Lab7 -Week2

1. Write down the contents of your computer's ARP cache. (use arp -a)
   Contents:
   Internet address, physical address, protocol type (static or dynamic)

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Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::198e:1347:bc7c:15f3%7
   IPv4 Address. . . . . . . . . . . : 192.168.0.6
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : fe80::f68c:ebff:fea7:c6ab%7
                                       192.168.0.1

C:\WINDOWS\system32>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time=2ms TTL=30
Reply from 192.168.0.1: bytes=32 time=7ms TTL=30
Reply from 192.168.0.1: bytes=32 time=3ms TTL=30
Reply from 192.168.0.1: bytes=32 time=2ms TTL=30

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 7ms, Average = 3ms

C:\WINDOWS\system32>arp -a

Interface: 192.168.0.6 --- 0x7
  Internet Address      Physical Address      Type
  192.168.0.1           f4-8c-eb-a7-c6-ab     dynamic
  224.0.0.2             01-00-5e-00-00-02     static
  224.0.0.22            01-00-5e-00-00-16     static

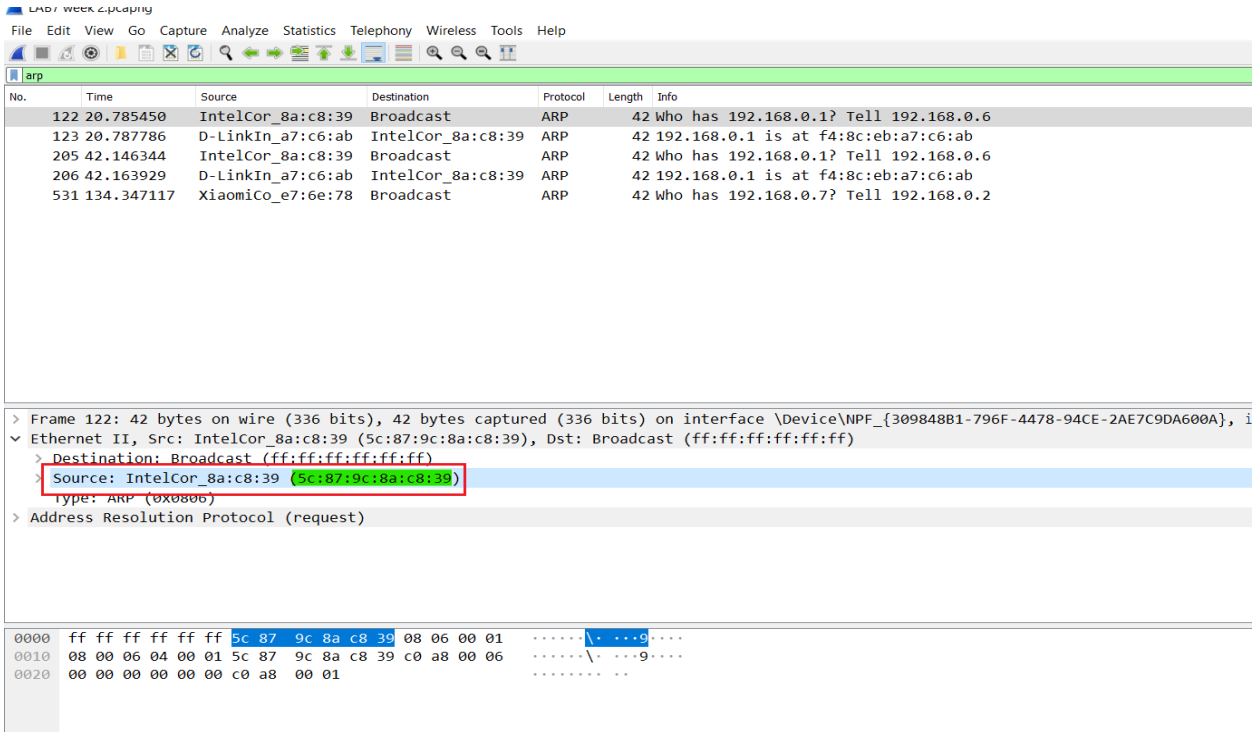
Interface: 192.168.214.1 --- 0x10
  Internet Address      Physical Address      Type
  224.0.0.22            01-00-5e-00-00-16     static

Interface: 192.168.88.1 --- 0x13
  Internet Address      Physical Address      Type
  224.0.0.22            01-00-5e-00-00-16     static

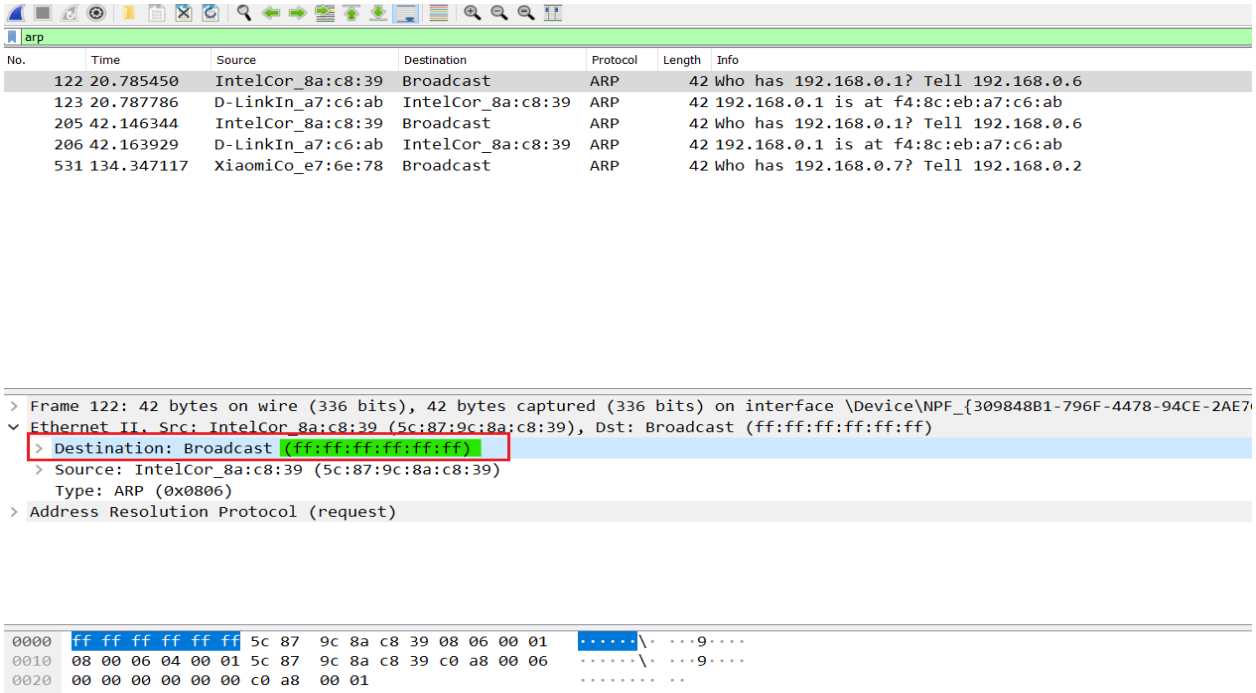
C:\WINDOWS\system32>
```

2. What are the hexadecimal values of the source and destination in the ethernet frame containing the ARP request message?

Source:



Destination:



3. What is the type field indicating, in ethernet frame? For ARP?

Type: ARP and its HEX value is 0x0806

arp

No.	Time	Source	Destination	Protocol	Length	Info
122	20.785450	IntelCor_8a:c8:39	Broadcast	ARP	42	Who has 192.168.0.1? Tell 192.168.0.6
123	20.787786	D-LinkIn_a7:c6:ab	IntelCor_8a:c8:39	ARP	42	192.168.0.1 is at f4:8c:eb:a7:c6:ab
205	42.146344	IntelCor_8a:c8:39	Broadcast	ARP	42	Who has 192.168.0.1? Tell 192.168.0.6
206	42.163929	D-LinkIn_a7:c6:ab	IntelCor_8a:c8:39	ARP	42	192.168.0.1 is at f4:8c:eb:a7:c6:ab
531	134.347117	XiaomiCo_e7:6e:78	Broadcast	ARP	42	Who has 192.168.0.7? Tell 192.168.0.2

```
> Frame 122: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface \Device\NPF_{309848B1-796F-4478-
v Ethernet II, Src: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
  > Destination: Broadcast (ff:ff:ff:ff:ff:ff)
  > Source: IntelCor_8a:c8:39 (5c:87:9c:8a:c8:39)
    Type: ARP (0x0806)
> Address Resolution Protocol (request)
```

```
0000  ff ff ff ff ff ff 5c 87  9c 8a c8 39 08 06 00 01   ......\· ···9····
0010  08 00 06 04 00 01 5c 87  9c 8a c8 39 c0 a8 00 06   ......\· ···9····
0020  00 00 00 00 00 00 c0 a8  00 01                     ........ ··
```

4. How many bytes from the beginning does the ARP opcode field begin?

20 bytes from the beginning