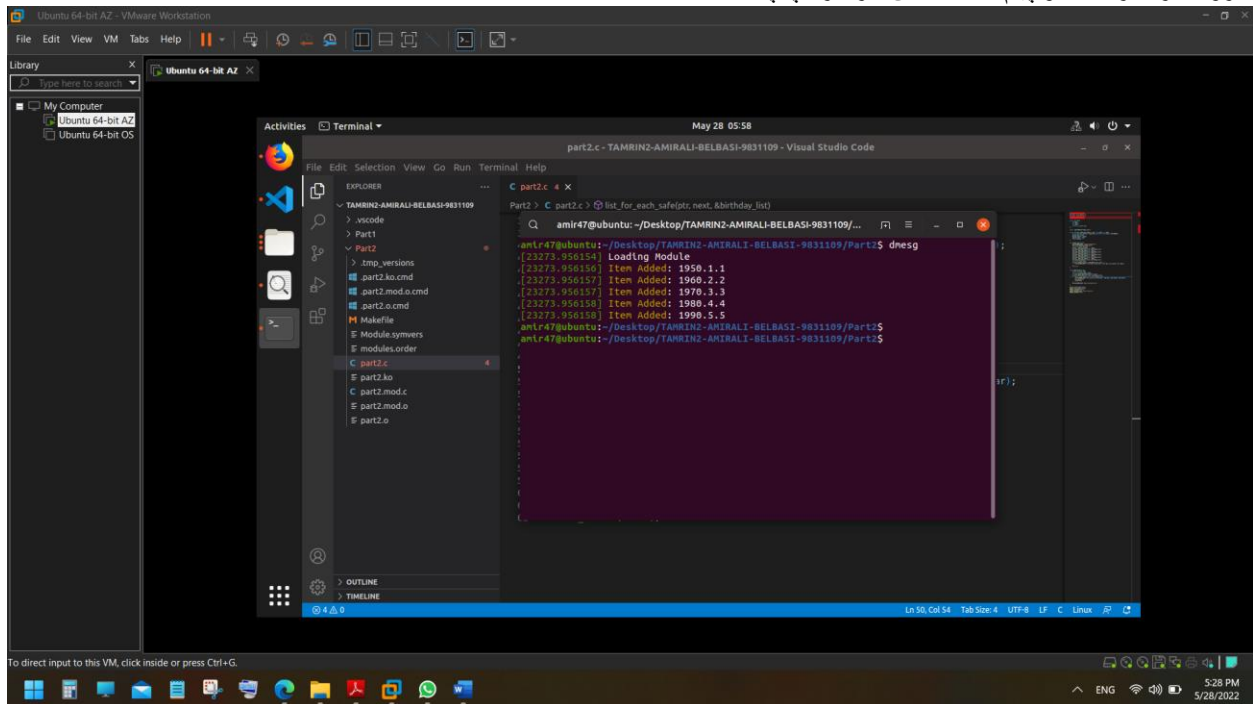
```
part.c: code - Visual Studio Code
1 #include <linux/init.h>
2 #inc
3 #inc
4 3.744373 [drm] SM4_1: yes.
5 int 3.751042 fbcon: svgadrmfb (fb0) is primary device
6 { 3.757570 Console: switching to colour frame buffer device 100x37
7 { 3.763261 [drm] Initialized vmwgfx 2.15.0 20180704 for 0000:00:0f:0 on mmo
8 r 0
9 { 4.050172 RAPL PMU: API unit is 2^-32 Joules, 5 fixed counters, 10737418240
10 4.050173 RAPL PMU: hw unit of domain pp0-core 2^-0 Joules
11 void { 4.050173 RAPL PMU: hw unit of domain package 2^-0 Joules
12 { 4.050173 RAPL PMU: hw unit of domain dram 2^-0 Joules
13 { 4.050174 RAPL PMU: hw unit of domain ppi-gpu 2^-0 Joules
14 { 4.050174 RAPL PMU: hw unit of domain psys 2^-0 Joules
15 { 4.050503 cryptd: max_cpu_qlen set to 1000
16 modu 4.083171 AVX2 version of gcm_enc/dec engaged.
17 modu 4.083172 AES CTR mode by8 optimization enabled
18 MODU 16.898483 rfkll: input handler disabled
19 MODU 18.487699 ISO 9660 Extensions: Microsoft Joliet Level 3
20 MODU 18.514885 ISO 9660 Extensions: RRIIP_1991A
[ 3230.775940] partii: loading out-of-tree module taints kernel.
[ 3230.775950] partii: module verification failed: signature and/or required key
missing - tainting kernel
[ 3230.777820] Loading Module
[ 3517.738891] Removing Module
amir47@ubuntu:~/Desktop/code$
```

ماژول از لیست حذف شد:



## Part2:

ماژول بارگذاری شد و پیام اضافه شدن هر گره چاپ شد:



ماژول برداشته شد و گره ها تک تک از لیست حذف شدند:

