

05

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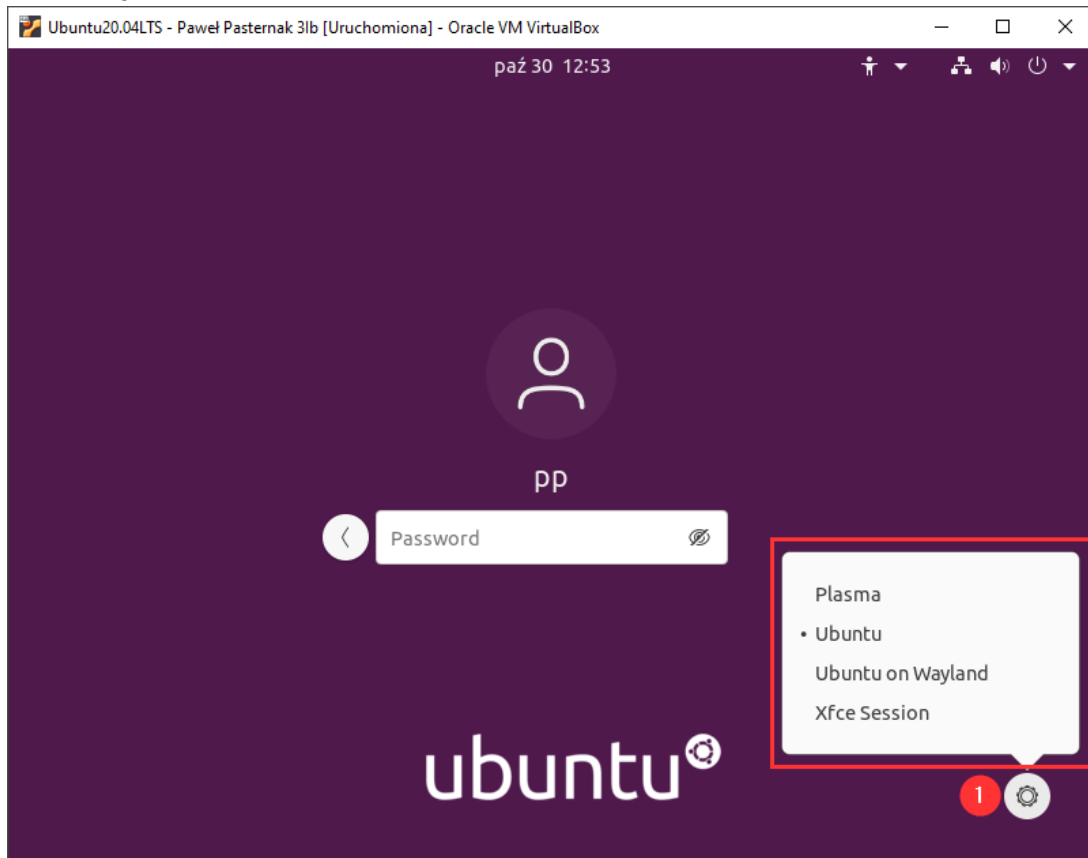
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1. Wyświetl Zainstalowane środowiska graficzne Linux

a) W konsoli (zawartość pliku)

```
pp@Pasternak2021: /usr/share/xsessions$  
ls  
plasma.desktop  ubuntu.desktop  xfce.desktop  
pp@Pasternak2021: /usr/share/xsessions$  
cat ubuntu.desktop  
[Desktop Entry]  
Name=Ubuntu  
Comment=This session logs you into Ubuntu  
Exec=env GNOME_SHELL_SESSION_MODE=ubuntu /usr/bin/gnome-  
session --systemd --session=ubuntu  
TryExec=/usr/bin/gnome-shell  
Type=Application  
DesktopNames=ubuntu:GNOME  
X-GDM-SessionRegisters=true  
X-Ubuntu-Gettext-Domain=gnome-session-3.0  
pp@Pasternak2021: /usr/share/xsessions$  
█
```

b) Przez GUI

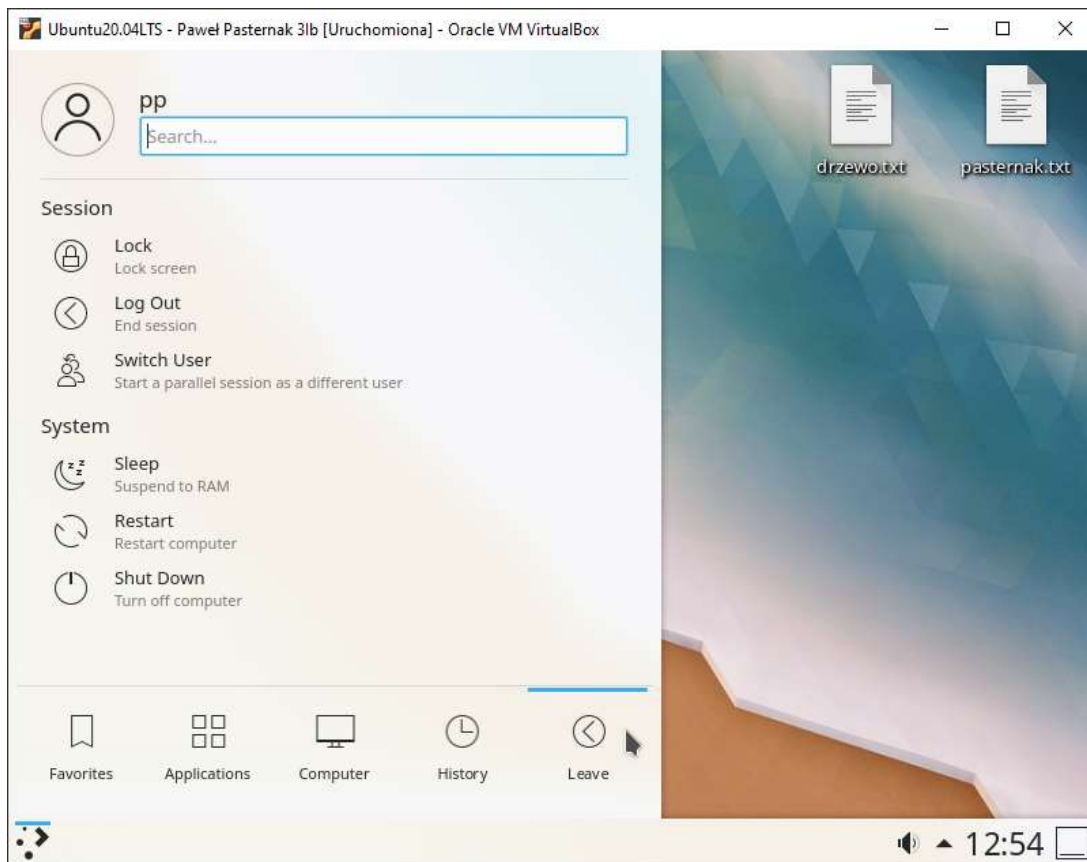


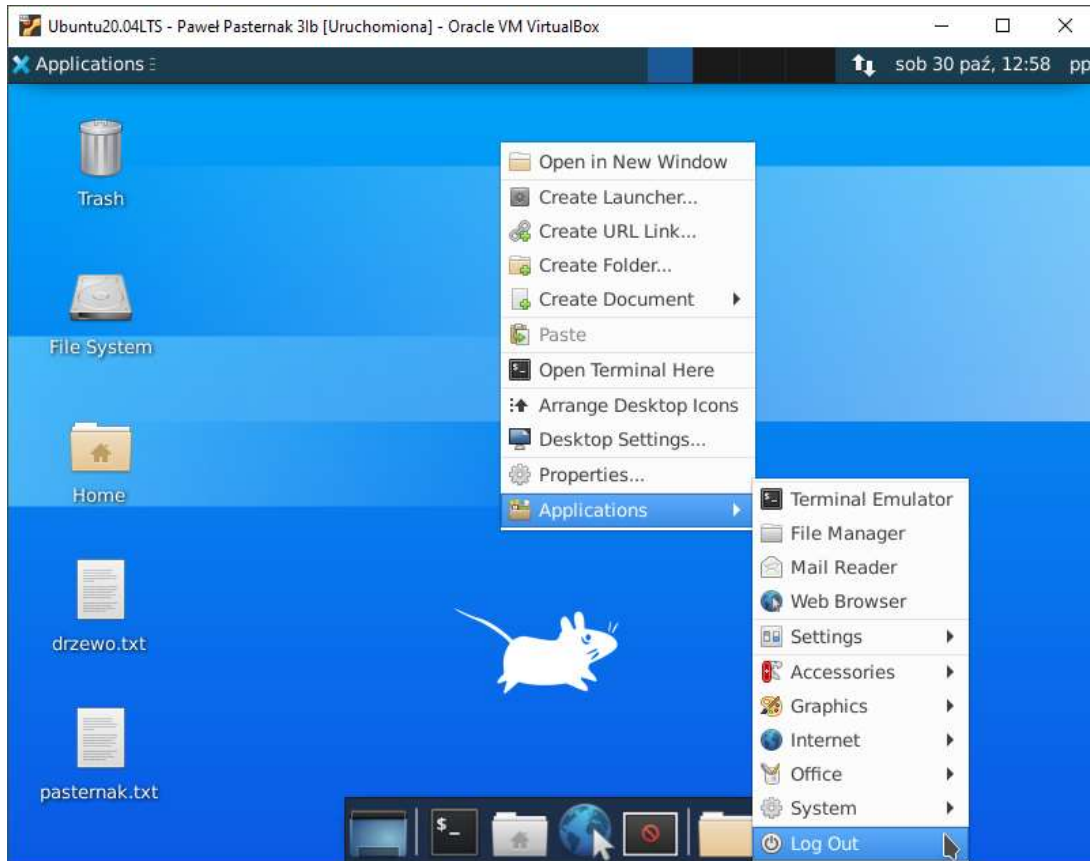
c) Doinstaluj 2 Nowe środowiska graficzne, przedstaw ich działanie

```

pp@Pasternak2021:/usr/share/xsessions$
sudo apt install xfce4-session
Reading package lists... Done
Building dependency tree
Reading state information... Done
xfce4-session is already the newest version (4.14.2-0ubuntu1).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
pp@Pasternak2021:/usr/share/xsessions$
sudo apt install kde-plasma-desktop
Reading package lists... Done
Building dependency tree
Reading state information... Done
kde-plasma-desktop is already the newest version (5:104ubuntu4).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
pp@Pasternak2021:/usr/share/xsessions$

```





d) Usuń jedno środowisko graficzne

```

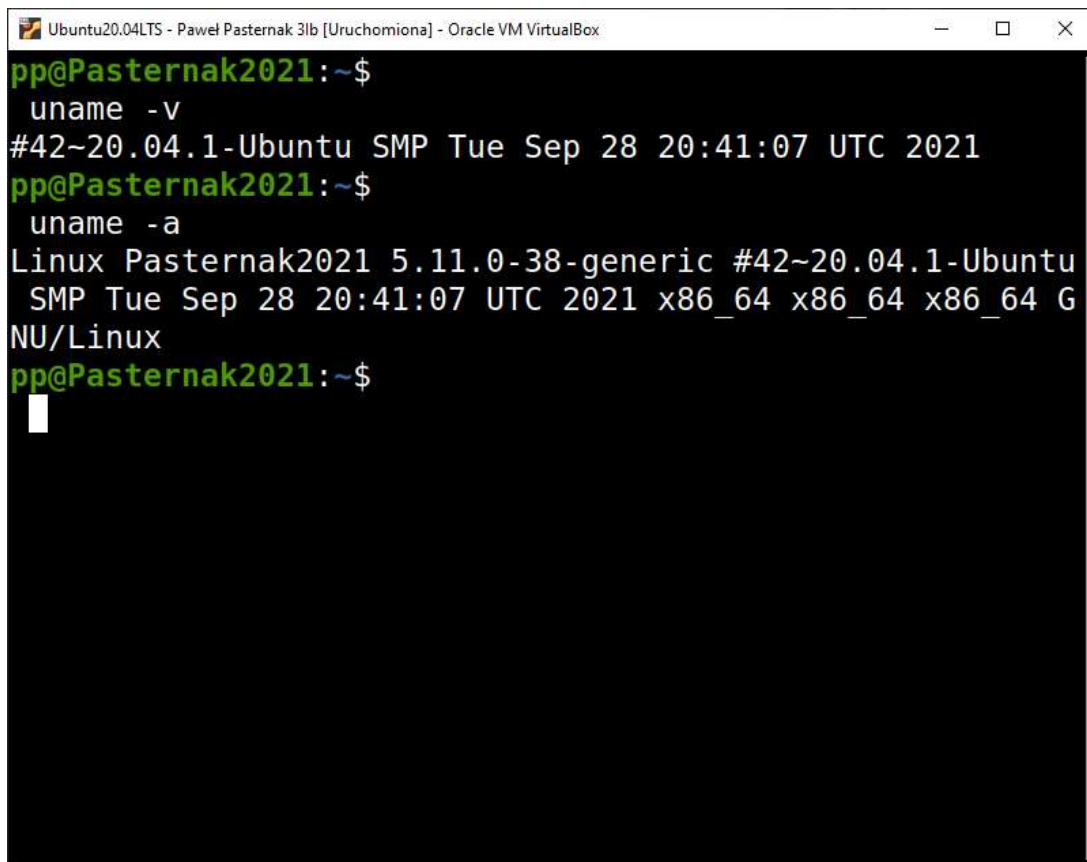
pp@Pasternak2021:~$ sudo apt purge xfce4-session
[sudo] password for pp:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and
are no longer required:
  accountsservice-ubuntu-schemas
  elementary-xfce-icon-theme gnome-screensaver
  greybird-gtk-theme indicator-applet
  indicator-appmenu indicator-bluetooth
  indicator-datetime indicator-keyboard
  indicator-messages indicator-power
  indicator-printers indicator-session indicator-sound
  jayatana libbamf3-2 libfcitx-config4
  libfcitx-gclient1 libfcitx-utils0 libgnome-panel0
  libido3-0.1-0 liblightdm-gobject-1-0
  libmessaging-menu0 libthunarx-3-0
  libunity-gtk2-parser0 libunity-settings-daemon1
  liburl-dispatcher1 light-locker
  light-locker-settings lightdm-gtk-greeter2-panel1
  lightdm-gtk-greeter2-panel1

```

2. Wyświetl podstawowe informacje o systemie

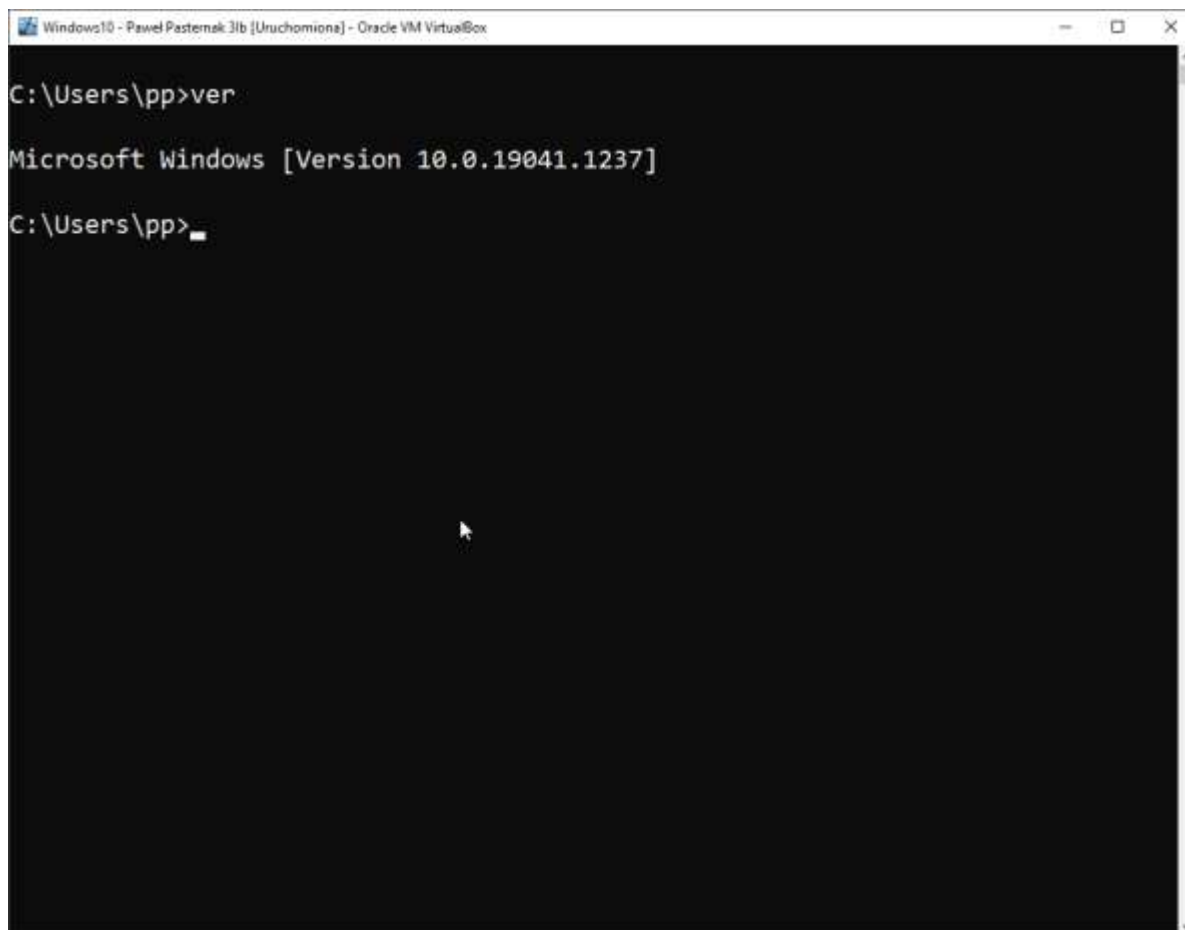
a) Informacja o wersji systemu

i. Linux

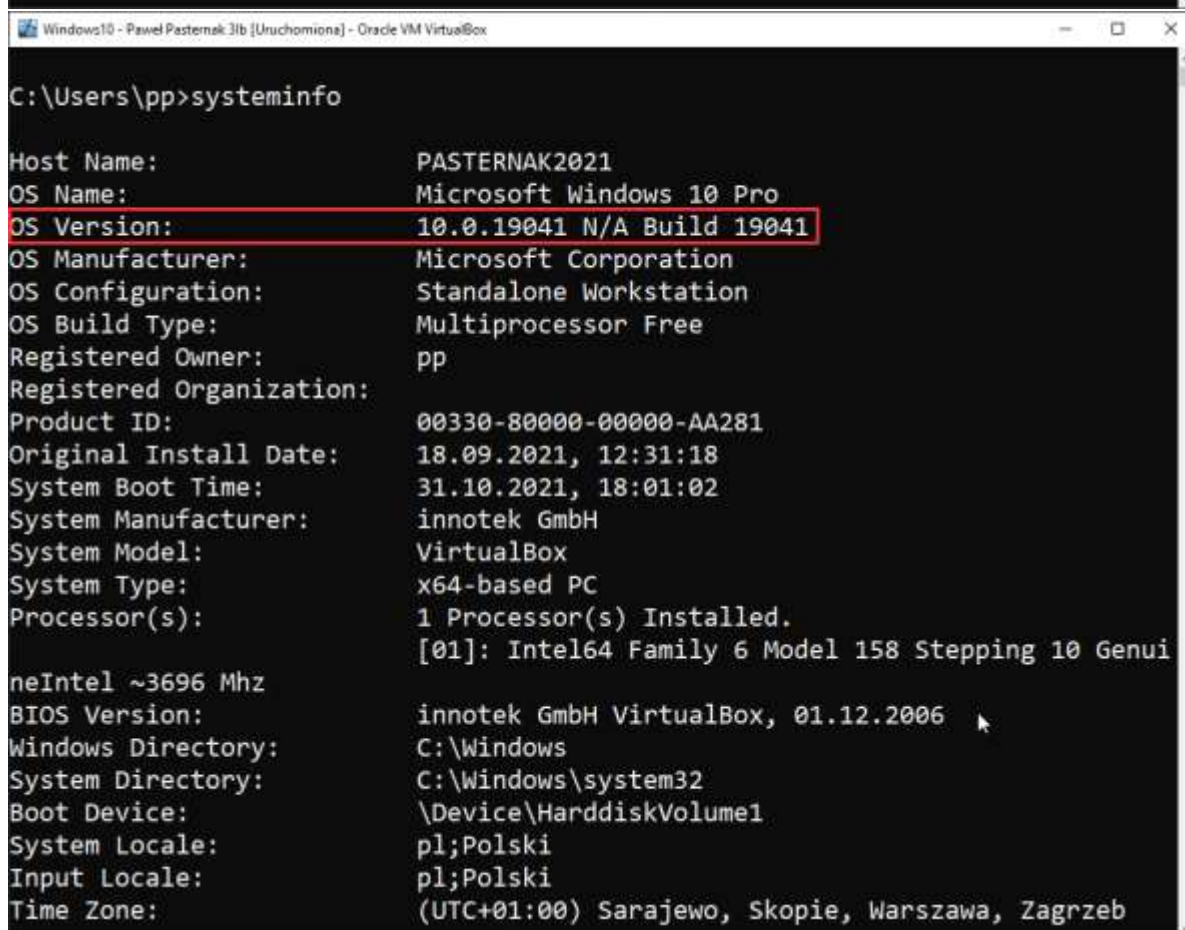


```
Ubuntu20.04LTS - Paweł Pasternak 3lb [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$
  uname -v
#42~20.04.1-Ubuntu SMP Tue Sep 28 20:41:07 UTC 2021
pp@Pasternak2021:~$
  uname -a
Linux Pasternak2021 5.11.0-38-generic #42~20.04.1-Ubuntu
SMP Tue Sep 28 20:41:07 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
pp@Pasternak2021:~$
```


ii. Windows



```
Windows10 - Paweł Pasternak 3Ib [Uruchomiona] - Oracle VM VirtualBox
C:\Users\pp>ver
Microsoft Windows [Version 10.0.19041.1237]
C:\Users\pp>
```

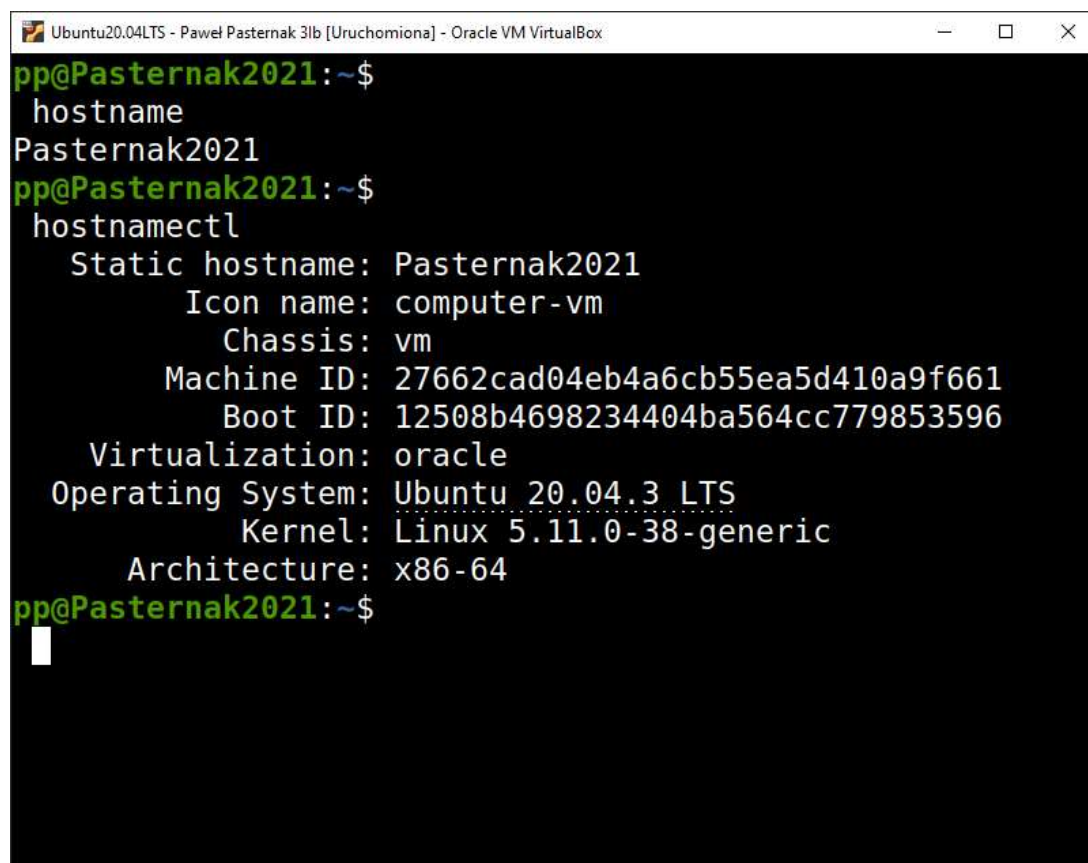


```
Windows10 - Paweł Pasternak 3Ib [Uruchomiona] - Oracle VM VirtualBox
C:\Users\pp>systeminfo

Host Name:                PASTERNAK2021
OS Name:                   Microsoft Windows 10 Pro
OS Version:                10.0.19041 N/A Build 19041
OS Manufacturer:         Microsoft Corporation
OS Configuration:        Standalone Workstation
OS Build Type:             Multiprocessor Free
Registered Owner:         pp
Registered Organization:
Product ID:                00330-80000-00000-AA281
Original Install Date:     18.09.2021, 12:31:18
System Boot Time:         31.10.2021, 18:01:02
System Manufacturer:      innotek GmbH
System Model:              VirtualBox
System Type:               x64-based PC
Processor(s):              1 Processor(s) Installed.
                           [01]: Intel64 Family 6 Model 158 Stepping 10 Genui
neIntel ~3696 Mhz
BIOS Version:              innotek GmbH VirtualBox, 01.12.2006
Windows Directory:        C:\Windows
System Directory:         C:\Windows\system32
Boot Device:               \Device\HarddiskVolume1
System Locale:              pl;Polski
Input Locale:              pl;Polski
Time Zone:                 (UTC+01:00) Sarajewo, Skopie, Warszawa, Zagrzeb
```

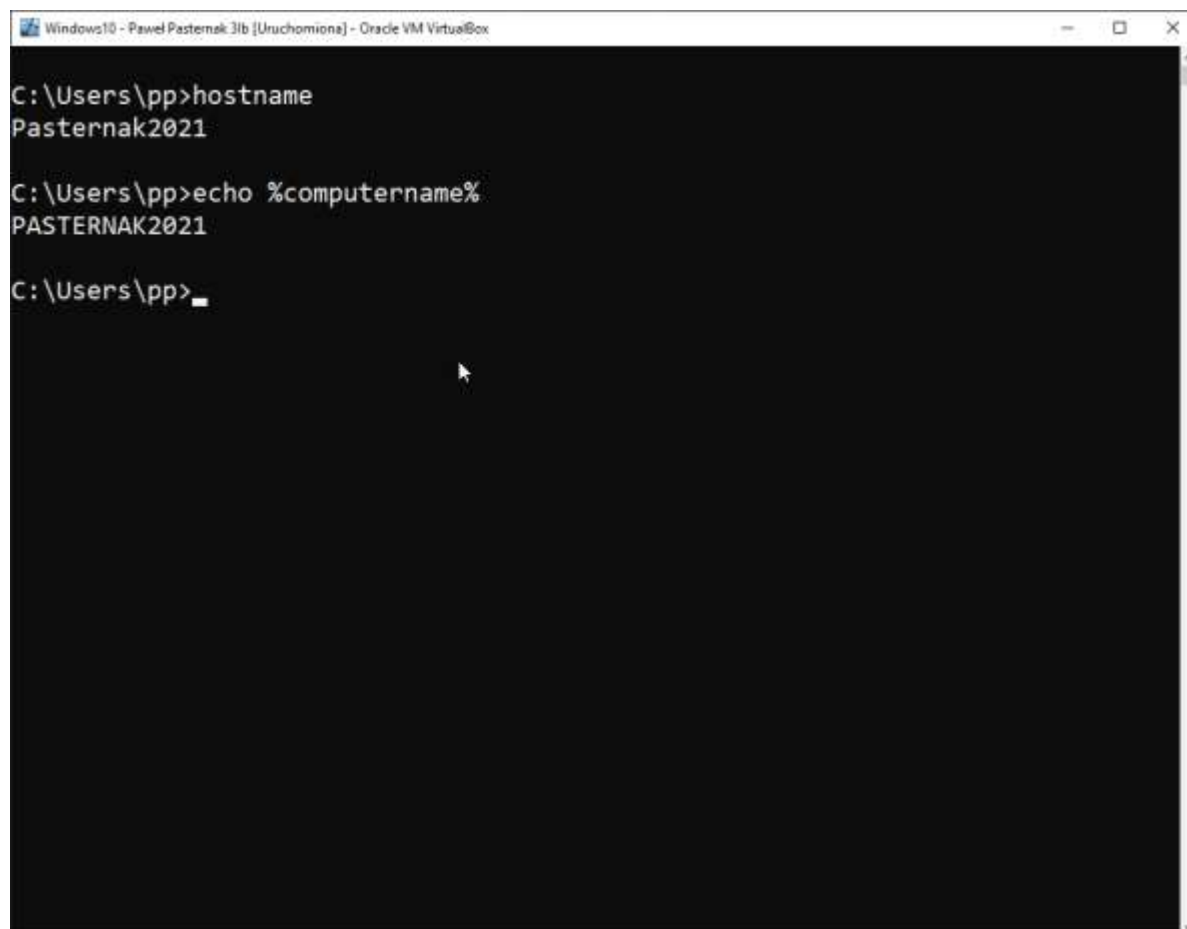
b) Nazwa komputera

i. Linux

A terminal window titled "Ubuntu20.04LTS - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox". The prompt is "pp@Pasternak2021:~\$". The user enters "hostname", which outputs "Pasternak2021". Then the user enters "hostnamectl", which outputs system details: "Static hostname: Pasternak2021", "Icon name: computer-vm", "Chassis: vm", "Machine ID: 27662cad04eb4a6cb55ea5d410a9f661", "Boot ID: 12508b4698234404ba564cc779853596", "Virtualization: oracle", "Operating System: Ubuntu 20.04.3 LTS", "Kernel: Linux 5.11.0-38-generic", and "Architecture: x86-64". The prompt returns to "pp@Pasternak2021:~\$".

```
pp@Pasternak2021:~$  
hostname  
Pasternak2021  
pp@Pasternak2021:~$  
hostnamectl  
Static hostname: Pasternak2021  
Icon name: computer-vm  
Chassis: vm  
Machine ID: 27662cad04eb4a6cb55ea5d410a9f661  
Boot ID: 12508b4698234404ba564cc779853596  
Virtualization: oracle  
Operating System: Ubuntu 20.04.3 LTS  
Kernel: Linux 5.11.0-38-generic  
Architecture: x86-64  
pp@Pasternak2021:~$
```

ii. Windows

A Windows Command Prompt window titled "Windows10 - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox". The prompt is "C:\Users\pp>". The user enters "hostname", which outputs "Pasternak2021". Then the user enters "echo %computername%", which outputs "PASTERNAK2021". The prompt returns to "C:\Users\pp>".

```
C:\Users\pp>hostname  
Pasternak2021  
  
C:\Users\pp>echo %computername%  
PASTERNAK2021  
  
C:\Users\pp>
```


c) Data oryginalnej instalacji

i. Linux

```

Ubuntu20.04LTS - Paweł Pasternak 3Ib [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$
sudo tune2fs -l /dev/sda1 | grep 'Filesystem created:'
Filesystem created:          Sat Sep 18 12:34:05 2021
pp@Pasternak2021:~$
sudo head -n1 /var/log/installer/syslog
Sep 18 10:26:27 ubuntu kernel: [    0.000000] Linux vers
ion 5.11.0-27-generic (bulld@lcy01-amd64-019) (gcc (Ubu
ntu 9.3.0-17ubuntu1~20.04) 9.3.0, GNU ld (GNU Binutils f
or Ubuntu) 2.34) #29~20.04.1-Ubuntu SMP Wed Aug 11 15:58
:17 UTC 2021 (Ubuntu 5.11.0-27.29~20.04.1-generic 5.11.2
2)
pp@Pasternak2021:~$
sudo stat / | grep 'Birth'
Birth: -
pp@Pasternak2021:~$

```

ii. Windows

```

Windows10 - Paweł Pasternak 3Ib [Uruchomiona] - Oracle VM VirtualBox
C:\Users\pp>systeminfo

Host Name:                PASTERNAK2021
OS Name:                  Microsoft Windows 10 Pro
OS Version:               10.0.19041 N/A Build 19041
OS Manufacturer:         Microsoft Corporation
OS Configuration:        Standalone Workstation
OS Build Type:             Multiprocessor Free
Registered Owner:         pp
Registered Organization:
Product ID:                00330-80000-00000-AA281
Original Install Date:     18.09.2021, 12:31:18
System Boot Time:         31.10.2021, 18:01:02
System Manufacturer:      innotek GmbH
System Model:              VirtualBox
System Type:               x64-based PC
Processor(s):              1 Processor(s) Installed.
                           [01]: Intel64 Family 6 Model 158 Stepping 10 Genui
neIntel ~3696 Mhz
BIOS Version:              innotek GmbH VirtualBox, 01.12.2006
Windows Directory:        C:\Windows
System Directory:         C:\Windows\system32
Boot Device:               \Device\HarddiskVolume1
System Locale:              pl;Polski
Input Locale:              pl;Polski
Time Zone:                 (UTC+01:00) Sarajewo, Skopje, Warszawa, Zagrzeb

```

d) Informacja o dostępnej pamięci RAM

i. Linux

```

Ubuntu20.04LTS - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$
free -m

      total        used        free      shared  buff/cache
Mem:    3933         950         547           9    2435    2693
Swap:   2047           0        2047

pp@Pasternak2021:~$
cat /proc/meminfo
MemTotal:        4028320 kB
MemFree:         561080 kB
MemAvailable:    2758632 kB
Buffers:         49884 kB
Cached:         2131500 kB
SwapCached:      0 kB
Active:          747384 kB
Inactive:        2261152 kB
Active(anon):    1468 kB
Inactive(anon):  834908 kB
Active(file):    745916 kB
Inactive(file):  1426244 kB

```

ii. Windows

```

Windows10 - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox
System Locale:        pl;Polski
Input Locale:        pl;Polski
Time Zone:           (UTC+01:00) Sarajewo, Skopie, Warszawa, Zagrzeb
Total Physical Memory: 4 096 MB
Available Physical Memory: 2 634 MB
Virtual Memory: Max Size: 5 504 MB
Virtual Memory: Available: 4 222 MB
Virtual Memory: In Use: 1 282 MB
Page File Location(s): C:\pagefile.sys
Domain:              WORKGROUP
Logon Server:        \\PASTERNAK2021
Hotfix(s):           5 Hotfix(s) Installed.
                     [01]: KB5005539
                     [02]: KB4561600
                     [03]: KB4570334
                     [04]: KB5005565
                     [05]: KB5005699
Network Card(s):     1 NIC(s) Installed.
                     [01]: Intel(R) PRO/1000 MT Desktop Adapter
                        Connection Name: Ethernet
                        DHCP Enabled:    No
                        IP address(es)
                        [01]: 10.20.30.40
                        [02]: fe80::f108:41f9:8efc:a77e
Hyper-V Requirements: A hypervisor has been detected. Features required
for Hyper-V will not be displayed.

```

3. Wyświetl i zanotuj w tabeli informacje na temat systemu Linux

a) Wersja jądra systemu

```
pp@Pasternak2021:~$  
uname -r  
5.11.0-38-generic  
pp@Pasternak2021:~$  
hostnamectl | grep 'Kernel: '  
Kernel: Linux 5.11.0-38-generic  
pp@Pasternak2021:~$
```

b) Informacje o dysku

```
pp@Pasternak2021:~$  
sudo lshw -class disk  
*-cdrom  
description: DVD reader  
product: CD-ROM  
vendor: VBOX  
physical id: 0.0.0  
bus info: scsi@1:0.0.0  
logical name: /dev/cdrom  
logical name: /dev/dvd  
logical name: /dev/sr0  
version: 1.0  
capabilities: removable audio dvd  
configuration: ansiversion=5 status=nodisc  
*-disk  
description: ATA Disk  
product: VBOX HARDDISK  
vendor: VirtualBox  
physical id: 0.0.0  
bus info: scsi@2:0.0.0  
logical name: /dev/sda  
version: 1.0  
serial: VB09e2cb5d-9044bd82  
size: 200GiB (214GB)  
capabilities: partitioned partitioned:dos  
configuration: ansiversion=5 logicalsectorsize=512 sectors
```



```

Ubuntu20.04LTS - Paweł Pasternak 3lb [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$ sudo hdparm -i /dev/sda

/dev/sda:

Model=VBOX HARDDISK, FwRev=1.0, SerialNo=VB09e2cb5d-9044bd82
Config={ Fixed }
RawCHS=16383/16/63, TrkSize=0, SectSize=512, ECCbytes=0
BuffType=DualPortCache, BuffSize=256kB, MaxMultSect=128, MultSec
t=128
CurCHS=16383/16/63, CurSects=16514064, LBA=yes, LBAsects=4194304
00
IORDY=yes, tPIO={min:120,w/IORDY:120}, tDMA={min:120,rec:120}
PIO modes: pio0 pio3 pio4
DMA modes: mdma0 mdma1 mdma2
UDMA modes: udma0 udma1 udma2 udma3 udma4 udma5 *udma6
AdvancedPM=no WriteCache=enabled
Drive conforms to: unknown: ATA/ATAPI-1,2,3,4,5,6

* signifies the current active mode

pp@Pasternak2021:~$ sudo fdisk -l /dev/sda
Disk /dev/sda: 200 GiB, 214748364800 bytes, 419430400 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes

```

c) Informacje o procesorze

```

Ubuntu20.04LTS - Paweł Pasternak 3lb [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$ cat /proc/cpuinfo
processor       : 0
vendor_id      : GenuineIntel
cpu family     : 6
model          : 158
model name     : Intel(R) Core(TM) i7-8700K CPU @ 3.70GHz
stepping       : 10
cpu MHz        : 3695.994
cache size     : 12288 KB
physical id    : 0
siblings       : 1
core id        : 0
cpu cores      : 1
apicid         : 0
initial apicid : 0
fpu            : yes
fpu_exception  : yes
cpuid level    : 22
wp             : yes
flags          : fpu vme de pse tsc msr pae mce cx8 apic sep mtr
r pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx
rdtscp lm constant_tsc rep_good noopl xtopology nonstop_tsc cpuid
tsc_known_freq pni pclmulqdq monitor ssse3 cx16 pcid sse4_1 sse4_
2 x2apic movbe popcnt aes xsave avx rdrand hypervisor lahf_lm abm
3dnowprefetch invpcid_single pti fsgsbase avx2 invpcid rdseed cl

```

```

Ubuntu20.04LTS - Paweł Pasternak 3lb [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:/proc$
sudo 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):                      1
On-line CPU(s) list:         0
Thread(s) per core:          1
Core(s) per socket:          1
Socket(s):                   1
NUMA node(s):                1
Vendor ID:                   GenuineIntel
CPU family:                   6
Model:                       158
Model name:                   Intel(R) Core(TM) i7-8700K CPU @ 3.70GHz
Stepping:                    10
CPU MHz:                     3695.994
BogoMIPS:                    7391.98
Hypervisor vendor:           KVM
Virtualization type:         full
L1d cache:                   32 KiB
L1i cache:                   32 KiB
L2 cache:                    256 KiB

```

d) Informacje o karcie graficznej

```

Ubuntu20.04LTS - Paweł Pasternak 3lb [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$
sudo lshw -class display
*-display
   description: VGA compatible controller
   product: SVGA II Adapter
   vendor: VMware
   physical id: 2
   bus info: pci@0000:00:02.0
   version: 00
   width: 32 bits
   clock: 33MHz
   capabilities: vga_controller bus_master rom
   configuration: driver=vmwgfx latency=64
   resources: irq:18 ioport:d010(size=16) memory:e0000000-e0ffffff
memory:f0000000-f01ffffff memory:c0000-dffff
pp@Pasternak2021:~$

```

```

Ubuntu20.04 LTS - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$ sudo lspci -vnn | grep VGA -A 8
00:02.0 VGA compatible controller [0300]: VMware SVGA II Adapter
[15ad:0405] (prog-if 00 [VGA controller])
    Subsystem: VMware SVGA II Adapter [15ad:0405]
    Flags: bus master, fast devsel, latency 64, IRQ 18
    I/O ports at d010 [size=16]
    Memory at e0000000 (32-bit, prefetchable) [size=16M]
    Memory at f0000000 (32-bit, non-prefetchable) [size=2M]
    Expansion ROM at 000c0000 [virtual] [disabled] [size=128K]
]
    Kernel driver in use: vmwgfx
    Kernel modules: vmwgfx
pp@Pasternak2021:~$

```

e) Tabela

Specyfikacja podzespołów

Dysk twardy	Model	VBOX HARDDISK
	Numer seryjny	VB09e2cb5d-9044bd82
	Pojemność	200Gib (214GB)
Procesor	Nazwa modelu	Intel® Core™ i7-8700 CPU
	Taktowanie	3.70GHz
	Liczba rdzeni	1
Karta graficzna	Producent	VMware
	Generacja modelu GPU	00

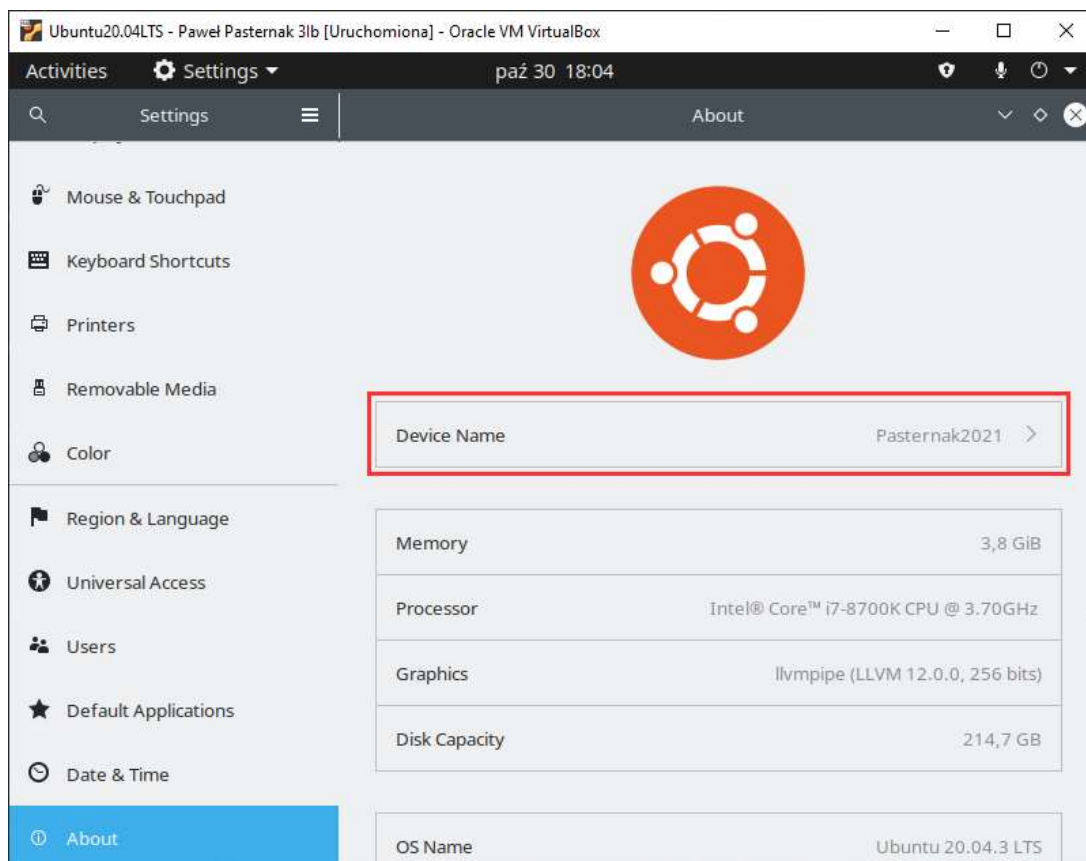
4. Przez GUI oraz Wiersz poleceń oraz terminal

a) Wyświetl nazwę Komputera

iii. CLI - Linux

```
Ubuntu20.04LTS - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox
pp@Pasternak2021:~$
hostname
Pasternak2021
pp@Pasternak2021:~$
hostnamectl
  Static hostname: Pasternak2021
        Icon name: computer-vm
        Chassis: vm
        Machine ID: 27662cad04eb4a6cb55ea5d410a9f661
        Boot ID: 12508b4698234404ba564cc779853596
  Virtualization: oracle
  Operating System: Ubuntu 20.04.3 LTS
        Kernel: Linux 5.11.0-38-generic
  Architecture: x86_64
pp@Pasternak2021:~$
```

iv. GUI – Linux

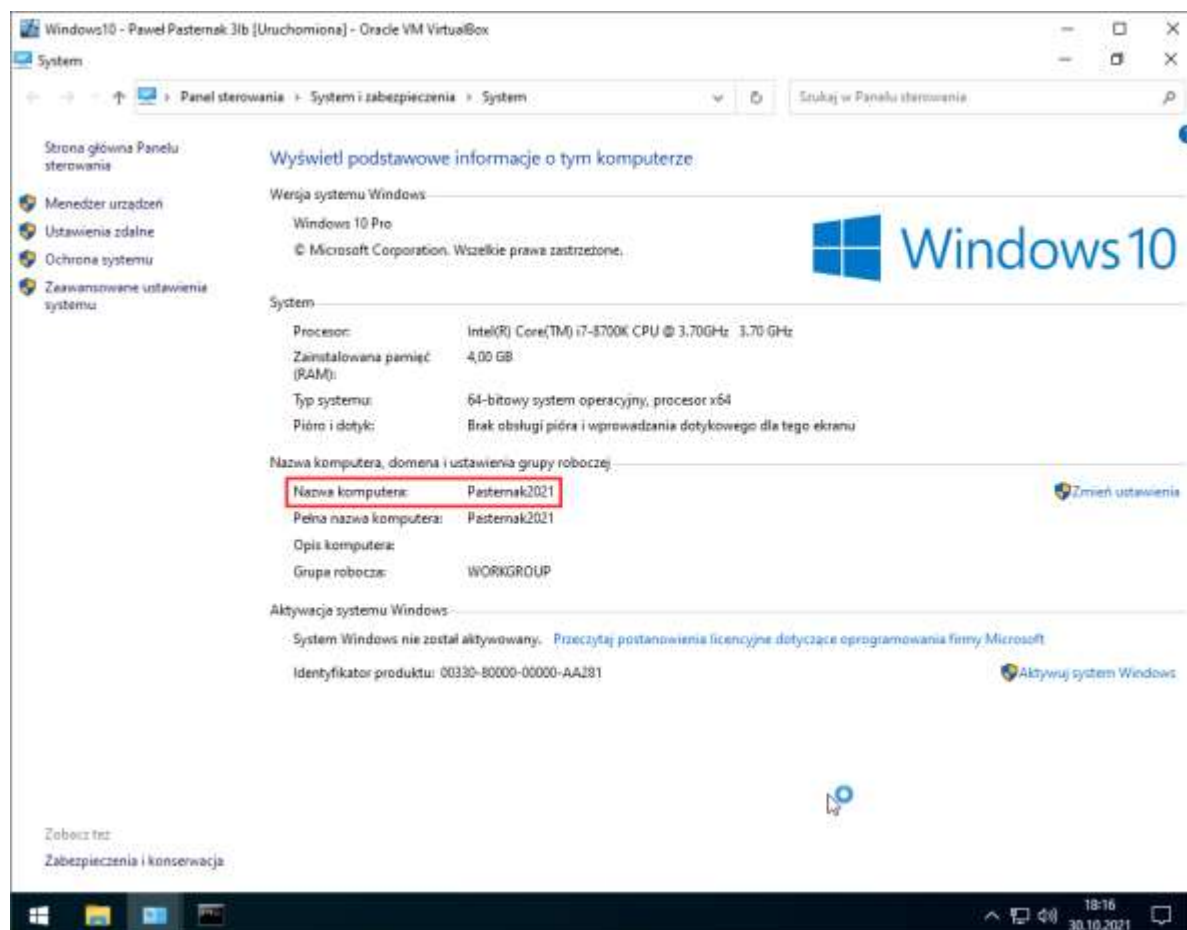


```

C:\Users\pp>hostname
Pasternak2021

C:\Users\pp>echo %computername%
PASTERNAK2021

C:\Users\pp>
    
```



b) Wyświetl informację o konfiguracji kart sieciowych

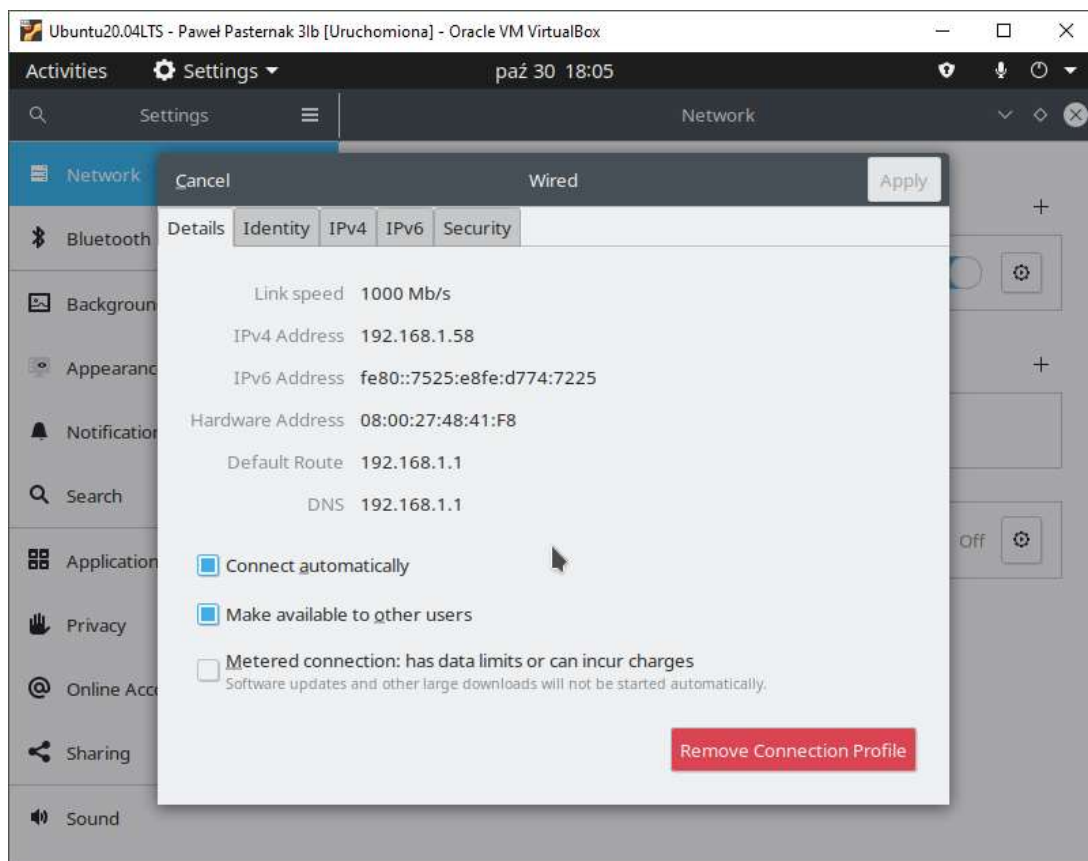
i. CLI - Linux

```

pp@Pasternak2021:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOW
N group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_co
del state UP group default qlen 1000
    link/ether 08:00:27:48:41:f8 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.58/24 brd 192.168.1.255 scope global dynamic n
oprefixroute enp0s3
        valid_lft 84578sec preferred_lft 84578sec
    inet6 fe80::7525:e8fe:d774:7225/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
pp@Pasternak2021:~$

```

ii. GUI - Linux



```

Windows10 - Paweł Pasternak 31b [Uruchomiona] - Oracle VM VirtualBox
C:\Users\pp>ipconfig /all

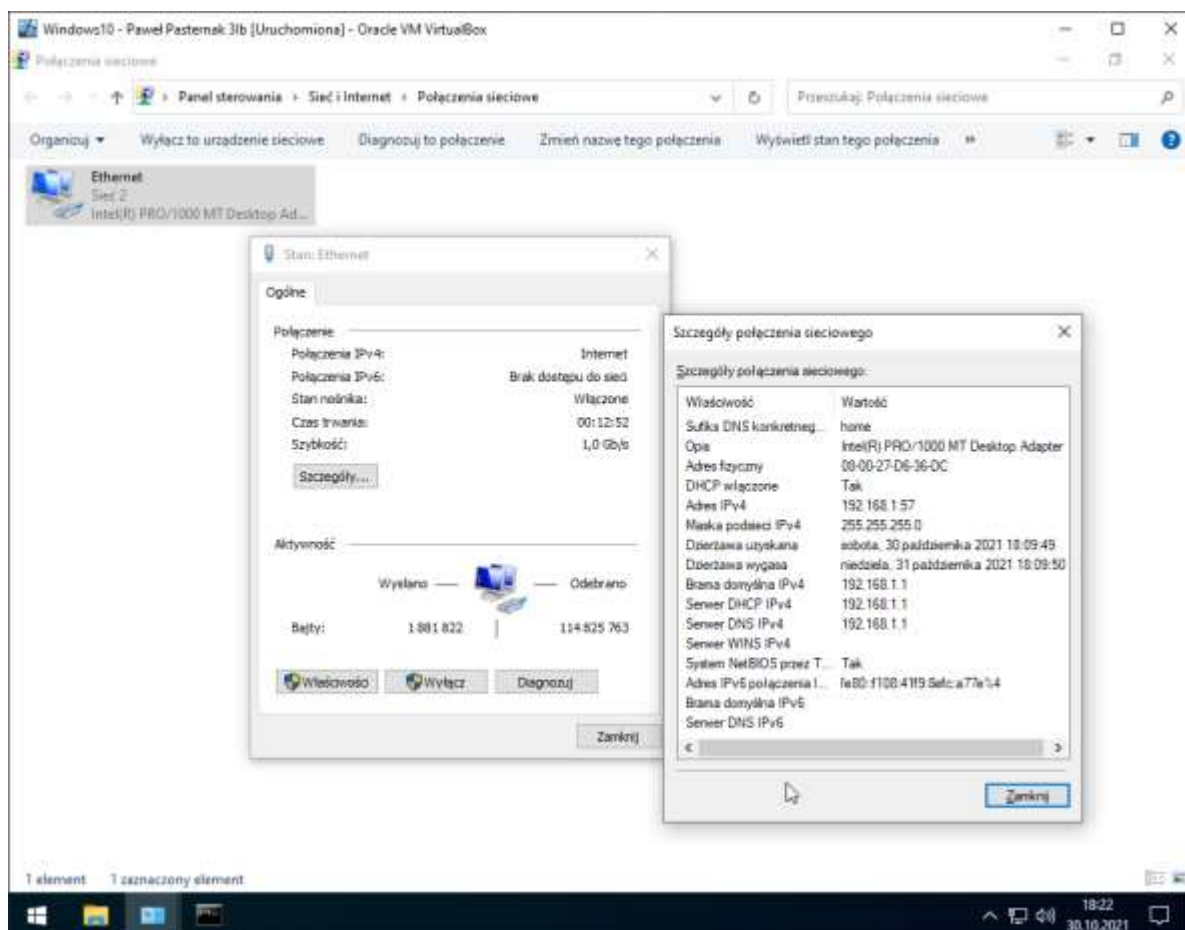
Windows IP Configuration

Host Name . . . . . : Pasternak2021
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : home

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : home
    Description . . . . . : Intel(R) PRO/1000 MT Desktop Adapter
    Physical Address. . . . . : 08-00-27-D6-36-DC
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::f108:41f9:8efc:a77e%4(Preferred)

    IPv4 Address. . . . . : 192.168.1.57(Preferred)
    Subnet Mask . . . . . : 255.255.255.0
    Lease Obtained. . . . . : sobota, 30 października 2021 18:10:18
    Lease Expires . . . . . : niedziela, 31 października 2021 18:10:18
    Default Gateway . . . . . : 192.168.1.1
  
```



c) Zmień adres karty sieciowej na 10.20.30.40

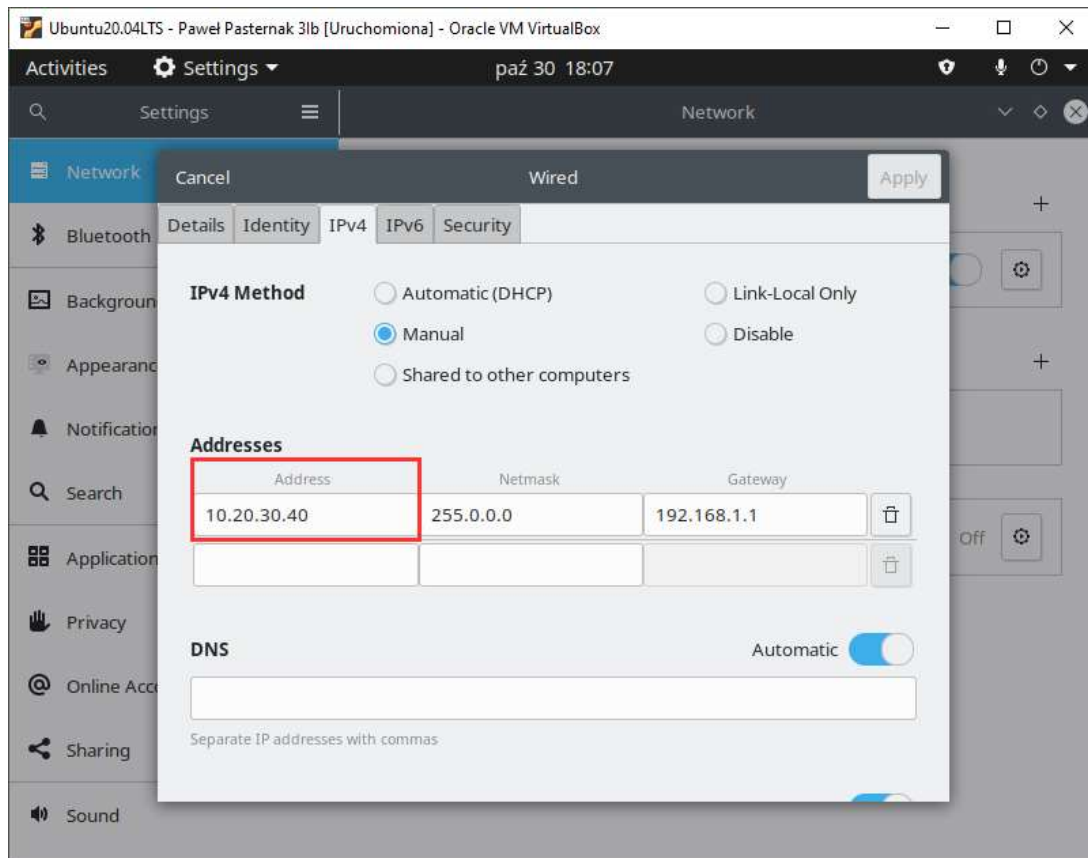
i. CLI - Linux

```

pp@Pasternak2021:~$ sudo ip a change 10.20.30.40 dev enp0s3
pp@Pasternak2021:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOW
N group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_co
del state UP group default qlen 1000
    link/ether 08:00:27:48:41:f8 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.58/24 brd 192.168.1.255 scope global dynamic n
oprefixroute enp0s3
        valid_lft 84407sec preferred_lft 84407sec
    inet 10.20.30.40/32 scope global enp0s3
        valid_lft forever preferred_lft forever
    inet6 fe80::7525:e8fe:d774:7225/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
pp@Pasternak2021:~$

```

ii. GUI - Linux



iii. CLI – Win

```

C:\Windows\system32>netsh interface ipv4 set address name="Ethernet" static 10.20.30.40 255.0.0.0 192.168.1.1

C:\Windows\system32>ipconfig

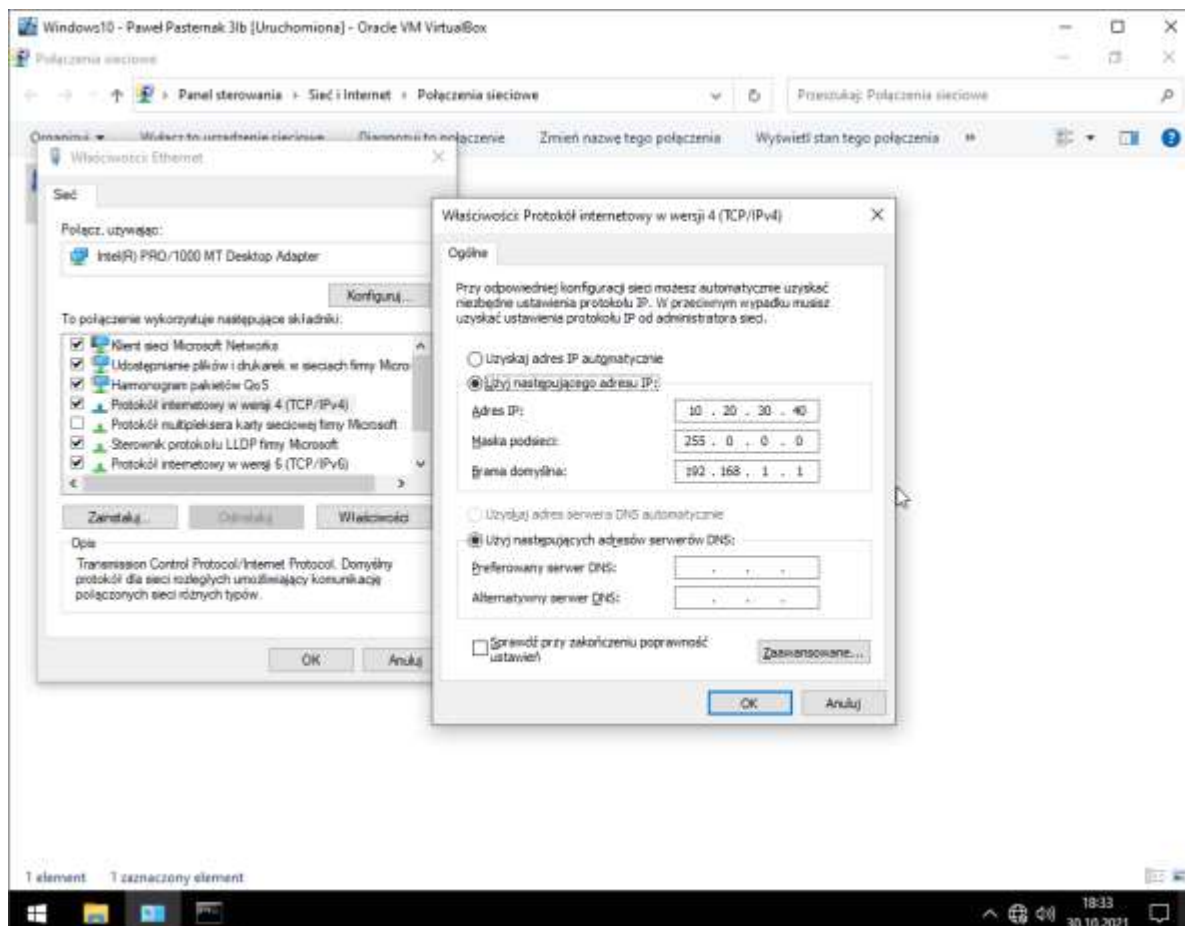
Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80:f108:41f9:8efc:a77e%4
    IPv4 Address. . . . . : 10.20.30.40
    Subnet Mask . . . . . : 255.0.0.0
    Default Gateway . . . . . : 192.168.1.1

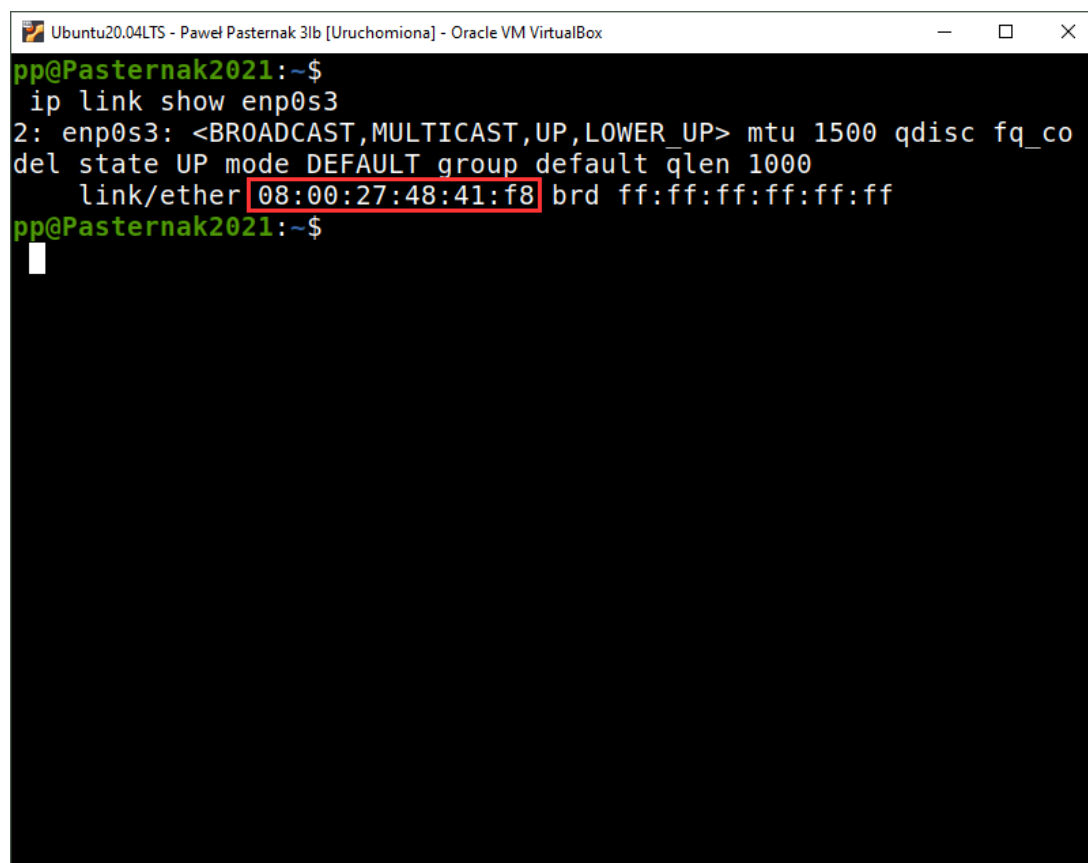
C:\Windows\system32>
    
```

iv. GUI – Win



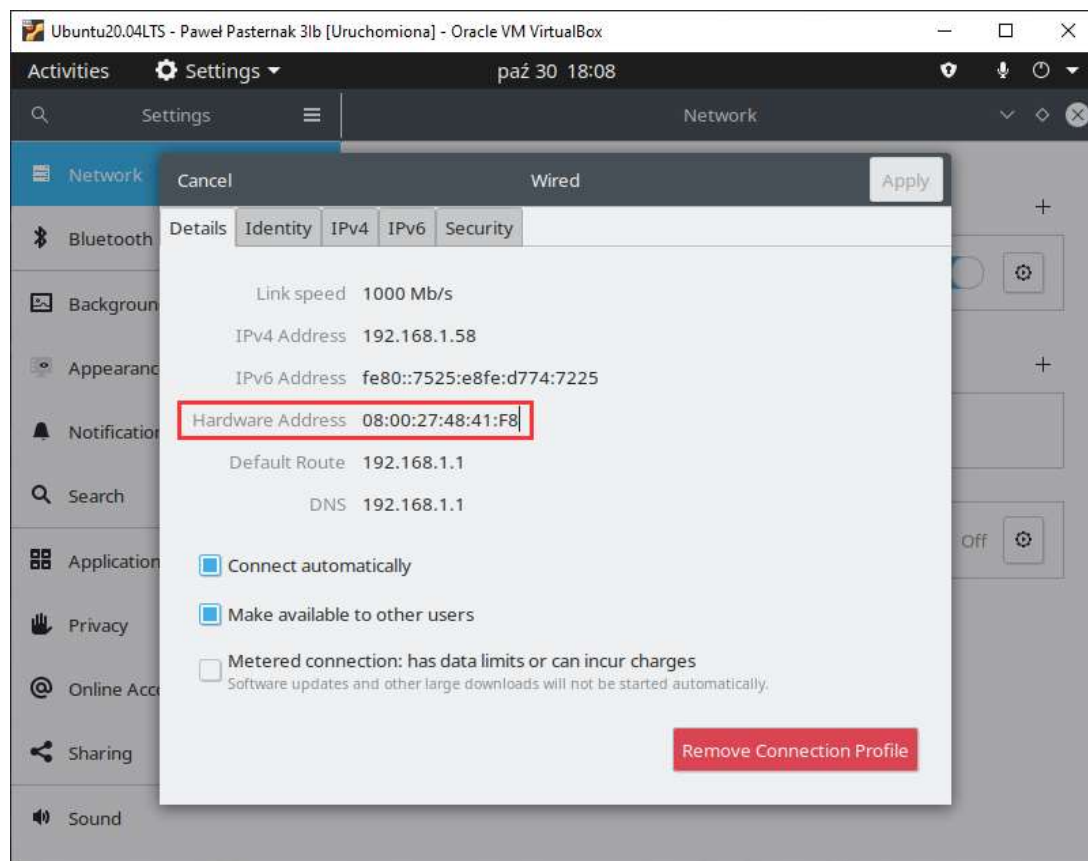
d) Wyświetl jaki jest adres MAC karty sieciowej

i. CLI - Linux



```
pp@Pasternak2021:~$ ip link show enp0s3
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP mode DEFAULT group default qlen 1000
    link/ether 08:00:27:48:41:f8 brd ff:ff:ff:ff:ff:ff
pp@Pasternak2021:~$
```

ii. GUI - Linux



iii. CLI – Win

```

C:\Users\pp>getmac

Physical Address    Transport Name
=====
08-00-27-D6-36-DC  N/A

C:\Users\pp>ipconfig /all

Windows IP Configuration

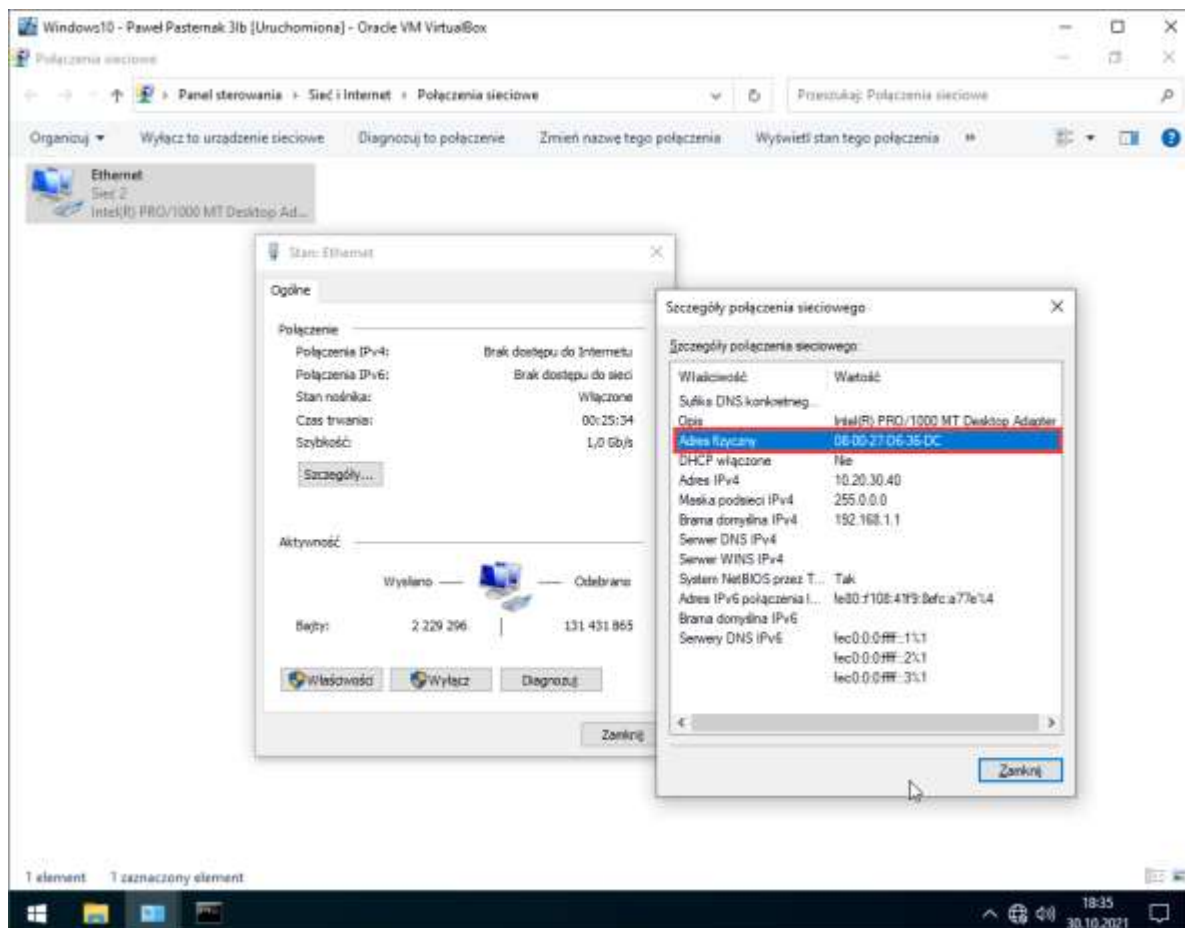
Host Name . . . . . : Pasternak2021
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Ethernet:

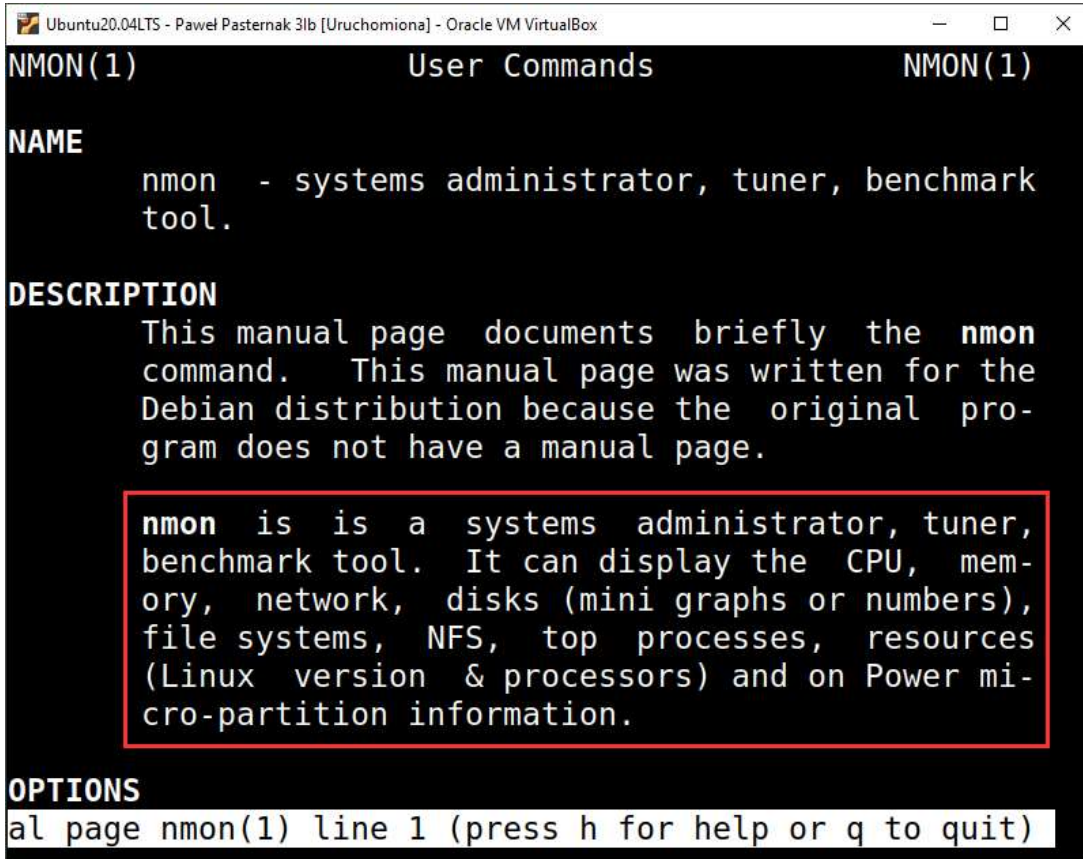
Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) PRO/1000 MT Desktop Adapter
Physical Address. . . . . : 08-00-27-D6-36-DC
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

```

iv. GUI – Win



5. Opisz podstawowe przeznaczenie programu NMON



```

NMON(1)                                User Commands                                NMON(1)

NAME
    nmon - systems administrator, tuner, benchmark tool.

DESCRIPTION
    This manual page documents briefly the nmon command. This manual page was written for the Debian distribution because the original program does not have a manual page.

    nmon is is a systems administrator, tuner, benchmark tool. It can display the CPU, memory, network, disks (mini graphs or numbers), file systems, NFS, top processes, resources (Linux version & processors) and on Power micro-partition information.

OPTIONS
al page nmon(1) line 1 (press h for help or q to quit)
  
```

NMON jest narzędziem przeznaczonym to administrowania systemami i sprawdzaniem ich wydajności. Potrafi przedstawić informacje o: procesorze, pamięci RAM, sieci, dyskach, systemie plików, udostępnionych zasobach sieciowych, procesach i daemonach, a także innych zasobach systemowych.

Funkcje programu NMON są dogłębnie przedstawione w sprawozdaniu z roku 2021 o nazwie 17Procesy.docx w punkcie 21.