

Assignment 4 - (Mini Assignment 3)

DNS protocol behavior

```
Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix  . : domain.name
    Description . . . . . : Intel(R) Dual Band Wireless-AC 7265
    Physical Address. . . . . : 88-B1-11-F5-87-D2
    DHCP Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::5cb6:3e0:d8d6:16fc%17(Preferred)
    IPv4 Address. . . . . : 192.168.0.15(Preferred)
    Subnet Mask . . . . . : 255.255.255.0
    Lease Obtained. . . . . : 14 March 2020 06:58:51 PM
    Lease Expires . . . . . : 14 March 2020 08:58:50 PM
    Default Gateway . . . . . : fe80::8226:89ff:fe51:b8d0%17
                                192.168.0.1
    DHCP Server . . . . . : 192.168.0.1
    DHCPv6 IAID . . . . . : 126398737
    DHCPv6 Client DUID. . . . . : 00-01-00-01-25-C7-74-A0-48-BA-4E-3C-AA-97
    DNS Servers . . . . . : 192.168.0.1
    NetBIOS over Tcpip. . . . . : Enabled
```

My ip : 192.168.0.15

MAC : 88-B1-11-F5-87-D2

A

Educational institution INDIA

```
Command Prompt

timeout was 2 seconds.
Default Server: UnKnown
Address: 192.168.0.1

> iitd.ac.in
Server: UnKnown
Address: 192.168.0.1

Non-authoritative answer:
Name: in.domain.name
Address: 78.47.226.171
Aliases: iitd.ac.in.domain.name

> set q=mx
> iitd.ac.in
Server: UnKnown
Address: 192.168.0.1

Non-authoritative answer:
iitd.ac.in.domain.name canonical name = in.domain.name
in.domain.name MX preference = 10, mail exchanger = mail.in.domain.name
> set q=cname
> iitd.ac.in
Server: UnKnown
Address: 192.168.0.1

Non-authoritative answer:
iitd.ac.in.domain.name canonical name = in.domain.name
>
C:\Users\subbu>
```

Name: iitd.ac.in

IP: 78.47.226.171

Mail IP : 82.208.29.194

Canonical name : in.domain.name

TTL : 3600

Educational institution EUROPE

```
>
C:\Users\subbu>nslookup
DNS request timed out.
    timeout was 2 seconds.
Default Server:  UnKnown
Address:  192.168.0.1

> ox.ac.uk
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
Name:    uk.domain.name
Address:  78.47.226.171
Aliases:  ox.ac.uk.domain.name

> set q=mx
> ox.ac.uk
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
ox.ac.uk.domain.name    canonical name = uk.domain.name
uk.domain.name  MX preference = 10, mail exchanger = mail.uk.domain.name
> set q=cname
> ox.ac.uk
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
ox.ac.uk.domain.name    canonical name = uk.domain.name
>
```

Name: ox.ac.uk (Oxford)

IP: 78.47.226.171

Mail IP : 82.208.29.194

Canonical name : uk.domain.name

TTL: 2400

Educational institution North America

```
C:\Users\subbu>nslookup
DNS request timed out.
    timeout was 2 seconds.
Default Server:  UnKnown
Address:  192.168.0.1

> stanford.edu
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
DNS request timed out.
    timeout was 2 seconds.
Non-authoritative answer:
DNS request timed out.
    timeout was 2 seconds.
Name:    stanford.edu
Address:  171.67.215.200

> set q=mx
> stanford.edu
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
Non-authoritative answer:
stanford.edu    MX preference = 10, mail exchanger = mxb-00000d03.gslb.pphosted.com
stanford.edu    MX preference = 10, mail exchanger = mxa-00000d03.gslb.pphosted.com
> set q=cname
> stanford.edu
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
DNS request timed out.
    timeout was 2 seconds.
*** Request to UnKnown timed-out
>
C:\Users\subbu>
```

Name: stanford.edu

IP: 171.67.215.200

Mail IP : 148.163.149.244

Canonical name : none

TTL: 4300

Govt. Ministry

```
C:\Users\subbu>nslookup
DNS request timed out.
    timeout was 2 seconds.
Default Server:  UnKnown
Address:  192.168.0.1

> mhrd.gov.in
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
Name:    in.domain.name
Address:  78.47.226.171
Aliases:  mhrd.gov.in.domain.name

> set q=mx
> mhrd.gov.in
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
mhrd.gov.in.domain.name canonical name = in.domain.name
in.domain.name  MX preference = 10, mail exchanger = mail.in.domain.name
> set q=cname
> mhrd.gov.in
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
mhrd.gov.in.domain.name canonical name = in.domain.name
>
```

Name: mhrd.gov.in

IP: 78.47.226.171

Mail IP : 82.208.29.194

Canonical name : in.domain.name

TTL: 2300

Scientific Research

```

>
C:\Users\subbu>nslookup
DNS request timed out.
    timeout was 2 seconds.
Default Server:  UnKnown
Address:  192.168.0.1

> isro.gov.in
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
Name:    in.domain.name
Address:  78.47.226.171
Aliases:  isro.gov.in.domain.name

> set q=mx
> isro.gov.in
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
isro.gov.in.domain.name canonical name = in.domain.name
in.domain.name  MX preference = 10, mail exchanger = mail.in.domain.name
> set q=cname
> isro.gov.in
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
isro.gov.in.domain.name canonical name = in.domain.name
>

```

Name: isro.gov.in

IP: 78.47.226.171

Mail IP : 82.208.29.194

Canonical name : in.domain.name

TTL: 3500

Business Enterprise

```

>
C:\Users\subbu>nslookup
DNS request timed out.
    timeout was 2 seconds.
Default Server:  UnKnown
Address:  192.168.0.1

> hfcl.com
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
DNS request timed out.
    timeout was 2 seconds.
Non-authoritative answer:
DNS request timed out.
    timeout was 2 seconds.
Name:    hfcl.com
Address:  64.150.163.177

> set q=mx
> hfcl.com
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
Non-authoritative answer:
hfcl.com  MX preference = 10, mail exchanger = mx.hfcl.com
> set q=cname
> hfcl.com
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
DNS request timed out.
    timeout was 2 seconds.
*** Request to UnKnown timed-out
>

```

Name: hfcl.com

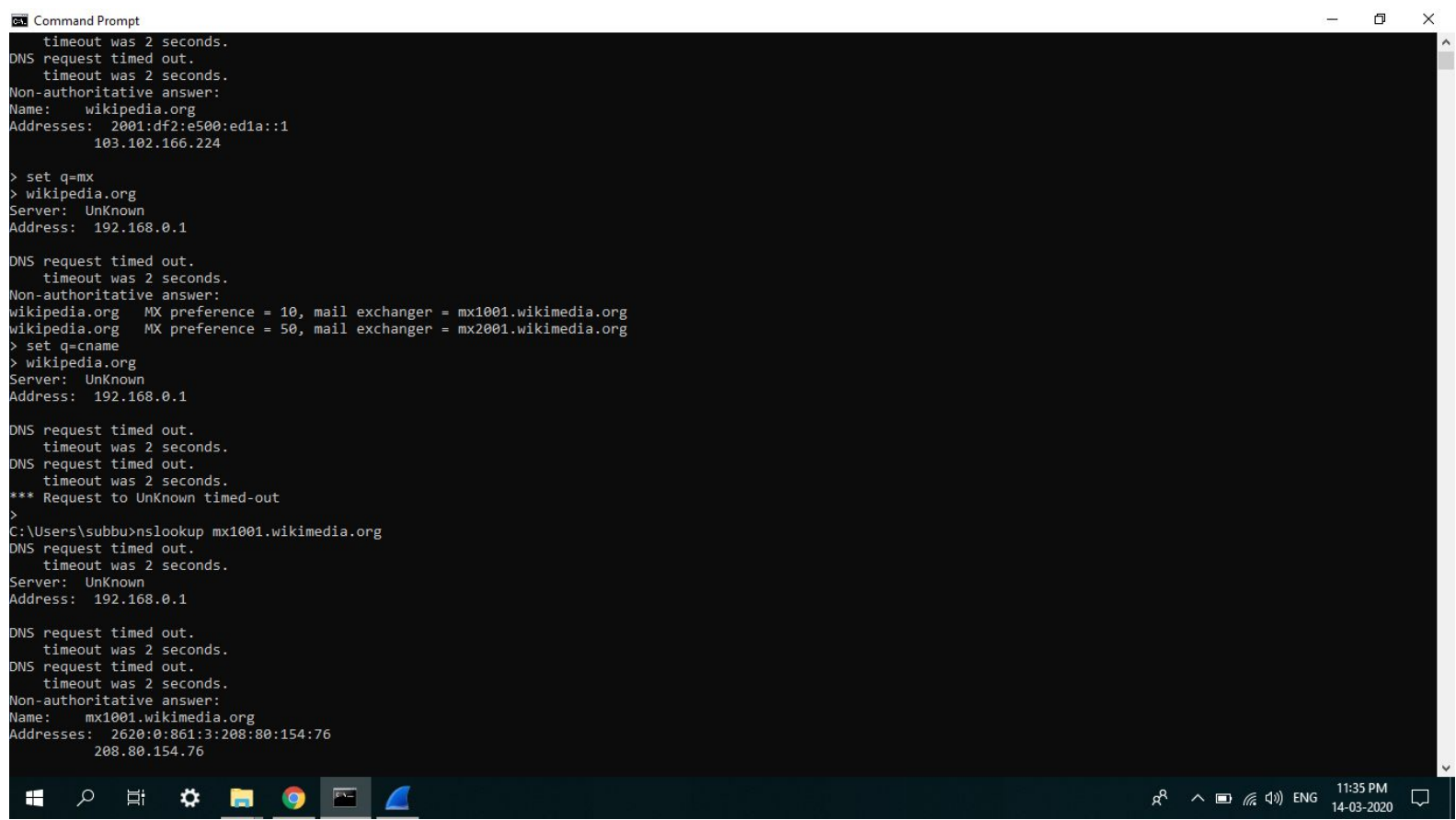
IP: 64.150.163.177

Mail IP : 119.252.208.33

TTL: 86400

Canonical name : none

gTLD



Name: wikipedia.org

IP: 103.102.166.224

Mail IP : 208.80.154.76

Canonical name : none

TTL: 6700

Information like above are available in screenshot itself

sTLD

```
Command Prompt
timeout was 2 seconds.
DNS request timed out.
timeout was 2 seconds.
Non-authoritative answer:
Name: mit.edu
Addresses: 2600:1417:8000:4be::255e
           2600:1417:8000:4a2::255e
           104.85.193.82

> set q=mx
> mit.edu
Server: UnKnown
Address: 192.168.0.1

DNS request timed out.
timeout was 2 seconds.
Non-authoritative answer:
mit.edu MX preference = 100, mail exchanger = mit-edu.mail.protection.outlook.com
> set q=cname
> mit.edu
Server: UnKnown
Address: 192.168.0.1

DNS request timed out.
timeout was 2 seconds.
DNS request timed out.
timeout was 2 seconds.
*** Request to UnKnown timed-out
>
C:\Users\subbu>nslookup mit-edu.mail.protection.outlook.com
DNS request timed out.
timeout was 2 seconds.
Server: UnKnown
Address: 192.168.0.1

DNS request timed out.
timeout was 2 seconds.
DNS request timed out.
timeout was 2 seconds.
DNS request timed out.
timeout was 2 seconds.
DNS request timed out.
timeout was 2 seconds.
*** Request to UnKnown timed-out
```

ccTLD


```
Command Prompt
Default Server:  UnKnown
Address:  192.168.0.1

> google.fr
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
Name:    fr.domain.name
Address:  78.47.226.171
Aliases:  google.fr.domain.name

> set q=mx
> google.fr
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
google.fr.domain.name  canonical name = fr.domain.name
fr.domain.name  MX preference = 10, mail exchanger = mail.fr.domain.name
> set q=cname
> google.fr
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
google.fr.domain.name  canonical name = fr.domain.name
>
C:\Users\subbu>nslookup mail.fr.domain.name
DNS request timed out.
    timeout was 2 seconds.
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
DNS request timed out.
    timeout was 2 seconds.
Non-authoritative answer:
Name:    mail.gransy.com
Addresses:  2001:1528:137::f1
            82.208.29.194
Aliases:  mail.fr.domain.name
```

```
Command Prompt
Default Server:  UnKnown
Address:  192.168.0.1

> nicovideo.jp
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
Name:    jp.domain.name
Address:  78.47.226.171
Aliases:  nicovideo.jp.domain.name

> set q=mx
> nicovideo.jp
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
nicovideo.jp.domain.name  canonical name = jp.domain.name
jp.domain.name  MX preference = 10, mail exchanger = mail.jp.domain.name
> set q=cname
> nicovideo.jp
Server:  UnKnown
Address:  192.168.0.1

Non-authoritative answer:
nicovideo.jp.domain.name  canonical name = jp.domain.name
>
C:\Users\subbu>nslookup mail.jp.domain.name
DNS request timed out.
    timeout was 2 seconds.
Server:  UnKnown
Address:  192.168.0.1

DNS request timed out.
    timeout was 2 seconds.
DNS request timed out.
    timeout was 2 seconds.
Non-authoritative answer:
Name:    mail.gransy.com
Addresses:  2001:1528:137::f1
            82.208.29.194
Aliases:  mail.jp.domain.name
```