

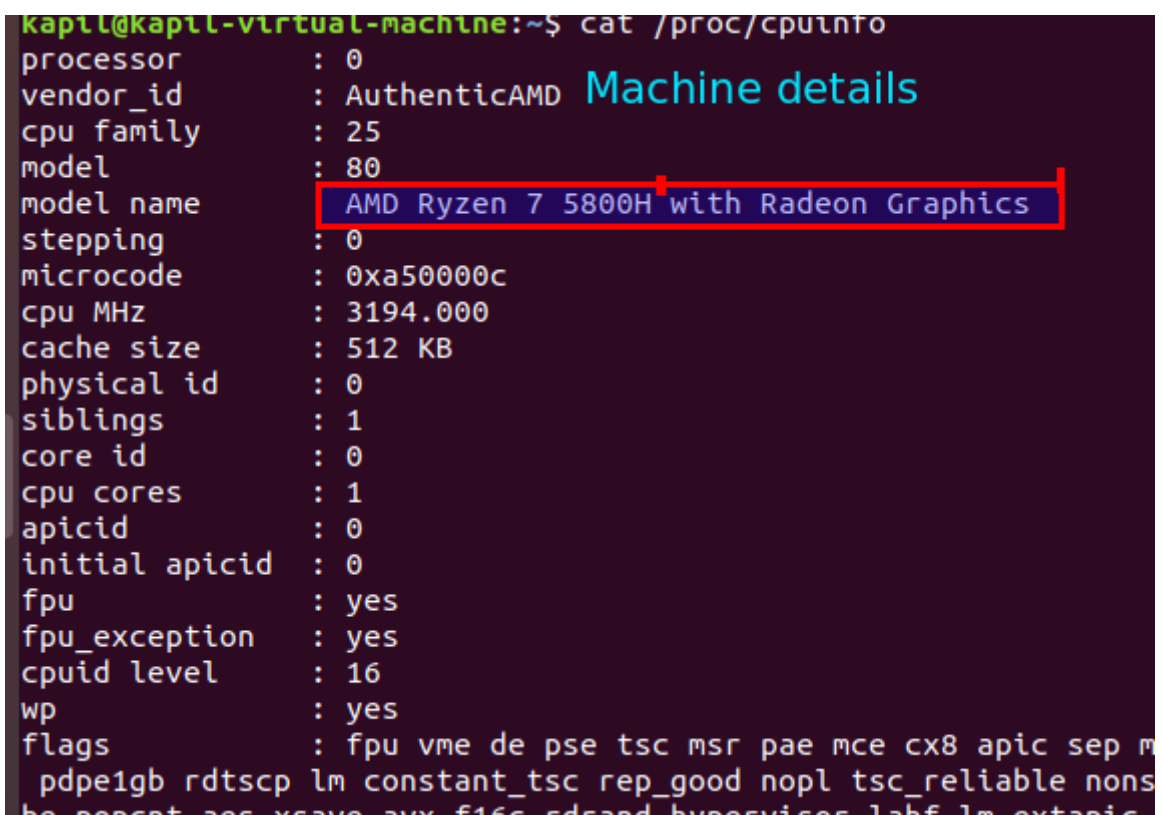
# Assignment 1

## CPU Information

- **command used**

1. **output=**

```
cat /proc/cpuinfo
```



```
kaptl@kaptl-virtual-machine:~$ cat /proc/cpuinfo
processor       : 0
vendor_id      : AuthenticAMD
cpu family     : 25
model          : 80
model name     : AMD Ryzen 7 5800H with Radeon Graphics
stepping       : 0
microcode      : 0xa50000c
cpu MHz        : 3194.000
cache size     : 512 KB
physical id    : 0
siblings       : 1
core id        : 0
cpu cores      : 1
apicid         : 0
initial apicid : 0
fpu            : yes
fpu_exception  : yes
cpuid level    : 16
wp             : yes
flags           : fpu vme de pse tsc msr pae mce cx8 apic sep m
pdpe1gb rdtscp lm constant_tsc rep_good noopl tsc_reliable nons
bo repnt_200 xsave avx f16c rdrand hypervisor labf lm extapic
```

Machine details

2. **output=**

```
lsb_release -a
```

```
kapil@kapil-virtual-machine: ~
File Edit View Search Terminal Help
kapil@kapil-virtual-machine:~$ lsb_release
No LSB modules are available.
kapil@kapil-virtual-machine:~$ lsb_release-a
lsb_release-a: command not found
kapil@kapil-virtual-machine:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 18.04.6 LTS
Release:        18.04
Codename:       bionic
kapil@kapil-virtual-machine:~$
```

EXPLANATION OF OS USING

### 3. output=

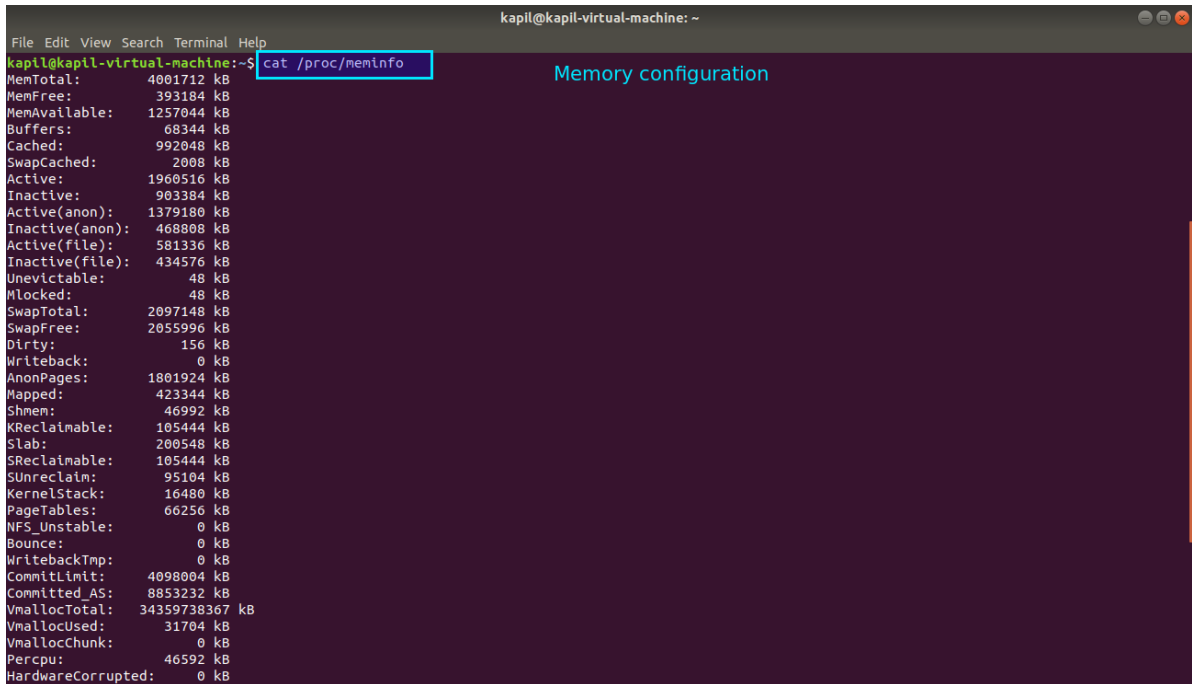
```
uname -ra
```

```
kapil@kapil-virtual-machine: ~
File Edit View Search Terminal Help
kapil@kapil-virtual-machine:~$ lsb_release
No LSB modules are available.
kapil@kapil-virtual-machine:~$ lsb_release-a
lsb_release-a: command not found
kapil@kapil-virtual-machine:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 18.04.6 LTS
Release:        18.04
Codename:       bionic
kapil@kapil-virtual-machine:~$ uname -r
5.4.0-90-generic
kapil@kapil-virtual-machine:~$ uname -ra
Linux kapil-virtual-machine 5.4.0-90-generic #101~18.04.1-Ubuntu SMP Fri Oct 22
09:25:04 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
kapil@kapil-virtual-machine:~$
```

linux host name and os details

## 4. output=

```
cat /proc/meminfo
```

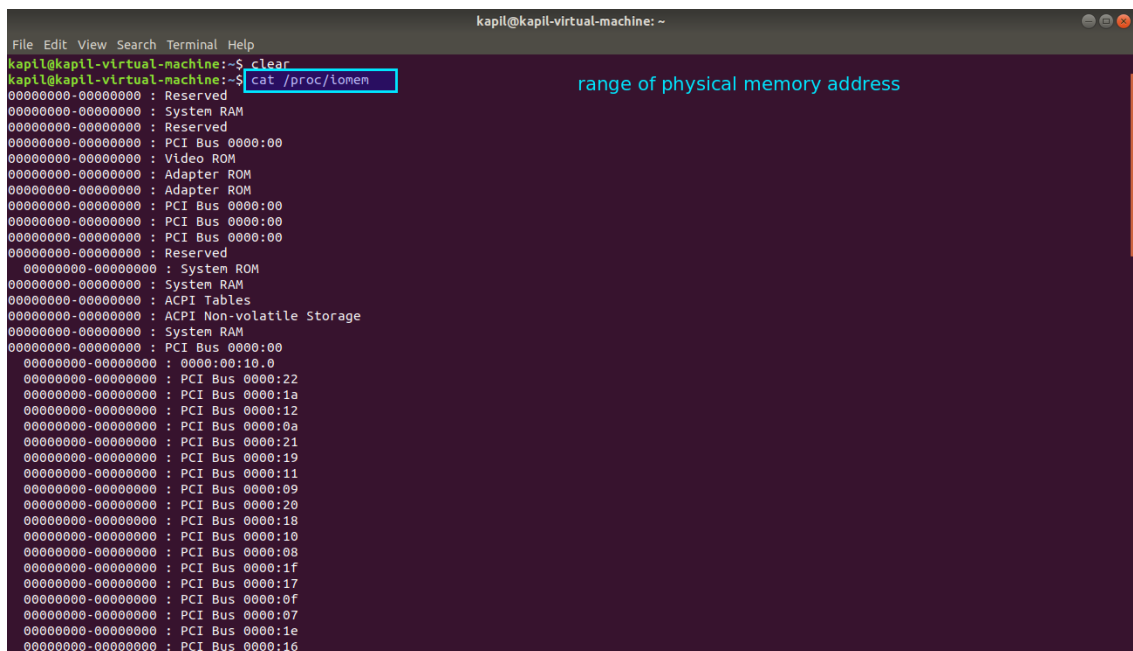


```
File Edit View Search Terminal Help
kapil@kapil-virtual-machine:~$ cat /proc/meminfo
MemTotal: 4001712 kB
MemFree: 393184 kB
MemAvailable: 1257044 kB
Buffers: 68344 kB
Cached: 992048 kB
SwapCached: 2008 kB
Active: 1960516 kB
Inactive: 903384 kB
Active(anon): 1379180 kB
Inactive(anon): 468808 kB
Active(file): 581336 kB
Inactive(file): 434576 kB
Unevictable: 48 kB
Mlocked: 48 kB
SwapTotal: 2097148 kB
SwapFree: 2055996 kB
Dirty: 156 kB
Writeback: 0 kB
AnonPages: 1801924 kB
Mapped: 423344 kB
Shmem: 46992 kB
KReclaimable: 105444 kB
Slab: 200548 kB
SReclaimable: 105444 kB
SUnreclaim: 95104 kB
KernelStack: 16480 kB
PageTables: 66256 kB
NFS_Unstable: 0 kB
Bounce: 0 kB
WritebackTmp: 0 kB
CommitLimit: 4098004 kB
Committed_AS: 8853232 kB
VmallocTotal: 34359738367 kB
VmallocUsed: 31704 kB
VmallocChunk: 0 kB
Percpu: 46592 kB
HardwareCorrupted: 0 kB
```

Memory configuration

## 5. output=

```
cat /proc/iomem
```

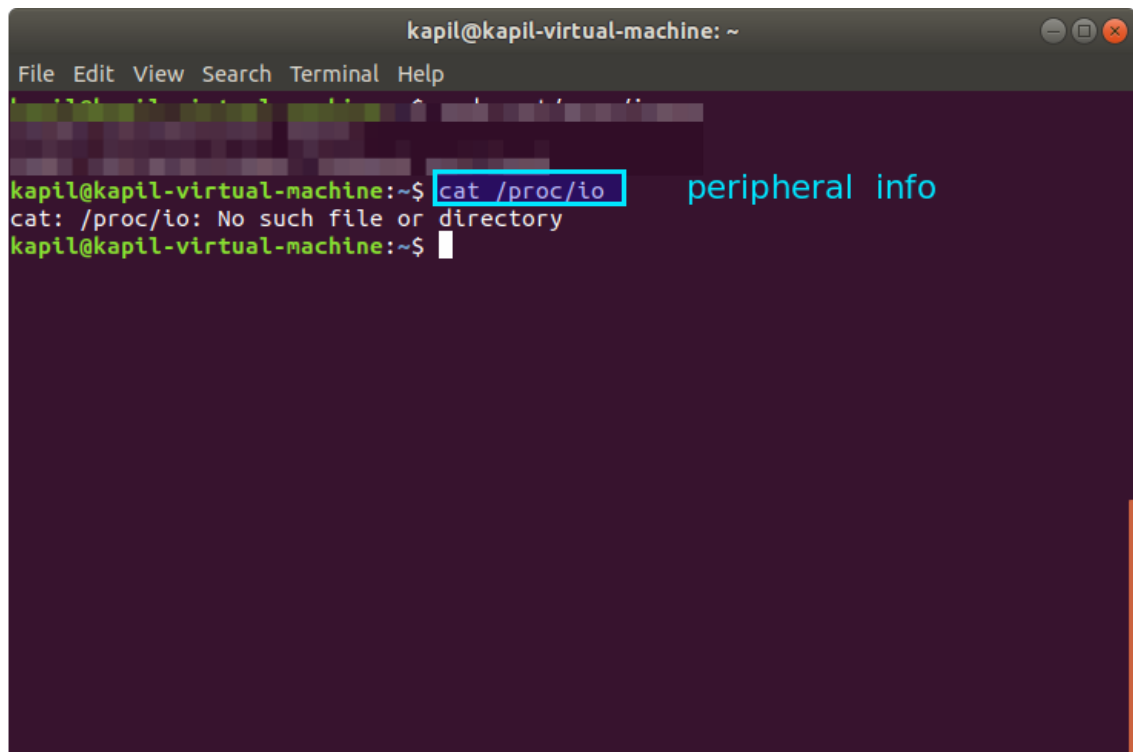


```
File Edit View Search Terminal Help
kapil@kapil-virtual-machine:~$ clear
kapil@kapil-virtual-machine:~$ cat /proc/iomem
00000000-00000000 : Reserved
00000000-00000000 : System RAM
00000000-00000000 : Reserved
00000000-00000000 : PCI Bus 0000:00
00000000-00000000 : Video ROM
00000000-00000000 : Adapter ROM
00000000-00000000 : Adapter ROM
00000000-00000000 : PCI Bus 0000:00
00000000-00000000 : PCI Bus 0000:00
00000000-00000000 : PCI Bus 0000:00
00000000-00000000 : Reserved
00000000-00000000 : System ROM
00000000-00000000 : System RAM
00000000-00000000 : ACPI Tables
00000000-00000000 : ACPI Non-volatile Storage
00000000-00000000 : System RAM
00000000-00000000 : PCI Bus 0000:00
00000000-00000000 : 0000:00:10.0
00000000-00000000 : PCI Bus 0000:22
00000000-00000000 : PCI Bus 0000:1a
00000000-00000000 : PCI Bus 0000:12
00000000-00000000 : PCI Bus 0000:0a
00000000-00000000 : PCI Bus 0000:21
00000000-00000000 : PCI Bus 0000:19
00000000-00000000 : PCI Bus 0000:11
00000000-00000000 : PCI Bus 0000:09
00000000-00000000 : PCI Bus 0000:20
00000000-00000000 : PCI Bus 0000:18
00000000-00000000 : PCI Bus 0000:10
00000000-00000000 : PCI Bus 0000:08
00000000-00000000 : PCI Bus 0000:1f
00000000-00000000 : PCI Bus 0000:17
00000000-00000000 : PCI Bus 0000:0f
00000000-00000000 : PCI Bus 0000:07
00000000-00000000 : PCI Bus 0000:1e
00000000-00000000 : PCI Bus 0000:16
```

range of physical memory address

## 6. output=

```
cat /proc/io
```

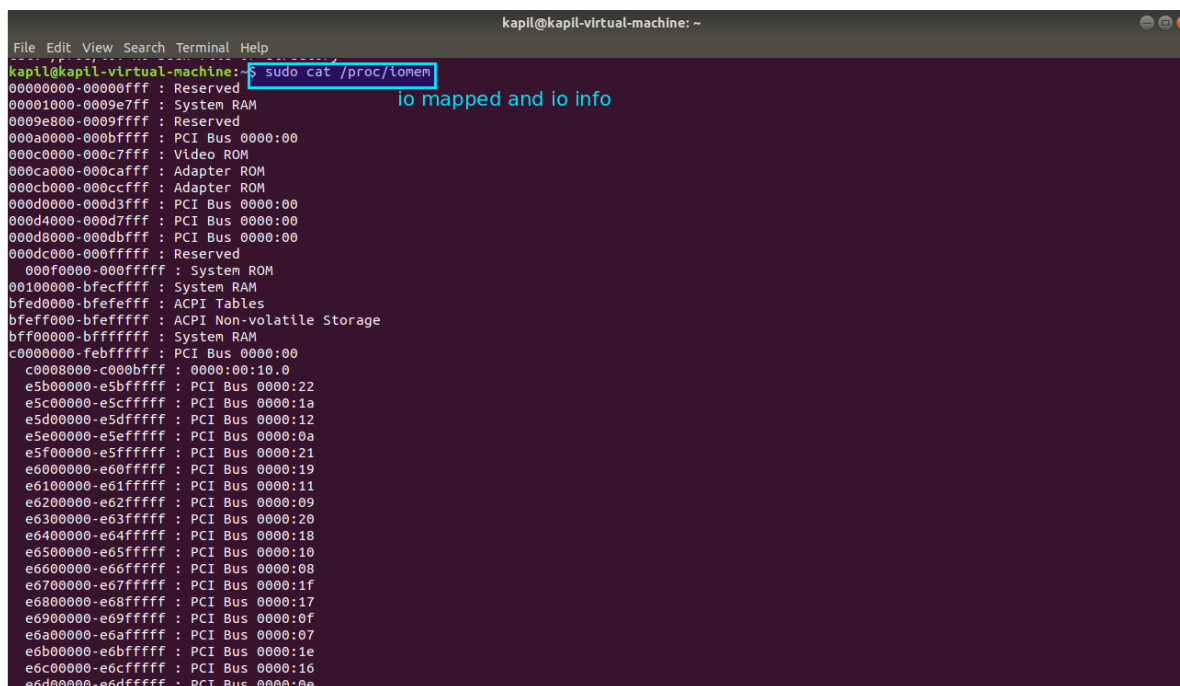


```
kapil@kapil-virtual-machine: ~  
File Edit View Search Terminal Help  
kapil@kapil-virtual-machine:~$ cat /proc/io  
cat: /proc/io: No such file or directory  
kapil@kapil-virtual-machine:~$
```

peripheral info

## 7. output=

```
sudo cat /proc/iomem
```

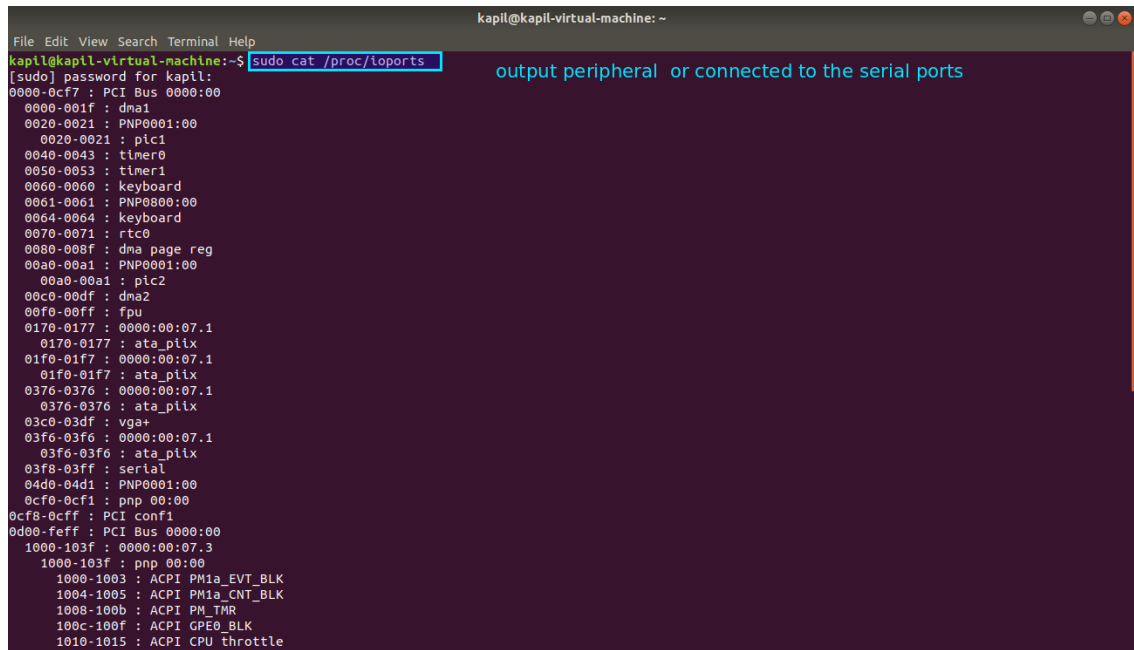


```
kapil@kapil-virtual-machine:~$ sudo cat /proc/iomem  
00000000-00000fff : Reserved  
00001000-0000e7ff : System RAM  
0000e800-0000ffff : Reserved  
0000a000-0000bfff : PCI Bus 0000:00  
0000c000-0000cfff : Video ROM  
0000ca00-0000cafff : Adapter ROM  
0000cb00-0000cbfff : Adapter ROM  
0000d000-0000d3fff : PCI Bus 0000:00  
0000d400-0000d7fff : PCI Bus 0000:00  
0000d800-0000dbfff : PCI Bus 0000:00  
0000dc00-0000dcfff : Reserved  
0000e000-0000e3fff : System ROM  
0000e400-0000e7fff : System RAM  
0000e800-0000e8fff : ACPI Tables  
0000e900-0000e9fff : ACPI Non-volatile Storage  
0000ea00-0000eafff : System RAM  
0000eb00-0000ebfff : PCI Bus 0000:00  
0000ec00-0000ecfff : 0000:00:10.0  
0000ed00-0000edfff : PCI Bus 0000:22  
0000ee00-0000eefff : PCI Bus 0000:1a  
0000ef00-0000effff : PCI Bus 0000:12  
0000f000-0000f0fff : PCI Bus 0000:0a  
0000f100-0000f1fff : PCI Bus 0000:21  
0000f200-0000f2fff : PCI Bus 0000:19  
0000f300-0000f3fff : PCI Bus 0000:11  
0000f400-0000f4fff : PCI Bus 0000:09  
0000f500-0000f5fff : PCI Bus 0000:20  
0000f600-0000f6fff : PCI Bus 0000:18  
0000f700-0000f7fff : PCI Bus 0000:10  
0000f800-0000f8fff : PCI Bus 0000:08  
0000f900-0000f9fff : PCI Bus 0000:1f  
0000fa00-0000fafff : PCI Bus 0000:17  
0000fb00-0000fbfff : PCI Bus 0000:0f  
0000fc00-0000fcfff : PCI Bus 0000:07  
0000fd00-0000fdfff : PCI Bus 0000:1e  
0000fe00-0000fefff : PCI Bus 0000:16  
0000ff00-0000fffff : PCI Bus 0000:0e
```

io mapped and io info

## 8. output=

```
sudo cat /proc/ioproports
```



A terminal window titled 'kapil@kapil-virtual-machine: ~' showing the command 'sudo cat /proc/ioproports' being executed. The output lists various I/O ports and their associated devices. A blue box highlights the command in the terminal. To the right of the terminal, the text 'output peripheral or connected to the serial ports' is displayed.

```
File Edit View Search Terminal Help
kapil@kapil-virtual-machine:~$ sudo cat /proc/ioproports
[sudo] password for kapil:
0000-0cf7 : PCI Bus 0000:00
0000-001f : dma1
0020-0021 : PNP0001:00
0020-0021 : pic1
0040-0043 : timer0
0050-0053 : timer1
0060-0060 : keyboard
0061-0061 : PNP0800:00
0064-0064 : keyboard
0070-0071 : rtc0
0080-008f : dma page reg
00a0-00a1 : PNP0001:00
00a0-00a1 : pic2
00c0-00df : dma2
00f0-00ff : fpu
0170-0177 : 0000:00:07.1
0170-0177 : ata_piix
01f0-01f7 : 0000:00:07.1
01f0-01f7 : ata_piix
0376-0376 : 0000:00:07.1
0376-0376 : ata_piix
03c0-03df : vga+
03f6-03f6 : 0000:00:07.1
03f6-03f6 : ata_piix
03f8-03ff : serial
04d0-04d1 : PNP0001:00
0cf0-0cf1 : pnp 00:00
0cf8-0cff : PCI conf1
0d00-feff : PCI Bus 0000:00
1000-103f : 0000:00:07.3
1000-103f : pnp 00:00
1000-1003 : ACPI PM1a_EVT_BLK
1004-1005 : ACPI PM1a_CNT_BLK
1008-100b : ACPI PM_TMR
100c-100f : ACPI GPE0_BLK
1010-1015 : ACPI CPU Throttle
```