OCTOBER 13, 2015

LAB 2

EE 450 SESSION 3

TUSHAR TIWARI

Q1. It is 163.53.78.58

```
C:\Users\therelaxist>nslookup www.flipkart.com
Server:  dns-cac-lb-01.rr.com
Address:  209.18.47.61

Non-authoritative answer:
Name:    flipkart.com
Addresses:  2001:df0:23e:9002::15
          163.53.78.58
Aliases:  www.flipkart.com
```

Q2. I chose oxford university. The authoritative DNS servers are encircled.

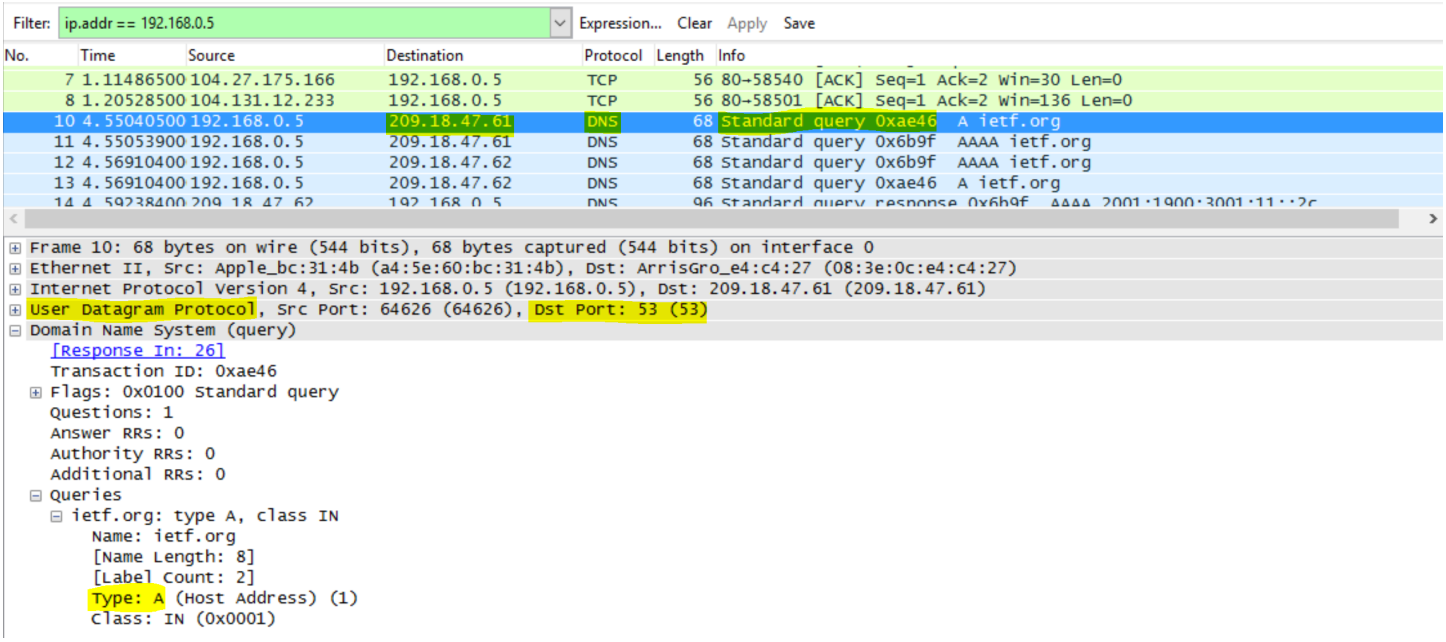
```
C:\Users\therelaxist>nslookup -type=NS ox.ac.uk
Server:  dns-cac-lb-01.rr.com
Address:  209.18.47.61

Non-authoritative answer:
ox.ac.uk        nameserver = dns2.ox.ac.uk
ox.ac.uk        nameserver = dns1.ox.ac.uk
ox.ac.uk        nameserver = dns0.ox.ac.uk
ox.ac.uk        nameserver = ns2.ja.net
```

Q3. 98.136.189.41. The DNS server I chose is ns2.ja.net but that refused my query. So I chose Google's DNS Server (8.8.8.8)

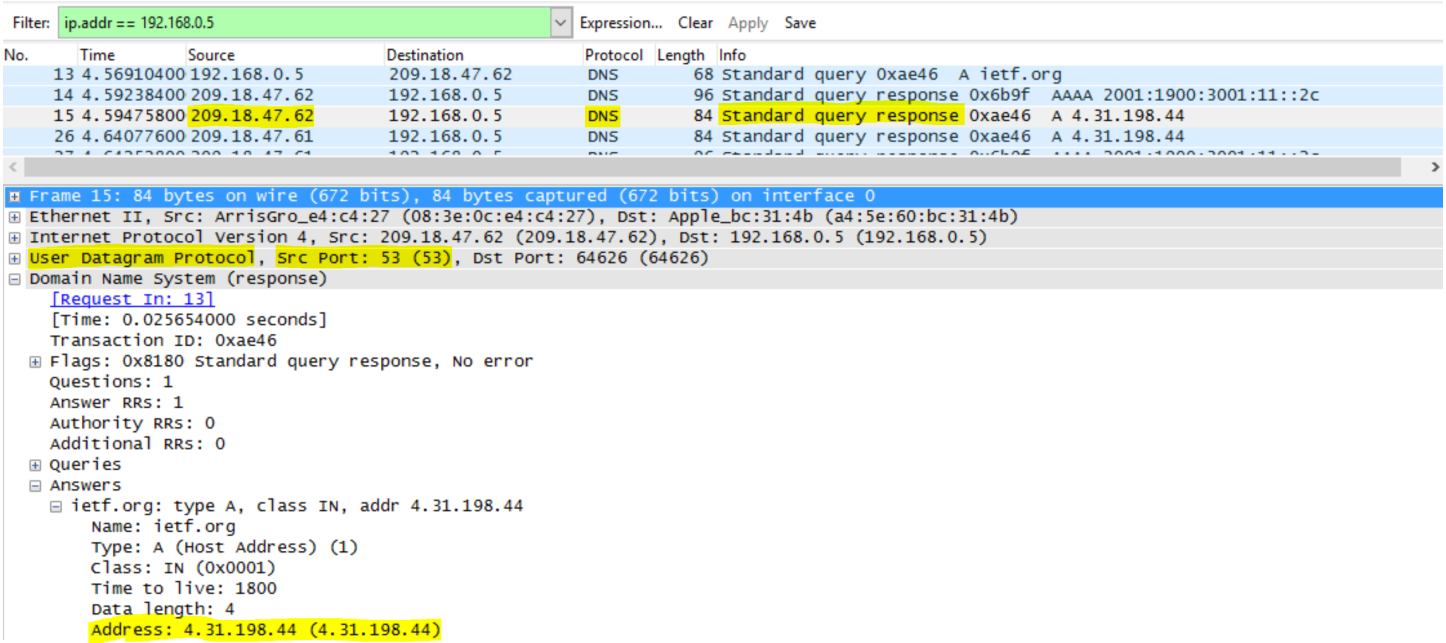
```
C:\Users\therelaxist>nslookup mail.yahoo.com ns2.ja.net
0.0.0.0.0.3.6.0.1.0.0.2.ip6.arpa        nameserver = ns0.ja.net
0.0.0.0.0.3.6.0.1.0.0.2.ip6.arpa        nameserver = ns4.ja.net
ns0.ja.net      internet address = 128.86.1.20
ns0.ja.net      internet address = 193.63.94.20
ns0.ja.net      AAAA IPv6 address = 2001:630:0:8::14
ns0.ja.net      AAAA IPv6 address = 2001:630:0:9::14
ns4.ja.net      internet address = 193.62.157.66
ns4.ja.net      AAAA IPv6 address = 2001:630:0:47::42
Server:  UnKnown
Address:  2001:630:0:45::11

*** UnKnown can't find mail.yahoo.com: Query refused

C:\Users\therelaxist>nslookup mail.yahoo.com 8.8.8.8
Server:  google-public-dns-a.google.com
Address:  8.8.8.8

Non-authoritative answer:
Name:    fo-ds-ats.member.g02.yahoodns.net
Addresses:  2001:4998:c:e33::50
          98.136.189.41
Aliases:  mail.yahoo.com
          login.yahoo.com
```

Q4. They are sent over UDP.
Q5. Destination Port is 53. Source Port is also 53.
Q6. The IP address is 209.18.47.62
Q7. It is of type A. Contains no answers.
Q8. 1 answer is provided. It contains the hostname, type, class, TTL, data length and the ipv4 address itself.
Q9. Yes, it is the ip address provided in the answer.
Q10. No.

The DNS Query



The DNS Response



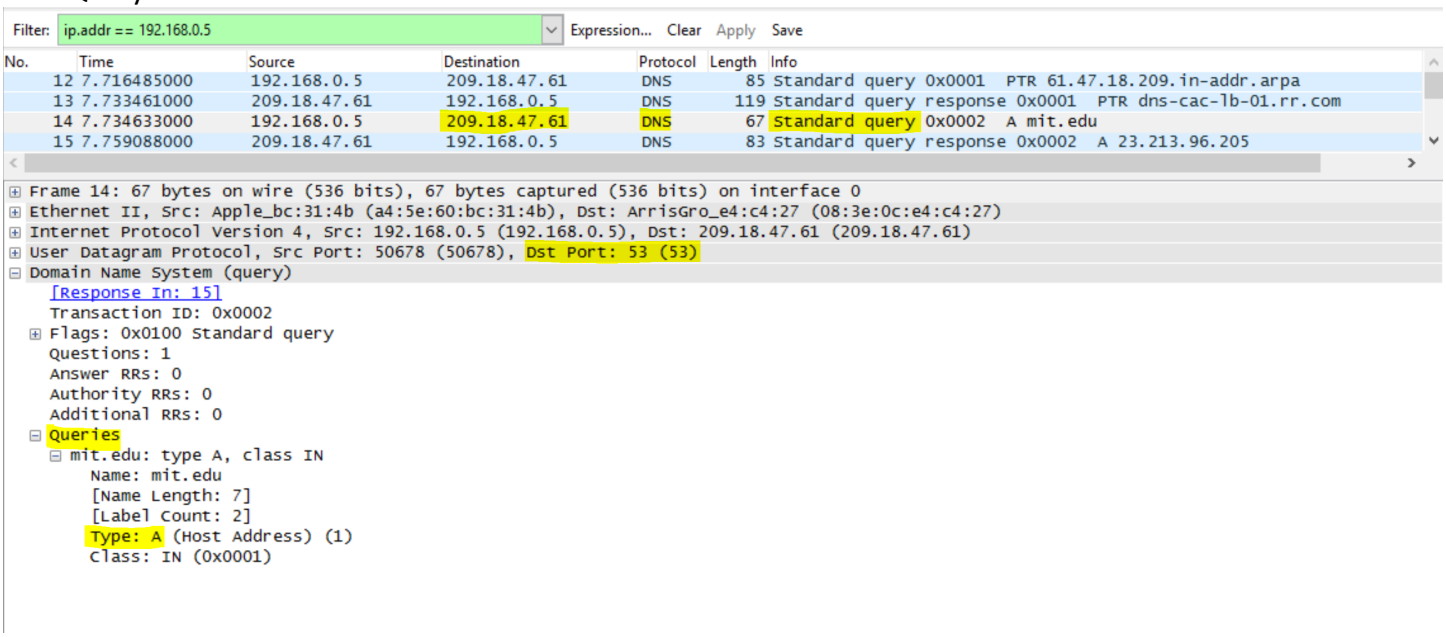
ipconfig /all - This shows the default DNS server provided by DHCP.

```
C:\Users\therelaxist>ipconfig /all

Windows IP Configuration

   Host Name . . . . . . . . . . . . : DESKTOP-E28R8JI
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Wireless LAN adapter Local Area Connection* 3:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
   Physical Address. . . . . . . . . : A6-5E-60-BC-31-4B
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Broadcom 802.11ac Network Adapter
   Physical Address. . . . . . . . . : A4-5E-60-BC-31-4B
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   IPv6 Address. . . . . . . . . . . : 2605:e000:4e01:fa00:f9af:3b31:1bd2:6415(Preferred)
   Temporary IPv6 Address. . . . . . : 2605:e000:4e01:fa00:88c4:88d:cc45:282a(Preferred)
   Link-local IPv6 Address . . . . . : fe80::f9af:3b31:1bd2:6415%7(Preferred)
   IPv4 Address. . . . . . . . . . . : 192.168.0.5(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Lease Obtained. . . . . . . . . . : Monday, October 12, 2015 12:47:17 AM
   Lease Expires . . . . . . . . . . : Monday, October 12, 2015 10:47:17 AM
   Default Gateway . . . . . . . . . : fe80::a3e:cff:fee4:c427%7
                                       192.168.0.1
   DHCP Server . . . . . . . . . . . : 192.168.0.1
   DHCPv6 IAID . . . . . . . . . . . : 94658144
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-1D-76-C0-B6-A4-5E-60-BC-31-4B
   DNS Servers . . . . . . . . . . . : 209.18.47.61
                                       209.18.47.62
```

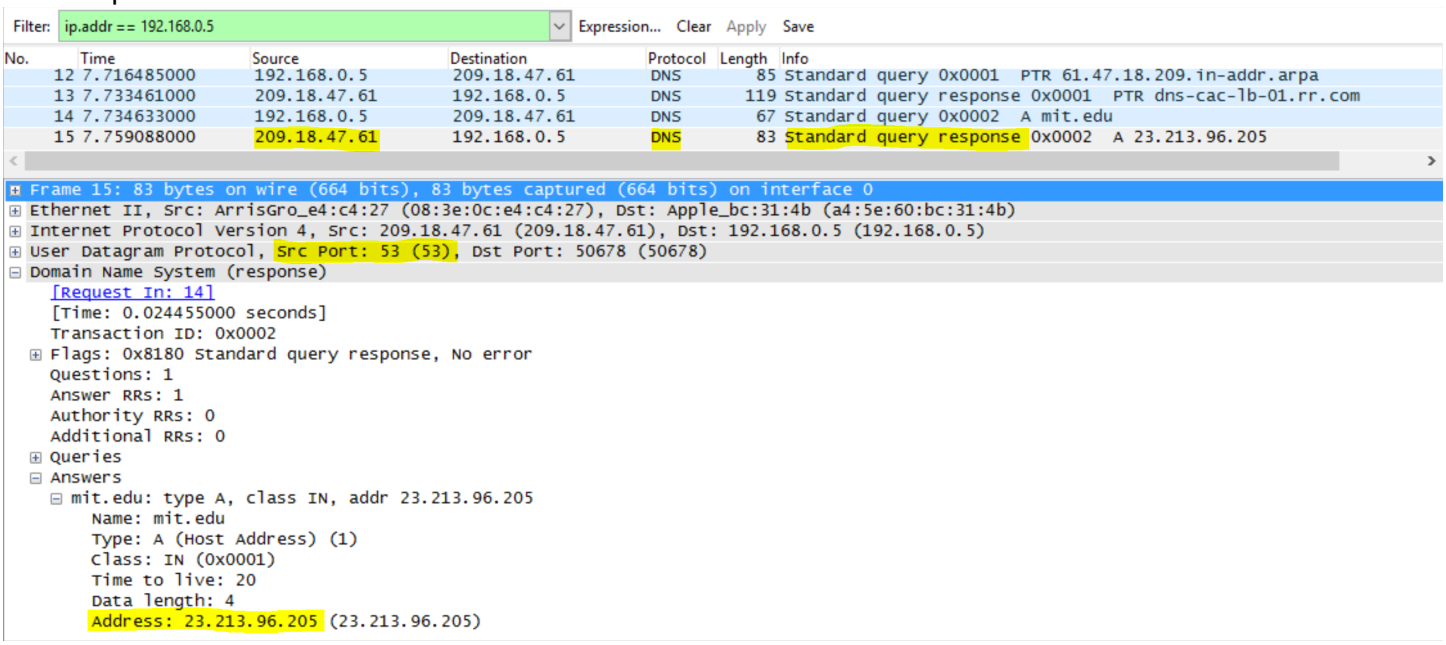
Q9. Yes, it contains the ip-address returned in the answers section.
Q10. No

Q11. Destination Port: 53. Source port: 53.
Q12. 209.18.47.61. Yes. (See previous ipconfig /all for default DNS)
Q13. Type A. Contains no answers.
Q14. Only 1 answer is provided. It contains the hostname, type, class, ttl, data length and address of mit.edu.

DNS Query

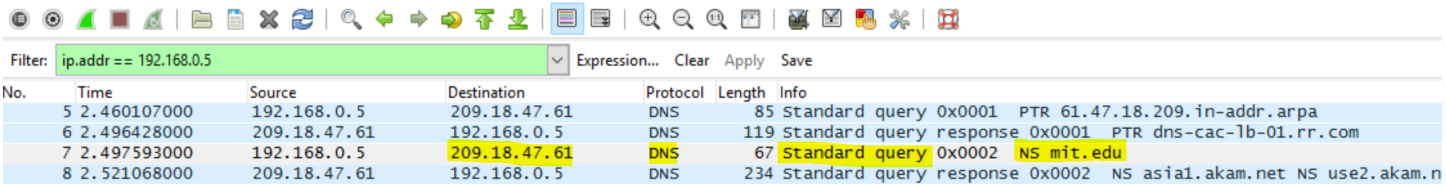


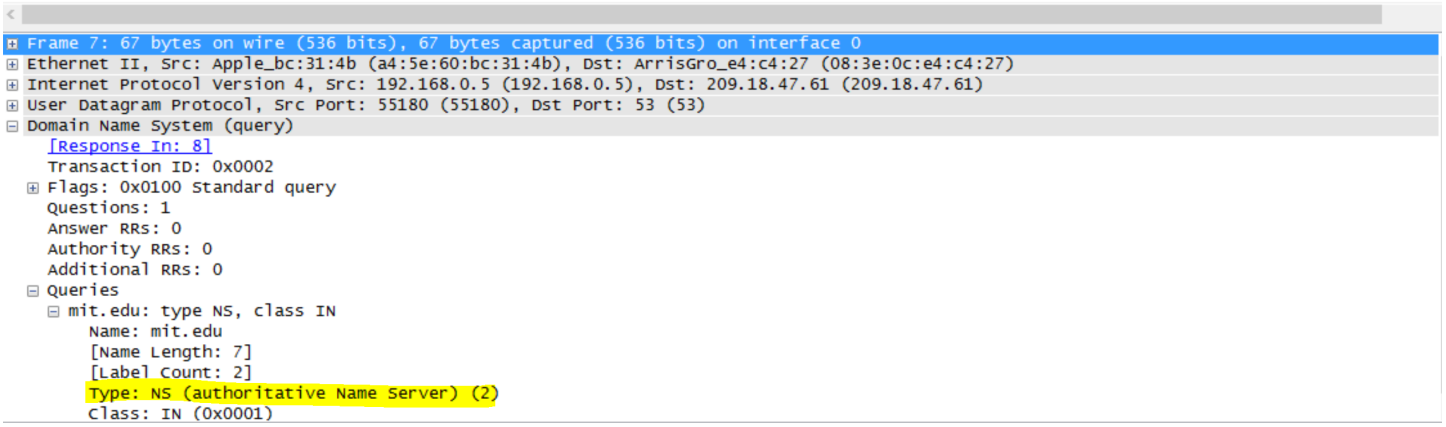
DNS Response



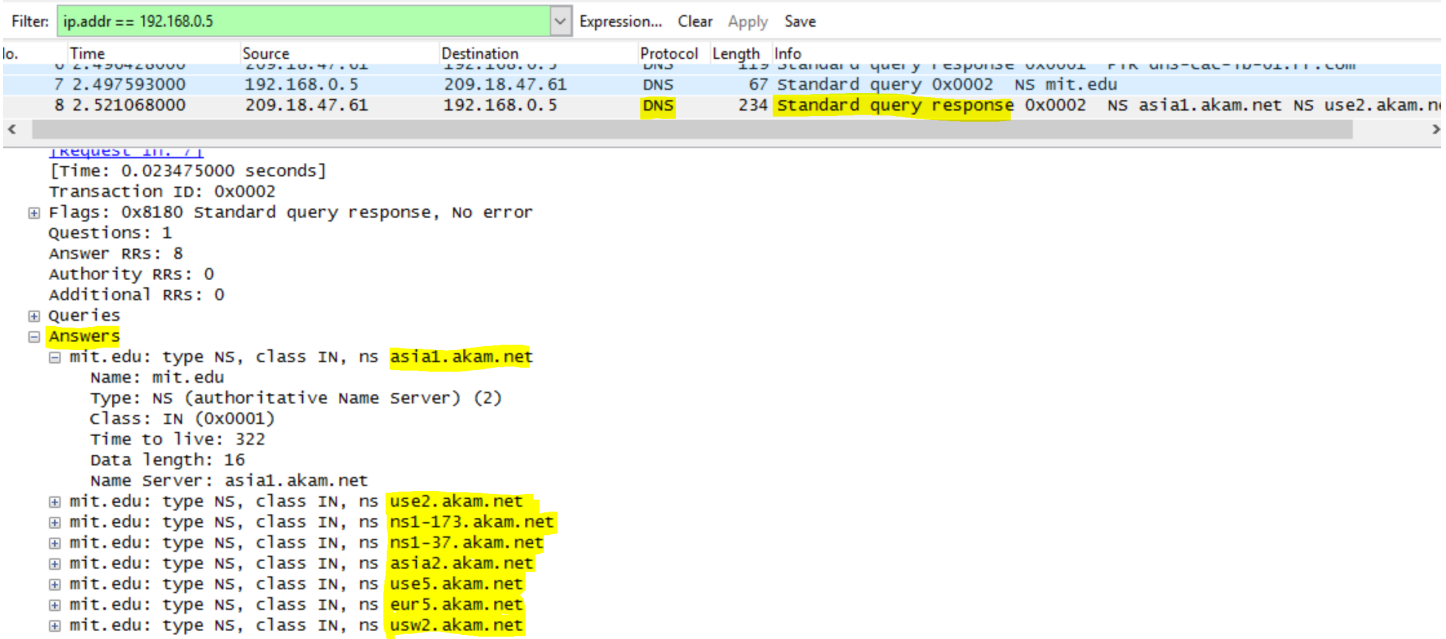
Q16. 209.18.47.61. Yes. (See previous ipconfig /all for default DNS)
Q17. Type NS. Contains no answers.
Q19. 8 answers are provided. The name servers are asia1.akam.net, asia2.akam.net, usw2.akam.net, ns1-37.akam.net, use2.akam.net, use5.akam.net, ns1-173.akam.net, eur5.akam.net. No it does not contain the IP addresses.

DNS Query



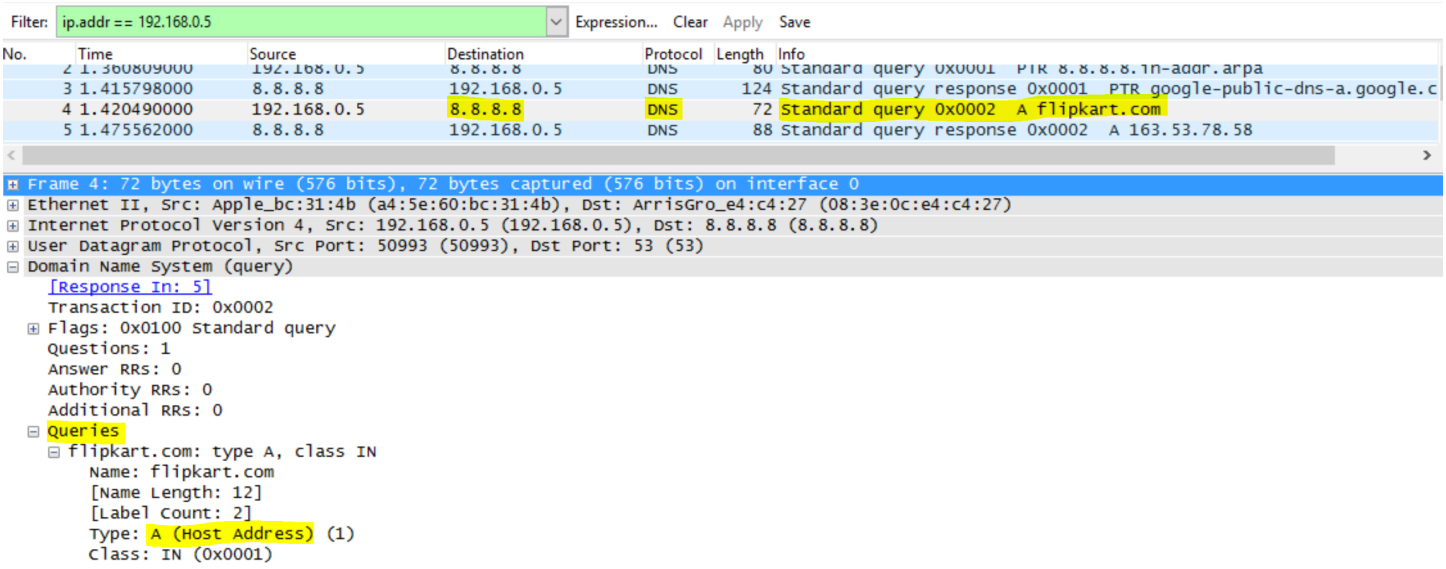


DNS Response



Command is **nslookup flipkart.com google-public-dns-a.google.com**. Because neither of the hostnames given in the question work.
Q16. 8.8.8.8. No. (See previous ipconfig /all for default DNS). It corresponds to google-public-dns-a.google.com.
Q17. Type A. Contains no answers.
Q19. Only 1 answer is provided. It contains the hostname, type, class, ttl, data length and ip address of flipkart.com.

DNS Query



DNS Response