

## **Vježba 5: Osnovne mrežne postavke računala**

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Razred: 2.B

## **PRIPREMA**

### **1. Što je to i čemu služi protokol DHCP?**

- Protokol DHCP (Dynamic Host Configuration Protocol) je protokol koji automatski dodjeljuje IP adrese u mreži. Ovo oslobađa administratora mreže od potrebe ručno postavljanja IP adresa za svaki uređaj. DHCP server također može pružiti dodatne informacije poput defaultnog gatewaya (routera) i DNS servera.

### **2. Što je to i kako se koristi naredba ping?**

- Naredba ping koristi se za testiranje dostupnosti mreže. Ova naredba šalje ICMP (Internet Control Message Protocol) pakete na određenu IP adresu i čeka odgovor. Ako dođe odgovor, to znači da je uređaj dostupan na mreži. Naredba ping koristi se često za otkrivanje mrežnih problema, provjeru latencije i za provjeru dostupnosti web servera

### **3. Napiši primjer IPv4 adrese!**

- Primjer IPv4 adrese može biti 192.168.1.1. IPv4 adresa je sastoji se od četiri okteta, a svaki oktet može imati vrijednosti od 0 do 255

### **4. Napiši primjer MAC adrese!**

- Primjer MAC adrese može biti 00:0a:95:9d:68:16. MAC adresa je unikatni identifikator dodijeljen svakom mrežnom uređaju.

### **5. Objasni čemu služi loopback adresa! Kako izgleda loopback adresa?**

- Loopback adresa je specijalna IP adresa (127.0.0.1) koja se koristi za testiranje mreže na samom uređaju. Kada se na uređaju pokuša pristupiti ovoj adresi, svi paketi se vraćaju na uređaj sam. Ovo je korisno za provjeru funkcionalnosti mreže na uređaju

## IZVOĐENJE VJEŽBE

### 1. U naredbenom retku pročitati mrežne postavke računala

```
Command Prompt
Microsoft Windows [Version 10.0.17763.737]
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C:\Users\učenik>ipconfig/all

Windows IP Configuration

Host Name . . . . . : WS5_LAB_2_3
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

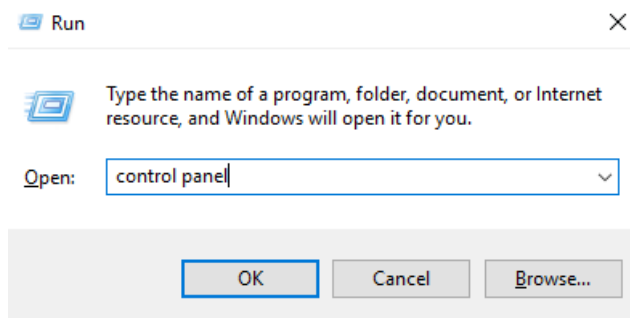
Ethernet adapter Ethernet:

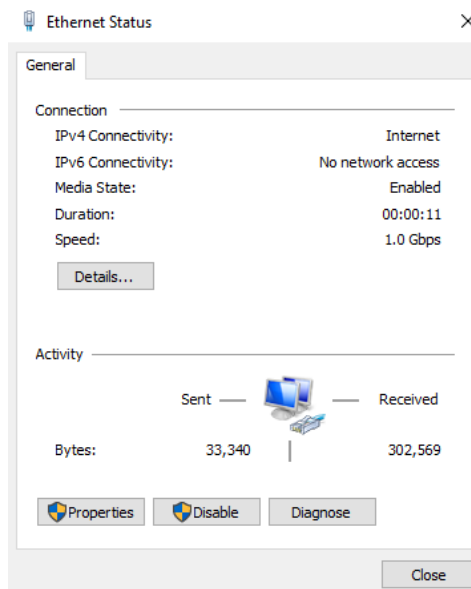
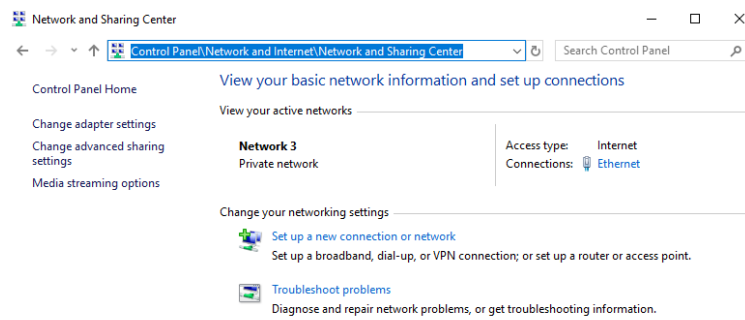
Connection-specific DNS Suffix . :
Description . . . . . : Realtek PCIe GBE Family Controller
Physical Address. . . . . : 78-85-C2-CE-9A-F7
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::fc40:eec5:1b83:251%7(Preferred)
IPv4 Address. . . . . : 192.168.50.18(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Wednesday, November 15, 2023 5:29:24 PM
Lease Expires . . . . . : Wednesday, November 15, 2023 5:39:24 PM
Default Gateway . . . . . : 192.168.50.5
DHCP Server . . . . . : 192.168.50.5
DHCPv6 IAID . . . . . : 40928706
DHCPv6 Client DUID. . . . . : 00-01-00-01-25-1F-BA-46-70-85-C2-CE-9A-F7
DNS Servers . . . . . : 192.168.50.5
                       193.198.184.130
                       193.198.184.140
NetBIOS over Tcpip. . . . . : Enabled

C:\Users\učenik>
```

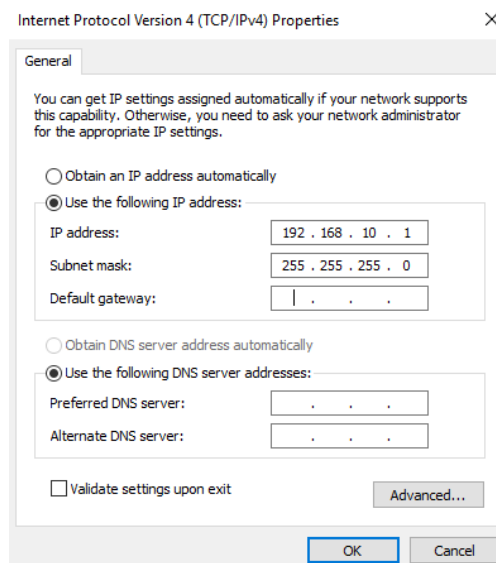
### 2. Statički pridružiti mrežne postavke računala za rad u lokalnoj mreži i pristup Internetu.

#### a) Dolazak do postavki





## b) Postavke



### c) Naredbeni redak

```
Command Prompt
Microsoft Windows [Version 10.0.17763.737]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\učenik>ping 127.0.0.1

Pinging 127.0.0.1 with 32 bytes of data:
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128

Ping statistics for 127.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\Users\učenik>ipconfig

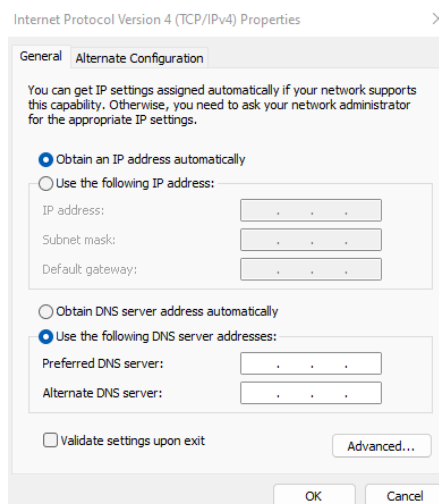
Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix . : 
    Link-local IPv6 Address . . . . . : fe80::fc40:eec5:1b83:251%7
    Autoconfiguration IPv4 Address. . : 169.254.2.81
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 

C:\Users\učenik>
```

### 3. Dinamički pridruži mrežne postavke računala za rad u lokalnoj mreži i pristup Internetu.



```
Command Prompt
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(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\učenik>ping 127.0.0.1

Pinging 127.0.0.1 with 32 bytes of data:
Reply from 127.0.0.1: bytes=32 time<1ms TTL=128
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Reply from 127.0.0.1: bytes=32 time<1ms TTL=128

Ping statistics for 127.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```