EE4013 Lab 3

Q1: Address: 58.229.6.225

```
rory@rory-Inspiron-5558:~$ nslookup aiit.or.kr
Server:         127.0.1.1
Address:        127.0.1.1#53

Non-authoritative answer:
Name:   aiit.or.kr
Address: 58.229.6.225
```

Q2: Address: 195.130.120.109

```
rory@rory-Inspiron-5558:~$ nslookup uoi.gr
Server:         127.0.1.1
Address:        127.0.1.1#53

Non-authoritative answer:
Name:   uoi.gr
Address: 195.130.120.109
```

Servers:

```
Authoritative answers can be found from:
marina.noc.uoi.gr       internet address = 195.130.120.120
kouzina.noc.uoi.gr      internet address = 195.130.120.110
sns1.grnet.gr   internet address = 83.212.5.22
```

Q3: Address: 195.130.120.120#53

```
rory@rory-Inspiron-5558:~$ nslookup mail.yahoo.com marina.noc.uoi.gr
Server:         marina.noc.uoi.gr
Address:        195.130.120.120#53

Non-authoritative answer:
mail.yahoo.com  canonical name = login.yahoo.com.
```

Q4: Sent using UDP

```
458 11:46:48.345401449 10.52.242.144  10.220.1.11     ICMP  184 Destination unreachable (Port unreachable)
459 11:46:48.353807694 104.20.1.85    10.52.242.144  TCP    74 80 → 33674 [SYN, ACK] Seq=0 Ack=1 Win=5792 Len=0 MSS=…
460 11:46:48.353840012 10.52.242.144  104.20.1.85    TCP    66 33674 → 80 [ACK] Seq=1 Ack=1 Win=29312 Len=0 TSval=25…
461 11:46:48.371611128 104.20.1.85    10.52.242.144  TCP    74 80 → 33672 [SYN, ACK] Seq=0 Ack=1 Win=5792 Len=0 MSS=…
462 11:46:48.371641662 10.52.242.144  104.20.1.85    TCP    66 33672 → 80 [ACK] Seq=1 Ack=1 Win=29312 Len=0 TSval=25…
467 11:46:48.479808992 10.52.242.144  10.220.1.10    DNS    77 Standard query 0xf988 A www.cafepress.com
468 11:46:48.479882989 10.52.242.144  10.220.1.10    DNS    72 Standard query 0x87f1 A www.iana.org
469 11:46:48.480015618 10.52.242.144  10.220.1.10    DNS    83 Standard query 0x5ca6 A www.internetsociety.org
470 11:46:48.498452909 10.220.1.10    10.52.242.144  DNS   156 Standard query response 0xf988 A www.cafepress.com CN…
471 11:46:48.499530267 4.31.198.44    10.52.242.144  TCP    74 443 → 50330 [SYN, ACK] Seq=0 Ack=1 Win=43440 Len=0 MS…
```

```
    [Coloring Rule Name: UDP]
    [Coloring Rule String: udp]
▾ Ethernet II, Src: IntelCor_db:89:3b (e4:f8:9c:db:89:3b), Dst: Fortinet_09:00:17 (00:09:0f:09:00:17)
  ▸ Destination: Fortinet_09:00:17 (00:09:0f:09:00:17)
  ▸ Source: IntelCor_db:89:3b (e4:f8:9c:db:89:3b)
    Type: IPv4 (0x0800)
▸ Internet Protocol Version 4, Src: 10.52.242.144, Dst: 10.220.1.10
▸ User Datagram Protocol, Src Port: 10159, Dst Port: 53
▾ Domain Name System (query)
    [Response In: 470]
    Transaction ID: 0xf988
  ▸ Flags: 0x0100 Standard query
```

Q5: Src Port: 53
Destination Port: 10159

```
▼ Ethernet II, Src: Fortinet_09:00:17 (00:09:0f:09:00:17), Dst: IntelCor_db
  ▶ Destination: IntelCor_db:89:3b (e4:f8:9c:db:89:3b)
  ▶ Source: Fortinet_09:00:17 (00:09:0f:09:00:17)
    Type: IPv4 (0x0800)
▶ Internet Protocol Version 4, Src: 10.220.1.10, Dst: 10.52.242.144
▶ User Datagram Protocol, Src Port: 53, Dst Port: 10159
▼ Domain Name System (response)
    [Request In: 467]
    [Time: 0.018643917 seconds]
    Transaction ID: 0xf988
```

Q6: It's sent to 10.52.255.255

```
wlp6s0    Link encap:Ethernet  HWaddr e4:f8:9c:db:89:3b
          inet addr:10.52.242.144  Bcast:10.52.255.255  Mask:255.255.240.0
          inet6 addr: fe80::f6e7:14:86e2:1553/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:379761 errors:0 dropped:0 overruns:0 frame:0
          TX packets:47513 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:122872750 (122.8 MB)  TX bytes:6487116 (6.4 MB)

rory@rory-Inspiron-5558:~$
```

Q7: It's a type A standard query and it doesn't contain any answers.

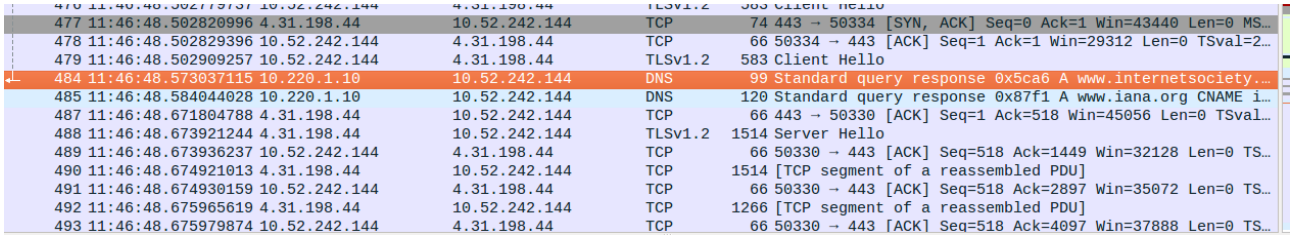
```
▼ Queries
  ▼ www.internetsociety.org: type A, class IN
      Name: www.internetsociety.org
      [Name Length: 23]
      [Label Count: 3]
      Type: A (Host Address) (1)
      Class: IN (0x0001)
```

Q8: There were 2 answers containing information about the name of the host, the type of address, class, the time to live, the data length and the IP address.

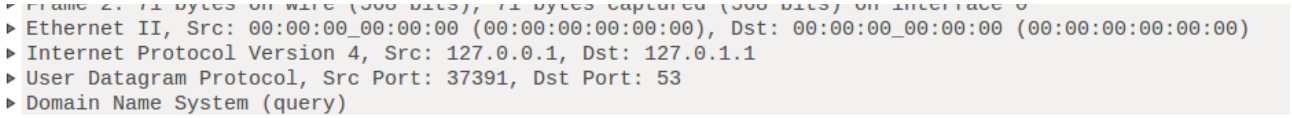
```
▼ www.iana.org: type CNAME, class IN, cname ianawww.vip.icann.org
    Name: www.iana.org
    Type: CNAME (Canonical NAME for an alias) (5)
    Class: IN (0x0001)
    Time to live: 2528
    Data length: 20
    CNAME: ianawww.vip.icann.org
▼ ianawww.vip.icann.org: type A, class IN, addr 192.0.32.8
    Name: ianawww.vip.icann.org
    Type: A (Host Address) (1)
    Class: IN (0x0001)
    Time to live: 30
    Data length: 4
    Address: 192.0.32.8
```

Q9: The first SYN packet was sent to 192.0.32.8 (see image above).

Q10: No

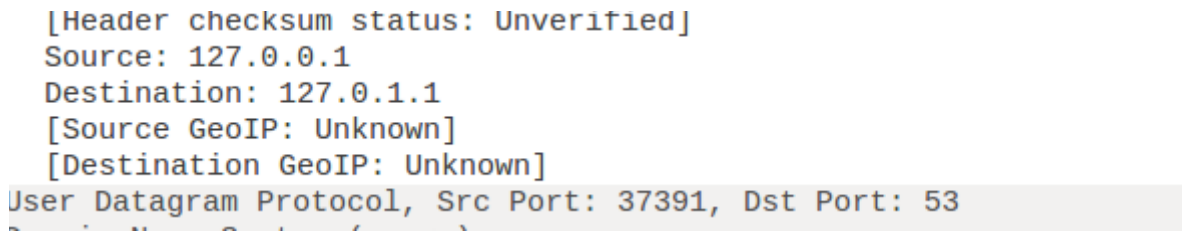



Q11: Source port: 37391
Destination: 53

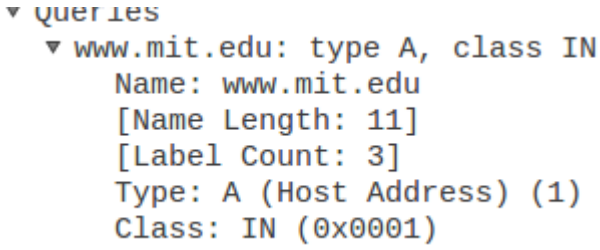



Q12: Address: 127.0.1.1

Yes




Q13: Standard type A, no answers




Q14: 3 answers containing name, type, class, TTL, data length and CNAME

```
    Class: IN (0x0001)
  ▼ Answers
    ▼ www.mit.edu: type CNAME, class IN, cname www.mit.edu.edgekey.net
        Name: www.mit.edu
        Type: CNAME (Canonical NAME for an alias) (5)
        Class: IN (0x0001)
        Time to live: 1800
        Data length: 25
        CNAME: www.mit.edu.edgekey.net
    ▼ www.mit.edu.edgekey.net: type CNAME, class IN, cname e9566.dscb.akamaiedge.net
        Name: www.mit.edu.edgekey.net
        Type: CNAME (Canonical NAME for an alias) (5)
        Class: IN (0x0001)
        Time to live: 60
        Data length: 24
        CNAME: e9566.dscb.akamaiedge.net
    ▼ e9566.dscb.akamaiedge.net: type A, class IN, addr 2.22.134.2
        Name: e9566.dscb.akamaiedge.net
        Type: A (Host Address) (1)
        Class: IN (0x0001)
        Time to live: 20
        Data length: 4
```

Q15: See image above for screenshot

Q16: Address: 127.0.1.1
Yes

```
▶ Ethernet II, Src: 00:00:00_00:00:00 (00:00:00:00:00:00), Dst: 00:00:00_00:00:00 (00
▶ Internet Protocol Version 4, Src: 127.0.0.1, Dst: 127.0.1.1
▶ User Datagram Protocol, Src Port: 44430, Dst Port: 53
▶ Domain Name System (query)
```

Q17: Type A standard query, no answers

```
    ▼ Queries
▼ Answers
  ▼ www.mit.edu: type CNAME, class IN, cname www.mit.edu.edgekey.net
      Name: www.mit.edu
      Type: CNAME (Canonical NAME for an alias) (5)
      Class: IN (0x0001)
      Time to live: 1138
      Data length: 25
      CNAME: www.mit.edu.edgekey.net
  ▼ www.mit.edu.edgekey.net: type CNAME, class IN, cname e9566.dscb.akamaiedge.net
      Name: www.mit.edu.edgekey.net
      Type: CNAME (Canonical NAME for an alias) (5)
      Class: IN (0x0001)
      Time to live: 60
      Data length: 24
      CNAME: e9566.dscb.akamaiedge.net
  ▼ e9566.dscb.akamaiedge.net: type A, class IN, addr 2.22.134.2
      Name: e9566.dscb.akamaiedge.net
      Type: A (Host Address) (1)
      Class: IN (0x0001)
      Time to live: 20
      Data length: 4
      Address: 2.22.134.2
```

Q18: www.mit.edu, www.mit.edu.edgekey.net, e9566.dscb.akamaiedge.net

Q19:

```
▼ Answers
  ▼ www.mit.edu: type CNAME, class IN, cname www.mit.edu.edgekey.net
      Name: www.mit.edu
      Type: CNAME (Canonical NAME for an alias) (5)
      Class: IN (0x0001)
      Time to live: 1138
      Data length: 25
      CNAME: www.mit.edu.edgekey.net
  ▼ www.mit.edu.edgekey.net: type CNAME, class IN, cname e9566.dscb.akamaiedge.net
      Name: www.mit.edu.edgekey.net
      Type: CNAME (Canonical NAME for an alias) (5)
      Class: IN (0x0001)
      Time to live: 60
      Data length: 24
      CNAME: e9566.dscb.akamaiedge.net
  ▼ e9566.dscb.akamaiedge.net: type A, class IN, addr 2.22.134.2
      Name: e9566.dscb.akamaiedge.net
      Type: A (Host Address) (1)
      Class: IN (0x0001)
      Time to live: 20
      Data length: 4
      Address: 2.22.134.2
```

Q20: Address: 127.0.1.1

Yes

```
▸ Frame 2: 71 bytes on wire (568 bits), 71 bytes captured (568 bits) on interface 0
▸ Ethernet II, Src: 00:00:00_00:00:00 (00:00:00:00:00:00), Dst: 00:00:00_00:00:00 (00:00:00:00:00:00)
▸ Internet Protocol Version 4, Src: 127.0.0.1, Dst: 127.0.1.1
▸ User Datagram Protocol, Src Port: 44430, Dst Port: 53
▸ Domain Name System (query)
```

Q21: Standard type A, no answers

```
▼ Queries
  ▼ www.mit.edu: type A, class IN
      Name: www.mit.edu
      [Name Length: 11]
      [Label Count: 3]
      Type: A (Host Address) (1)
      Class: IN (0x0001)
```

Q22: 3 answers containing name, type, class, TTL, data length and CNAME

Q23:

```
▼ Answers
  ▼ www.mit.edu: type CNAME, class IN, cname www.mit.edu.edgekey.net
      Name: www.mit.edu
      Type: CNAME (Canonical NAME for an alias) (5)
      Class: IN (0x0001)
      Time to live: 1138
      Data length: 25
      CNAME: www.mit.edu.edgekey.net
  ▼ www.mit.edu.edgekey.net: type CNAME, class IN, cname e9566.dscb.akamaiedge.net
      Name: www.mit.edu.edgekey.net
      Type: CNAME (Canonical NAME for an alias) (5)
      Class: IN (0x0001)
      Time to live: 60
      Data length: 24
      CNAME: e9566.dscb.akamaiedge.net
  ▼ e9566.dscb.akamaiedge.net: type A, class IN, addr 2.22.134.2
      Name: e9566.dscb.akamaiedge.net
      Type: A (Host Address) (1)
      Class: IN (0x0001)
      Time to live: 20
      Data length: 4
      Address: 2.22.134.2
```