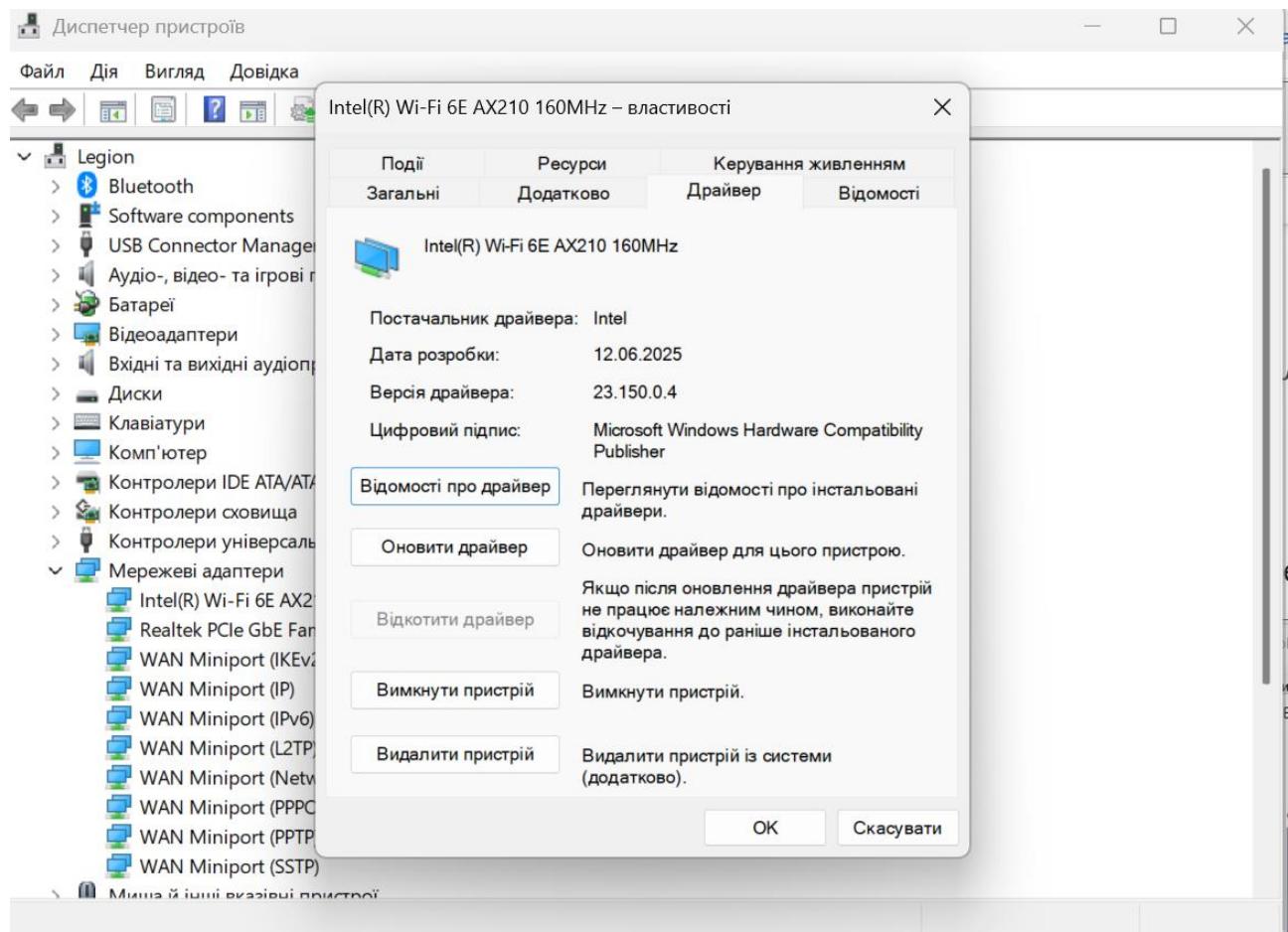


# Лабораторна робота №10

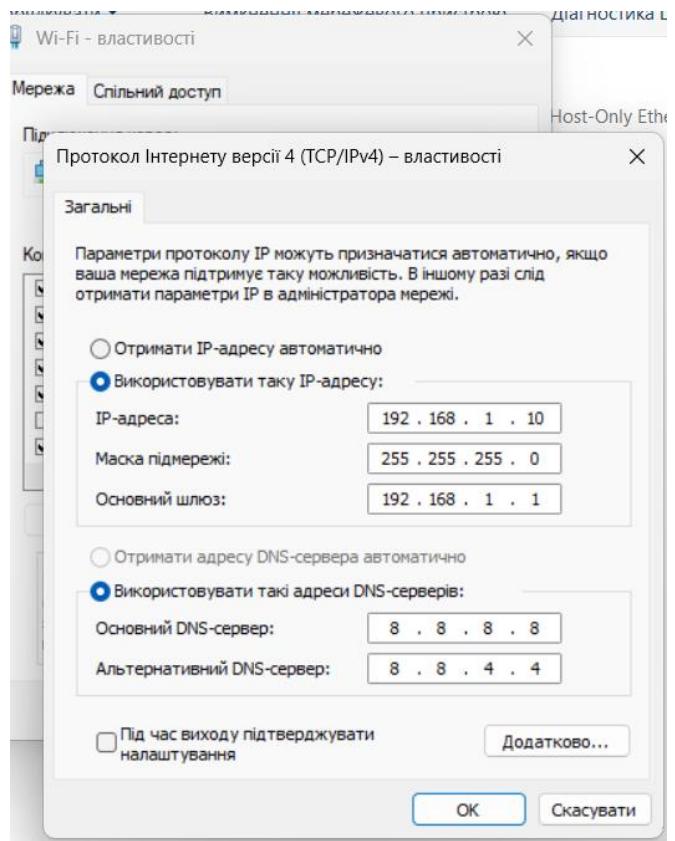
## Тема: Команди CLI та BASH

**Мета:** Оволодіти навичками по налаштуванню протоколу TCP/IP, роботі з CLI та bash.

Місцезнаходження драйвера мережевого адаптера



## Налаштування ТРС/IPv4 протоколу



## Виконання команди systeminfo

```
Processor(s): 1 Processor(s) Installed.  
[01]: Intel® Dual Band Wireless-AC 7265  
Windows Directory: C:\WINDOWS  
System Directory: C:\WINDOWS\system32  
Boot Device: \Device\HarddiskVolume1  
System Locale: uk;українська  
Input Locale: uk;українська  
Time Zone: (UTC+02:00) Вільнянос, Гельсінкі, Київ, Рига, Софія, Таллінн  
Total Physical Memory: 32 166 MB  
Available Physical Memory: 20 741 MB  
Virtual Memory: Max Size: 34 214 MB  
Virtual Memory: Available: 22 458 MB  
Virtual Memory: In Use: 11 764 MB  
Page File Location(s): C:\pagefile.sys  
Domain: WORKGROUP  
Logon Server: \\DESKTOP-RKCKCC1  
Hotfix(s): 4 Hotfix(s) Installed.  
[01]: KB5066128  
[02]: KB5054156  
[03]: KB5068861  
[04]: KB5067035  
Network Card(s): 3 NIC(s) Installed.  
[01]: Intel(R) Dual Band Wireless-AC 7265  
    Connection Name: Wi-Fi  
    DHCP Enabled: Yes  
    DHCP Server: 172.20.10.1  
    IP address(es)  
        [01]: 172.20.10.3  
        [02]: fe80::b9f9:70e1:8834:9017  
[02]: Realtek PCIe GBE Family Controller  
    Connection Name: Ethernet  
    Status: Media disconnected  
[03]: VirtualBox Host-Only Ethernet Adapter  
    Connection Name: Ethernet 3  
    DHCP Enabled: No  
    IP address(es)  
        [01]: 192.168.56.1  
        [02]: fe80::d65e:12d4:524e:9afc  
Virtualization-based security: Status: Not enabled  
    App Control for Business policy: Enforced  
    App Control for Business user mode policy: Off  
    Security Features Enabled:  
Hyper-V Requirements: VM Monitor Mode Extensions: Yes  
    Virtualization Enabled In Firmware: Yes  
    Second Level Address Translation: Yes  
    Data Execution Prevention Available: Yes
```

## Виконання команди netinfo

```
C:\Users\Home>netstat

Active Connections

Proto  Local Address        Foreign Address      State
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:53835 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:53836 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:53882 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:53889 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:54010 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:54014 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:54022 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:54024 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:58886 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:62647 ESTABLISHED
TCP    127.0.0.1:6327      DESKTOP-RKCKCC1:62648 ESTABLISHED
TCP    127.0.0.1:53833     DESKTOP-RKCKCC1:54021 ESTABLISHED
TCP    127.0.0.1:53833     DESKTOP-RKCKCC1:54023 ESTABLISHED
TCP    127.0.0.1:53833     DESKTOP-RKCKCC1:54025 ESTABLISHED
TCP    127.0.0.1:53834     DESKTOP-RKCKCC1:54019 ESTABLISHED
TCP    127.0.0.1:53835     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:53836     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:53882     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:53889     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:54010     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:54014     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:54017     DESKTOP-RKCKCC1:54026 ESTABLISHED
TCP    127.0.0.1:54019     DESKTOP-RKCKCC1:53834 ESTABLISHED
TCP    127.0.0.1:54021     DESKTOP-RKCKCC1:53833 ESTABLISHED
TCP    127.0.0.1:54022     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:54023     DESKTOP-RKCKCC1:53833 ESTABLISHED
TCP    127.0.0.1:54024     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:54025     DESKTOP-RKCKCC1:53833 ESTABLISHED
TCP    127.0.0.1:54026     DESKTOP-RKCKCC1:54017 ESTABLISHED
TCP    127.0.0.1:54033     DESKTOP-RKCKCC1:54043 ESTABLISHED
TCP    127.0.0.1:54035     DESKTOP-RKCKCC1:54042 ESTABLISHED
TCP    127.0.0.1:54042     DESKTOP-RKCKCC1:54035 ESTABLISHED
TCP    127.0.0.1:54043     DESKTOP-RKCKCC1:54033 ESTABLISHED
TCP    127.0.0.1:58886     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:62647     DESKTOP-RKCKCC1:6327 ESTABLISHED
TCP    127.0.0.1:62648     DESKTOP-RKCKCC1:6327 ESTABLISHED
```

## Виконання команди ping

```
C:\Users\Home>ping 192.168.15.254

Pinging 192.168.15.254 with 32 bytes of data:
Request timed out.
Request timed out.

Ping statistics for 192.168.15.254:
  Packets: Sent = 2, Received = 0, Lost = 2 (100% loss),
Control-C
C:\Users\Home>
C:\Users\Home>ping

Usage: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS]
           [-r count] [-s count] [[-j host-list] | [-k host-list]]
           [-w timeout] [-R] [-S srcaddr] [-c compartment] [-p]
           [-q] [-6] target_name

Options:
  -t          Ping the specified host until stopped.
              To see statistics and continue - type Control-Break;
              To stop - type Control-C.
  -a          Resolve addresses to hostnames.
  -n count    Number of echo requests to send.
  -l size     Send buffer size.
  -f          Set Don't Fragment flag in packet (IPv4-only).
  -i TTL      Time To Live.
  -v TOS      Type Of Service (IPv4-only. This setting has been deprecated
              and has no effect on the type of service field in the IP
              Header).
  -r count    Record route for count hops (IPv4-only).
  -s count    Timestamp for count hops (IPv4-only).
  -j host-list Loose source route along host-list (IPv4-only).
  -k host-list Strict source route along host-list (IPv4-only).
  -w timeout  Timeout in milliseconds to wait for each reply.
  -R          Use routing header to test reverse route also (IPv6-only).
              Per RFC 5095 the use of this routing header has been
              deprecated. Some systems may drop echo requests if
              this header is used.
  -S srcaddr  Source address to use.
  -c compartment Routing compartment identifier.
  -p          Ping a Hyper-V Network Virtualization provider address.
  -q          Force using IPv4.
  -6          Force using IPv6.

C:\Users\Home>
```

## Tracert з ключами

```
C:\Users\Home>tracert

Usage: tracert [-d] [-h maximum_hops] [-j host-list] [-w timeout]
                [-R] [-S srcaddr] [-4] [-6] target_name

Options:
    -d           Do not resolve addresses to hostnames.
    -h maximum_hops Maximum number of hops to search for target.
    -j host-list   Loose source route along host-list (IPv4-only).
    -w timeout     Wait timeout milliseconds for each reply.
    -R           Trace round-trip path (IPv6-only).
    -S srcaddr    Source address to use (IPv6-only).
    -4           Force using IPv4.
    -6           Force using IPv6.
```

```
C:\Users\Home>tracert -h 14
A target name or address must be specified.

Usage: tracert [-d] [-h maximum_hops] [-j host-list] [-w timeout]
                [-R] [-S srcaddr] [-4] [-6] target_name
```

```
Options:
    -d           Do not resolve addresses to hostnames.
    -h maximum_hops Maximum number of hops to search for target.
    -j host-list   Loose source route along host-list (IPv4-only).
    -w timeout     Wait timeout milliseconds for each reply.
    -R           Trace round-trip path (IPv6-only).
    -S srcaddr    Source address to use (IPv6-only).
    -4           Force using IPv4.
    -6           Force using IPv6.
```

```
C:\Users\Home>tracert -2 00:01
-2 is not a valid command option.

Usage: tracert [-d] [-h maximum_hops] [-j host-list] [-w timeout]
                [-R] [-S srcaddr] [-4] [-6] target_name
```

```
Options:
    -d           Do not resolve addresses to hostnames.
    -h maximum_hops Maximum number of hops to search for target.
    -j host-list   Loose source route along host-list (IPv4-only).
    -w timeout     Wait timeout milliseconds for each reply.
    -R           Trace round-trip path (IPv6-only).
    -S srcaddr    Source address to use (IPv6-only).
    -4           Force using IPv4.
    -6           Force using IPv6.
```

```
C:\Users\Home>
```

## Частина 2

### створення дерева папок в git bas

```
MINGW64:c/Users/gfds1
gfds1@Legion MINGW64 ~
$ mkdir -p Vanzhula/VARJ/GR1
mkdir -p Vanzhula/VARI/GR2
mkdir -p Vanzhula/VARGj

gfds1@Legion MINGW64 ~
$ echo "Group: KI-412, Date: $(date +%F)" > Vanzhula/VARJ/GR1/Roman.txt

gfds1@Legion MINGW64 ~
$ echo "romanzhula1@gmail.com" > Vanzhula/VARI/GR2/Vanzhula.txt

gfds1@Legion MINGW64 ~
$ cp Vanzhula/VARJ/GR1/Roman.txt Vanzhula/
gfds1@Legion MINGW64 ~
$ cp Vanzhula/VARI/GR2/Vanzhula.txt Vanzhula/
gfds1@Legion MINGW64 ~
$ tree Vanzhula
bash: tree: command not found

gfds1@Legion MINGW64 ~
$ ls -R Vanzhula
Vanzhula:
Roman.txt  VARGj/  VARI/  VARJ/  Vanzhula.txt

Vanzhula/VARGj:
Vanzhula/VARI:
GR2/
Vanzhula/VARI/GR2:
Vanzhula.txt

Vanzhula/VARJ:
GR1/
```

## Закидання скрипта на git hub

```
home@DESKTOP-RKCKCC1 MINGW64 ~/Desktop/лаби/БР/мережі (main)
$ git remote add origin https://github.com/botondukted342-png/Lab10_Bash_Script.
git

home@DESKTOP-RKCKCC1 MINGW64 ~/Desktop/лаби/БР/мережі (main)
$ git push -u origin main
remote: Repository not found.
fatal: repository 'https://github.com/botondukted342-png/Lab10_Bash_Script.git/' not found

home@DESKTOP-RKCKCC1 MINGW64 ~/Desktop/лаби/БР/мережі (main)
$ git push -u origin main
enumerating objects: 25, done.
Counting objects: 100% (25/25), done.
Delta compression using up to 8 threads
Compressing objects: 100% (20/20), done.
Writing objects: 100% (25/25), 4.02 MiB | 1.77 MiB/s, done.
total 25 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/botondukted342-png/Lab10_Bash_Script.git
 * [new branch]      main -> main
Branch 'main' set up to track 'origin/main'.
```

## Посилання на репозиторій гіт хабу

<https://github.com/roma0sweet/LR10.git>

```
x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci1: 127.0.0.1 [21/Apr/2020:08:06:57 +0300] "GET /media/widgetkit/fonts/Fontawesome-webfont.ttf HTTP/1.1" 404 1205 "http://ci1/media/widgetkit/wk-styles-180c3bef.css" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci1: 127.0.0.1 [21/Apr/2020:08:06:57 +0300] "GET /favicon.ico HTTP/1.1" 404 1157 "http://ci1/?style=ocean" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci2: 127.0.0.1 [21/Apr/2020:14:39:28 +0300] "GET /favicon.ico HTTP/1.1" 404 1155 "http://ci2/index.php/uk/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci2: 127.0.0.1 [21/Apr/2020:14:57:25 +0300] "GET /favicon.ico HTTP/1.1" 404 1155 "http://ci2/index.php/uk/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
default: 127.0.0.1 [21/Apr/2020:15:27:20 +0300] "GET /share.php?act=count&index=0&url=http%3A%2F%2Fksm.khnu.km.ua%2Fwhat-does-it-mean-computer-engineering" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.102 Safari/537.36 Edge/18.18363"
default: 127.0.0.1 [21/Apr/2020:15:27:20 +0300] "GET /share.php?act=count&index=1&url=https%3A%2F%2Fksm.khnu.km.ua%2Fwhat-does-it-mean-computer-engineering" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/70.0.3538.102 Safari/537.36 Edge/18.18363"
ci3: 127.0.0.1 [22/Apr/2020:10:54:02 +0300] "GET /favicon.ico HTTP/1.1" 404 1129 "http://ci3/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci2: 127.0.0.1 [23/Apr/2020:11:23:29 +0300] "GET /installation/index.php HTTP/1.1" 404 1193 "http://ci2/index.php/uk/?templateStyle=38" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci2: 127.0.0.1 [23/Apr/2020:23:13:27 +0300] "GET /templates/rt_kraken/custom/fonts/kelson_sans/kelson_sans_bold/kelson_sans-bold-webfont.woff2 HTTP/1.1" 404 1257 "http://ci2/templates/rt_kraken/custom/css-compiled/kraken_35.css?5eaf6e6" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
ci2: 127.0.0.1 [23/Apr/2020:23:13:27 +0300] "GET /templates/rt_kraken/custom/fonts/kelson_sans/kelson_sans_regular/kelson_sans-regular-webfont.woff2 HTTP/1.1" 404 1257 "http://ci2/templates/rt_kraken/custom/css-compiled/kraken_35.css?5eaf6e6" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
e.osvita.te.u: 127.0.0.1 [24/Apr/2020:12:16:28 +0300] "GET /favicon.ico HTTP/1.1" 404 1159 "http://e.osvita.te.u/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"
e.osvita.te.u.backup1: 127.0.0.1 [24/Apr/2020:12:16:46 +0300] "GET /favicon.ico HTTP/1.1" 404 1183 "http://e.osvita.te.u.backup1/" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.163 Safari/537.36"

Home@DESKTOP-RKCKCC1 MINGW64 ~/Desktop/лаби/БР/мережі (main)
$ ^[[200-grep " 404 " лаба10.txt | wc -l
bash: $^E[200-grep': command not found
0

Home@DESKTOP-RKCKCC1 MINGW64 ~/Desktop/лаби/БР/мережі (main)
$ grep " 404 " лаба10.txt | wc -l
44
```

Git bash виявив 44 логи з помилкою 404