```
┌──(h1p㊉H1p-PC)-[~]
└─$ ls
BF_shell  Desktop  Documents  Downloads  file.txt  HackTheBox  Music  Note  Pictures  Project

┌──(h1p㊉H1p-PC)-[~]
└─$ mkdir ~/UTM/OS/Lab_3

┌──(h1p㊉H1p-PC)-[~]
└─$ ls ~/UTM/OS/
Chirita_Stanislav_SI_211_Lab1.docx  Chirita_Stanislav_SI_211_Lab2.docx  Lab_2  Lab_3

┌──(h1p㊉H1p-PC)-[~]
└─$ cd UTM/OS/Lab_
bash: cd: UTM/OS/Lab_: No such file or directory

┌──(h1p㊉H1p-PC)-[~]
└─$ cd UTM/OS/Lab_3

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$
```

1.

```
┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ export PATH=blah

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ echo $PATH
blah

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ ls
Command 'ls' is available in the following places
 * /bin/ls
 * /usr/bin/ls
The command could not be located because '/bin:/usr/bin' is not included in the PATH environment variable.
ls: command not found

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$
```

2.

2.1

```
┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ export PATH=/usr/local/sbin:/usr/sbin:/sbin:/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/games:/home/h1p/.dotnet/tools

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ echo $PATH
/usr/local/sbin:/usr/sbin:/sbin:/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/games:/home/h1p/.dotnet/tools

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ export PATH=$PATH:/blah

┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ echo $PATH
/usr/local/sbin:/usr/sbin:/sbin:/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/games:/home/h1p/.dotnet/tools:/blah
```

2.3

```
┌──(h1p㊉H1p-PC)-[~/UTM/OS/Lab_3]
└─$ echo $HOME
/home/h1p
```

2.4

```
┌──(h1p☬H1p-PC)-[~/UTM/OS/Lab_3]
└─$ cd /home/utilizator_dorit/
█
```

2.5

```
┌──(h1p☬H1p-PC)-[~/UTM/OS/Lab_3]
└─$ cd /var/tmp/ ; cd /usr/share/
```

2.6

```
┌──(h1p☬H1p-PC)-[/usr/share]
└─$ cd doc

┌──(h1p☬H1p-PC)-[/usr/share/doc]
└─$ pwd
/usr/share/doc

┌──(h1p☬H1p-PC)-[/usr/share/doc]
└─$ █
```

3

```
┌──(h1p☬H1p-PC)-[~]
└─$ cd /proc

┌──(h1p☬H1p-PC)-[/proc]
└─$ █
```

3.1

```
┌──(h1p☺H1p-PC)-[/proc]
└─$ cat meminfo
MemTotal:        7943512 kB
MemFree:         1060404 kB
MemAvailable:    3313676 kB
Buffers:          162508 kB
Cached:          2959388 kB
SwapCached:            0 kB
Active:          4440264 kB
Inactive:        1333588 kB
Active(anon):    2943576 kB
Inactive(anon):   460368 kB
Active(file):    1496688 kB
Inactive(file):   873220 kB
Unevictable:      659600 kB
Mlocked:              32 kB
SwapTotal:       1000444 kB
SwapFree:        1000444 kB
Zswap:                 0 kB
Zswapped:              0 kB
Dirty:             14212 kB
Writeback:             4 kB
AnonPages:       3230628 kB
Mapped:           752320 kB
Shmem:            751988 kB
KReclaimable:     196720 kB
Slab:             294452 kB
```

```
┌──(h1p☺H1p-PC)-[/proc]
└─$ free -m
               total        used        free      shared  buff/cache   available
Mem:            7757        4501        1052         762        3271        3255
Swap:            976           0         976
```

3.2

```
┌──(h1p⊛ H1p-PC)-[/proc]
└─$ cat cpuinfo
processor       : 0
vendor_id       : GenuineIntel
cpu family      : 6
model           : 122
model name      : Intel(R) Celeron(R) N4100 CPU @ 1.10GHz
stepping        : 1
microcode       : 0×3e
cpu MHz         : 788.638
cache size      : 4096 KB
physical id     : 0
siblings        : 4
core id         : 0
cpu cores       : 4
apicid          : 0
initial apicid  : 0
fpu             : yes
fpu_exception   : yes
cpuid level     : 24
wp              : yes
```

```
┌──(h1p⊛ H1p-PC)-[/proc]
└─$ lscpu
Architecture:             x86_64
  CPU op-mode(s):         32-bit, 64-bit
  Address sizes:          39 bits physical, 48 bits virtual
  Byte Order:             Little Endian
CPU(s):                   4
  On-line CPU(s) list:    0-3
Vendor ID:                GenuineIntel
  Model name:             Intel(R) Celeron(R) N4100 CPU @ 1.10GHz
    CPU family:           6
    Model:                122
    Thread(s) per core:   1
    Core(s) per socket:   4
    Socket(s):            1
    Stepping:             1
    CPU(s) scaling MHz:   56%
```

3.3

```
┌──(h1p⊛ H1p-PC)-[/proc]
└─$ swapon -s
Filename                        Type        Size        Used        Priority
/dev/sda7                       partition   1000444     0           -2
```

3.4

```
┌──(h1p⊗H1p-PC)-[/proc]
└─$ lsmod
Module                     Size  Used by
ctr                        12288  2
ccm                        20480  6
ppdev                      24576  0
parport_pc                 40960  0
parport                    81920  2 parport_pc,ppdev
vmw_vsock_vmci_transport   45056  0
vsock                      61440  1 vmw_vsock_vmci_transport
vmw_vmci                  110592  1 vmw_vsock_vmci_transport
qrtr                       57344  4
sunrpc                    876544  1
binfmt_misc                28672  1
nls_ascii                  12288  1
snd_sof_pci_intel_apl      12288  0
nls_cp437                  16384  1
snd_sof_intel_hda_common  204800  1 snd_sof_pci_intel_apl
soundwire_intel            61440  1 snd_sof_intel_hda_common
soundwire_generic_allocation  12288  1 soundwire_intel
snd_sof_intel_hda_mlink    40960  2 soundwire_intel,snd_sof_intel_hda_common
vfat                       20480  1
soundwire_cadence          45056  1 soundwire_intel
fat                       102400  1 vfat
snd_sof_intel_hda          24576  1 snd_sof_intel_hda_common
snd_sof_pci                24576  2 snd_sof_intel_hda_common,snd_sof_pci_intel_apl
snd_sof_xtensa_dsp         16384  1 snd_sof_intel_hda_common
snd_sof                   356352  3 snd_sof_pci,snd_sof_intel_hda_common,snd_sof_intel_hda
btusb                      81920  0
snd_sof_utils              16384  1 snd_sof
btrtl                      28672  1 btusb
btbcm                      24576  1 btusb
soundwire_bus             114688  3 soundwire_intel,soundwire_generic_allocation,soundwire_cadence
btintel                    57344  1 btusb
btmtk                      12288  1 btusb
snd_soc_skl               204800  0
bluetooth                1126400  6 btrtl,btmtk,btintel,btbcm,btusb
```

3.4

```
┌──(h1p⊗H1p-PC)-[/proc]
└─$ uptime
 10:16:35 up 12:11,  3 users,  load average: 1,35, 1,03, 0,77
```

3.5

```
┌──(h1p💀 H1p-PC)-[/proc]
└─$ cat filesystems
nodev    sysfs
nodev    tmpfs
nodev    bdev
nodev    proc
nodev    cgroup
nodev    cgroup2
nodev    cpuset
nodev    devtmpfs
nodev    debugfs
nodev    tracefs
nodev    securityfs
nodev    sockfs
nodev    bpf
nodev    pipefs
nodev    ramfs
nodev    hugetlbfs
nodev    devpts
nodev    mqueue
nodev    resctrl
nodev    pstore
         ext3
         ext2
         ext4
nodev    autofs
nodev    efivarfs
nodev    configfs
         fuseblk
nodev    fuse
nodev    fusectl
         vfat
nodev    binfmt_misc
nodev    rpc_pipefs
```

3.6

```
┌──(h1p💀 H1p-PC)-[/etc/init.d]
└─$ pwd
/etc/init.d

┌──(h1p💀 H1p-PC)-[/etc/init.d]
└─$ ls
apache2              cron                haveged             mosquitto   plymouth                      redsocks        smartmontools       sudo
apache-htcacheclean  cryptdisks          inetsim             networking  plymouth-log                  rpcbind         smbd                sysstat
apparmor             cryptdisks-early    iodined             nfs-common  postgresql                    rsync           snmpd               udev
atftpd               dbus                keyboard-setup.sh   nginx       procps                        rwhod           speech-dispatcher   vmware
binfmt-support       dns2tcp             kmod                nmbd        ptunnel                       samba-ad-dc     ssh                 vmware-USBArbitrator
bluetooth            exim4               mariadb             openvpn     pulseaudio-enable-autospawn    screen-cleanup  sslh                x11-common
console-setup.sh     gdomap              miredo              pcscd       redis-server                  sddm            stunnel4
```

3.7

- 3.8

```
┌──(h1p㊿H1p-PC)-[/etc/init.d]
└─$ lsb_release -a
No LSB modules are available.
Distributor ID: Kali
Description:    Kali GNU/Linux Rolling
Release:        2023.3
Codename:       kali-rolling
```

3.9

```
┌──(h1p㊿H1p-PC)-[/etc/init.d]
└─$ ls /etc/ | grep "motd"
motd
update-motd.d

┌──(h1p㊿H1p-PC)-[/etc/init.d]
└─$ file /etc/motd
/etc/motd: ASCII text

┌──(h1p㊿H1p-PC)-[/etc/init.d]
└─$ cat /etc/motd

The programs included with the Kali GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
```

3.10

```
┌──(h1p㊿H1p-PC)-[/etc/init.d]
└─$ who | wc -l
3

┌──(h1p㊿H1p-PC)-[/etc/init.d]
└─$ who
h1p      tty1         2023-10-15 22:06
h1p      pts/0        2023-10-15 22:06 (:1)
h1p      pts/1        2023-10-16 00:52 (:1)
```

3.11

```
┌──(h1p☿ H1p-PC)-[/etc/init.d]
└─$ getent group | wc -l
85

┌──(h1p☿ H1p-PC)-[/etc/init.d]
└─$ getent group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:h1p
tty:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
kmem:x:15:
dialout:x:20:h1p
fax:x:21:
voice:x:22:
cdrom:x:24:h1p
floppy:x:25:h1p
tape:x:26:
sudo:x:27:h1p
audio:x:29:pulse,h1p
```

3.12

```
┌──(h1p☿ H1p-PC)-[/etc/init.d]
└─$ cat /etc/timezone
US/Eastern
```

3.13

```
┌──(h1p❀H1p-PC)-[/etc/init.d]
└─$ dpkg -L coreutils
/.
/bin
/bin/cat
/bin/chgrp
/bin/chmod
/bin/chown
/bin/cp
/bin/date
/bin/dd
/bin/df
/bin/dir
/bin/echo
/bin/false
/bin/ln
/bin/ls
/bin/mkdir
/bin/mknod
/bin/mktemp
/bin/mv
/bin/pwd
/bin/readlink
/bin/rm
/bin/rmdir
/bin/sleep
/bin/stty
/bin/sync
/bin/touch
/bin/true
/bin/uname
/bin/vdir
/usr
/usr/bin
/usr/bin/[
/usr/bin/arch
```

4. Raportul !!!