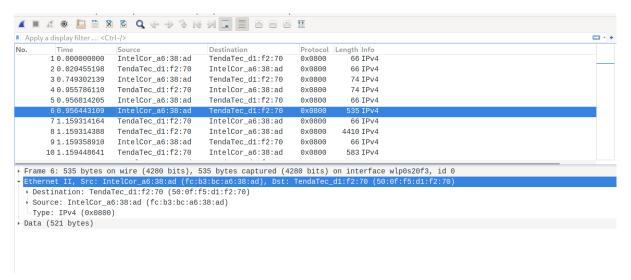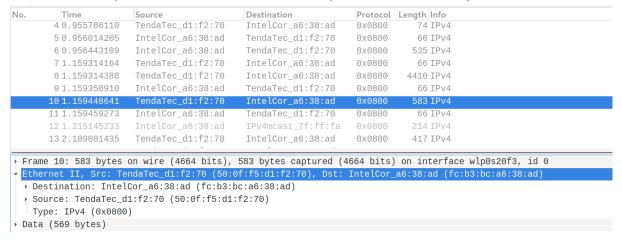# 1. Wireshark : Ethernet и ARP (7 баллов)

1.Захват и анализ Ethernet-кадров (3 балла)

1. fc:b3:bc:a6:38:ad
2. IntelCor_a6:38:ad

3. Адрес: 50:0f:f5:d1:f2:70, устройство: TendaTec_d1:f2:70
4. Как видно на скриншоте, это действительно адрес моего компьютера

2. ARP-протокол (4 балла)
1. Src: fc:b3:bc:a6:38:ad, Dst: ff:ff:ff:ff:ff:ff

```
▌ arp
No.      Time           Source            Destination        Protocol  Length  Info
      72 1.521382316    IntelCor_a6:38:ad  Broadcast          ARP        42 Who has 192.168.0.1? Tell 192.168.0.104
      73 1.529357883    TendaTec_d1:f2:70  IntelCor_a6:38:ad  ARP        42 192.168.0.1 is at 50:0f:f5:d1:f2:70

▸ Frame 72: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface wlp0s20f3, id 0
▾ Ethernet II, Src: IntelCor_a6:38:ad (fc:b3:bc:a6:38:ad), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
  ▸ Destination: Broadcast (ff:ff:ff:ff:ff:ff)
  ▸ Source: IntelCor_a6:38:ad (fc:b3:bc:a6:38:ad)
  └ Type: ARP (0x0806)
▸ Address Resolution Protocol (request)
```

2. Содержится в поле Sender IP address

```
    └ Type: ARP (0x0806)
▾ Address Resolution Protocol (request)
   ├ Hardware type: Ethernet (1)
   ├ Protocol type: IPv4 (0x0800)
   ├ Hardware size: 6
   ├ Protocol size: 4
   ├ Opcode: request (1)
   ├ Sender MAC address: IntelCor_a6:38:ad (fc:b3:bc:a6:38:ad)
   ├ Sender IP address: 192.168.0.104
   ├ Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
   └ Target IP address: 192.168.0.1
```

3. Поле Target MAC address
4. Поле Sender MAC address

```
▾ Address Resolution Protocol (reply)
   ├ Hardware type: Ethernet (1)
   ├ Protocol type: IPv4 (0x0800)
   ├ Hardware size: 6
   ├ Protocol size: 4
   ├ Opcode: reply (2)
   ├ Sender MAC address: TendaTec_d1:f2:70 (50:0f:f5:d1:f2:70)
   ├ Sender IP address: 192.168.0.1
   ├ Target MAC address: IntelCor_a6:38:ad (fc:b3:bc:a6:38:ad)
   └ Target IP address: 192.168.0.104
```