



**VILNIUS UNIVERSITY
ŠIAULIAI ACADEMY**

BACHELOR PROGRAMME SOFTWARE ENGINEERING

Computer networks laboratory work No. 7

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1. My 48 bit ethernet address:

```
Intel_ff:07:03 (bc:09:1b:ff:07:03)
```

2. The destination address is the address of my router:

```
Dst: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)
```

3. Hex value is 0x0800, which corresponds to IPv4

```
Type: IPv4 (0x0800)
```

4. The “G” in “GET” is the 54-th byte

5. Source address is **Src: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)**,
this is an address of my router.

6. Destination address is **Dst: Intel_ff:07:03 (bc:09:1b:ff:07:03)**, this is an address of my computer.

7. Hex value is 0x0800, which corresponds to IPv4

8. The “O” have the 67 bytes before it.

```
Interface: 192.168.0.131 --- 0x10
Internet Address      Physical Address      Type
 192.168.0.1           9c-a2-f4-20-8f-54    dynamic
 192.168.0.19          04-7c-16-00-27-c2    dynamic
 192.168.0.255         ff-ff-ff-ff-ff-ff    static
 224.0.0.2              01-00-5e-00-00-02    static
 224.0.0.22             01-00-5e-00-00-16    static
 224.0.0.113            01-00-5e-00-00-71    static
 224.0.0.251            01-00-5e-00-00-fb    static
 224.0.0.252            01-00-5e-00-00-fc    static
 224.0.1.60              01-00-5e-00-01-3c    static
 239.255.255.250        01-00-5e-7f-ff-fa    static
 255.255.255.255        ff-ff-ff-ff-ff-ff    static
```

9. Those are all available broadcasting addresses

10. **Sender MAC address: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)**
Sender IP address: 192.168.0.1
Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
11. **Type: ARP (0x0806)**
- 12.

- a. The ARP opcode starts after 20 bytes

```
Opcode: request (1)
```

- b. Value is 0x0001, for request
 - c. Yes Sender IP address: 192.168.0.1
- 13.
- a. The ARP opcode starts after 20 bytes from the beginning
Opcode: reply (2)
 - b. Value is 2, for response.
 - c. Src: Intel_ff:07:03 (bc:09:1b:ff:07:03)
Address: 192.168.0.131
Target MAC address: TPLink_20:8f:54 (9c:a2:f4:20:8f:54)
Target IP address: 192.168.0.1
- 14.
15. We cannot see the reply, because we are not the device that sent the original request.