- Identify the current USB devices (hint. : `lsusb`)

```
radwa@Ubunto:~/Desktop$ lsusb
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 002: ID 80ee:0021 VirtualBox USB Tablet
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
radwa@Ubunto:~/Desktop$
```

- Count how many CPUs (cores) on your device. (hint: `/proc/cpuinfo`)

```
radwa@Ubunto:~/Desktop$ cat /proc/cpuinfo | grep processor | wc -l
1
```

- Take a snapshot of current disk statistics 5 times with 2 seconds interval. (hint: `iostat`)

```
radwa@Ubunto:~/Desktop$ sudo apt install sysstat
[sudo] password for radwa:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove it.
Suggested packages:
  isag
The following NEW packages will be installed:
  sysstat
0 upgraded, 1 newly installed, 0 to remove and 193 not upgraded.
Need to get 487 kB of archives.
After this operation, 1,507 kB of additional disk space will be used.
Get:1 http://eg.archive.ubuntu.com/ubuntu jammy-updates/main amd64 sysstat amd64
 12.5.2-2ubuntu0.1 [487 kB]
Fetched 487 kB in 1s (506 kB/s)
Preconfiguring packages ...
Selecting previously unselected package sysstat.
(Reading database ... 231778 files and directories currently installed.)
Preparing to unpack .../sysstat_12.5.2-2ubuntu0.1_amd64.deb ...
Unpacking sysstat (12.5.2-2ubuntu0.1) ...
Setting up sysstat (12.5.2-2ubuntu0.1) ...

Creating config file /etc/default/sysstat with new version
update-alternatives: using /usr/bin/sar.sysstat to provide /usr/bin/sar (sar) in
 auto mode
Created symlink /etc/systemd/system/sysstat.service.wants/sysstat-collect.timer
→/lib/systemd/system/sysstat-collect.timer.
Created symlink /etc/systemd/system/sysstat.service.wants/sysstat-summary.timer
→/lib/systemd/system/sysstat-summary.timer.
Created symlink /etc/systemd/system/multi-user.target.wants/sysstat.service →/l
ib/systemd/system/sysstat.service.

Progress: [ 60%] [#################################.....................]
```

```
                                  (27102-1) ...
radwa@Ubunto:~/Desktop$ iostat -d 2 5
Linux 5.15.0-60-generic (Ubunto)        04/02/2023       _x86_64_        (1 CPU)

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_w
rtn    kB_dscd
loop0            0.02        0.03        0.00        0.00         17
  0        0
loop1            0.09        0.62        0.00        0.00        362
  0        0
loop10           1.95       24.74        0.00        0.00      14443
  0        0
loop11           1.01       10.72        0.00        0.00       6260
  0        0
loop12           0.07        0.60        0.00        0.00        349
  0        0
loop13           0.08        0.62        0.00        0.00        362
  0        0
loop14           0.07        0.60        0.00        0.00        348
  0        0
loop15           1.21       42.63        0.00        0.00      24886
  0        0
loop16           0.03        0.09        0.00        0.00         54
  0        0
loop17           0.05        0.44        0.00        0.00        259
  0        0
loop18           0.02        0.02        0.00        0.00         14
  0        0
loop2            0.08        0.60        0.00        0.00        348
  0        0
loop3            0.10        1.86        0.00        0.00       1083
  0        0
loop4            0.60        7.68        0.00        0.00       4483
  0        0
loop5            0.09        1.84        0.00        0.00       1074
  0        0
loop6            0.10        1.92        0.00        0.00       1122
  0        0
loop7            0.09        1.84        0.00        0.00       1073
  0        0
loop8            0.10        1.88        0.00        0.00       1095
  0        0
loop9            0.10        1.82        0.00        0.00       1065
```

- measure the network activities using (hint: `nicstat`)

```
radwa@Ubunto:~/Desktop$ sudo apt install nicstat
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
  nicstat
0 upgraded, 1 newly installed, 0 to remove and 193 not upgraded.
Need to get 18.2 kB of archives.
After this operation, 54.3 kB of additional disk space will be used.
Get:1 http://eg.archive.ubuntu.com/ubuntu jammy/main amd64 nicstat amd64 1.95-1b
uild3 [18.2 kB]
Fetched 18.2 kB in 0s (72.1 kB/s)
Selecting previously unselected package nicstat.
(Reading database ... 231840 files and directories currently installed.)
Preparing to unpack .../nicstat_1.95-1build3_amd64.deb ...
Unpacking nicstat (1.95-1build3) ...
Setting up nicstat (1.95-1build3) ...
Processing triggers for man-db (2.10.2-1) ...
```

```
radwa@Ubunto:~/Desktop$ ifconfig -a
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::300a:7367:832:f463  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:85:dd:dc  txqueuelen 1000  (Ethernet)
        RX packets 460  bytes 579110 (579.1 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 435  bytes 49179 (49.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 140  bytes 12071 (12.0 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 140  bytes 12071 (12.0 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

```
radwa@Ubunto:~/Desktop$ nicstat -z -t -n -i enp0s3
15:28:26    InKB   OutKB   InSeg  OutSeg Reset  AttF %ReTX InConn OutCon Drops
TCP         0.00    0.00    0.42    0.40  0.00  0.00 0.000   0.00   0.01  0.00
```

- List current PCI devices on your device (hint: `lspci`)

```
radwa@Ubunto:~/Desktop$ lspci
00:00.0 Host bridge: Intel Corporation 440FX - 82441FX PMC [Natoma] (rev 02)
00:01.0 ISA bridge: Intel Corporation 82371SB PIIX3 ISA [Natoma/Triton II]
00:01.1 IDE interface: Intel Corporation 82371AB/EB/MB PIIX4 IDE (rev 01)
00:02.0 VGA compatible controller: VMware SVGA II Adapter
00:03.0 Ethernet controller: Intel Corporation 82540EM Gigabit Ethernet Controll
er (rev 02)
00:04.0 System peripheral: InnoTek Systemberatung GmbH VirtualBox Guest Service
00:05.0 Multimedia audio controller: Intel Corporation 82801AA AC'97 Audio Contr
oller (rev 01)
00:06.0 USB controller: Apple Inc. KeyLargo/Intrepid USB
00:07.0 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI (rev 08)
00:0b.0 USB controller: Intel Corporation 82801FB/FBM/FR/FW/FRW (ICH6 Family) US
B2 EHCI Controller
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH8M/ICH8M-E) SATA Cont
roller [AHCI mode] (rev 02)
```

- List all files which are compressed by ZIP utilities

```
radwa@Ubunto:~/Desktop$ sudo find / -name "*.zip" -type f 2>/dev/null
/usr/share/libreoffice/share/config/images_helpimg.zip
/usr/share/libreoffice/share/config/images_colibre.zip
/usr/share/libreoffice/share/config/images_breeze_dark.zip
/usr/share/libreoffice/share/config/images_breeze_svg.zip
/usr/share/libreoffice/share/config/images_yaru_svg.zip
/usr/share/libreoffice/share/config/images_yaru.zip
/usr/share/libreoffice/share/config/images_breeze.zip
/usr/share/libreoffice/share/config/images_elementary.zip
/usr/share/libreoffice/share/config/images_breeze_dark_svg.zip
/usr/share/libreoffice/share/config/images_elementary_svg.zip
/usr/share/libreoffice/share/config/images_yaru_mate.zip
/usr/share/libreoffice/share/config/images_yaru_mate_svg.zip
```

- Using `grep` and `regex` list all lines containing hex numbers on a `/var/log/syslog`

```
radwa@Ubunto:~/Desktop$ sudo grep -e "0x" /var/log/syslog
Apr  2 15:19:21 Ubunto kernel: [  261.411530] audit: type=1326 audit(1680441561.354:52): au
id=1000 uid=1000 gid=1000 ses=4 subj=snap.snapd-desktop-integration.snapd-desktop-integrati
on pid=2002 comm="snapd-desktop-i" exe="/snap/snapd-desktop-integration/57/usr/bin/snapd-de
sktop-integration" sig=0 arch=c000003e syscall=314 compat=0 ip=0x7f6e99454a3d code=0x50000
```