Exercise 4

Q1

```
weill % dig www.cecs.anu.edu.au

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> www.cecs.anu.edu.au
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 11654
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 3, ADDITIONAL: 7

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;www.cecs.anu.edu.au.           IN      A

;; ANSWER SECTION:
www.cecs.anu.edu.au.    3600    IN      CNAME   rproxy.cecs.anu.edu.au.
rproxy.cecs.anu.edu.au. 3600    IN      A       150.203.161.98

;; AUTHORITY SECTION:
cecs.anu.edu.au.        300     IN      NS      ns2.cecs.anu.edu.au.
cecs.anu.edu.au.        300     IN      NS      ns4.cecs.anu.edu.au.
cecs.anu.edu.au.        300     IN      NS      ns3.cecs.anu.edu.au.

;; ADDITIONAL SECTION:
ns2.cecs.anu.edu.au.    300     IN      A       150.203.161.36
ns2.cecs.anu.edu.au.    3600    IN      AAAA    2001:388:1034:2905::24
ns3.cecs.anu.edu.au.    300     IN      A       150.203.161.50
ns3.cecs.anu.edu.au.    3600    IN      AAAA    2001:388:1034:2905::32
ns4.cecs.anu.edu.au.    300     IN      A       150.203.161.38
ns4.cecs.anu.edu.au.    3600    IN      AAAA    2001:388:1034:2905::26

;; Query time: 72 msec
;; SERVER: 129.94.242.2#53(129.94.242.2)
;; WHEN: Sun Jun 23 21:59:19 AEST 2019
;; MSG SIZE  rcvd: 271
```

According to the information in ANSWER SECTION, the IP address of www.cecs.anu.edu.auis is 150.203.161.98 . As we can see from QUESTION SECTION, type A DNS query is sent to get the answer.

Q2:

As it is shown in the CNAME record, the canonical name for CECS ANU web server is rproxy.cecs.anu.edu.au. The IP address is 150.203.161.98.

Reason: The hosts on the Internet can be identified using different methods, one is hostname and another is IP address. Hostname(alias) is easy for humans to remember but does not contains much detailed

information about the host, and it is difficult for routers to handle these hostnames. So, IP addresses are also used to identify hosts, but they are difficult for humans to remember. Aliasing is also useful when running multiple services

Q3:

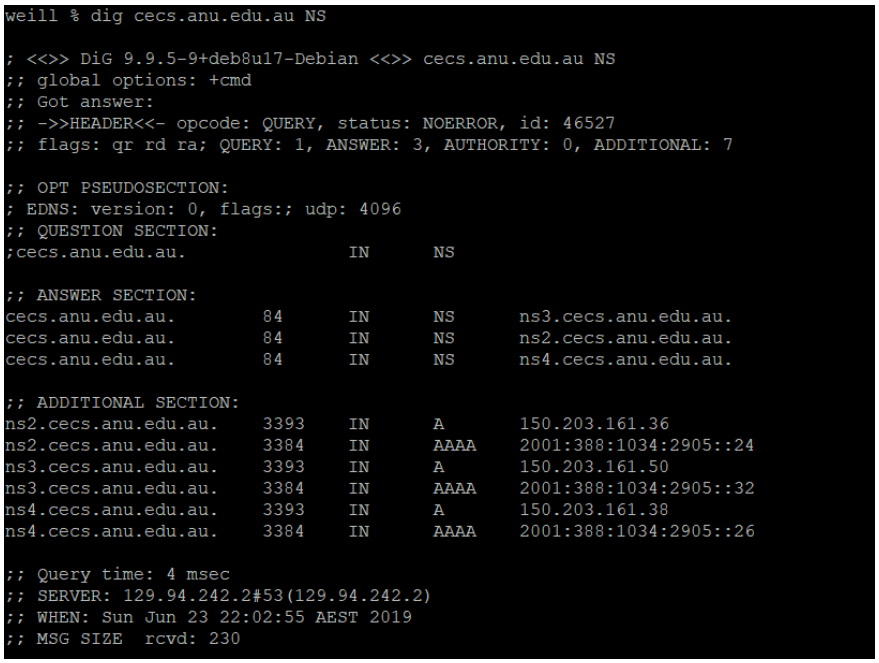
The authority section contains NS resource records for cecs.anu.edu.au domain name, there are three authoritative name servers for this domain name, which are ns2.cecs.anu.edu.au, ns4.cecs.anu.edu.au and ns3.cecs.anu.edu.au.

The additional section contains the IP addresses for these three authoritative name servers. The records with AAAA are for IPv6 addresses.

Q4:

From the information included at the bottom of the output in the above picture, the IP address of the local nameserver for my machine is 129.94.242.45.This query is made by connecting to CSE server within the campus.

Q5



```
weill % dig cecs.anu.edu.au NS

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> cecs.anu.edu.au NS
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 46527
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 7

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;cecs.anu.edu.au.               IN      NS

;; ANSWER SECTION:
cecs.anu.edu.          84      IN      NS      ns3.cecs.anu.edu.au.
cecs.anu.edu.          84      IN      NS      ns2.cecs.anu.edu.au.
cecs.anu.edu.          84      IN      NS      ns4.cecs.anu.edu.au.

;; ADDITIONAL SECTION:
ns2.cecs.anu.edu.au.   3393    IN      A       150.203.161.36
ns2.cecs.anu.edu.au.   3384    IN      AAAA    2001:388:1034:2905::24
ns3.cecs.anu.edu.au.   3393    IN      A       150.203.161.50
ns3.cecs.anu.edu.au.   3384    IN      AAAA    2001:388:1034:2905::32
ns4.cecs.anu.edu.au.   3393    IN      A       150.203.161.38
ns4.cecs.anu.edu.au.   3384    IN      AAAA    2001:388:1034:2905::26

;; Query time: 4 msec
;; SERVER: 129.94.242.2#53(129.94.242.2)
;; WHEN: Sun Jun 23 22:02:55 AEST 2019
;; MSG SIZE  rcvd: 230
```

For this question, I made a NSqueryas is shown in the above picture. This query is made by connecting to CSE server using cisco Any Connect VPN from outside the campus, which is slightly different from the previous query above. The DNS nameservers for the “cecs.anu.edu.au” domain are:

1:ns4.cecs.anu.edu.au(150.203.161.38),

2:ns3.cecs.anu.edu.au(150.203.161.50)

3:ns2.cecs.anu.edu.au(150.203.161.36).

Q6

The DNS name associated with 111.68.101.54 is

webserver.seecs.nust.edu.pk

Type PTR 54.101.68.111

```
weill % dig -x 111.68.101.54

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> -x 111.68.101.54
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 54001
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 3

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;54.101.68.111.in-addr.arpa.    IN      PTR

;; ANSWER SECTION:
54.101.68.111.in-addr.arpa. 3600 IN     PTR     webserver.seecs.nust.edu.pk.

;; AUTHORITY SECTION:
101.68.111.in-addr.arpa. 52618  IN      NS      ns1.hec.gov.pk.
101.68.111.in-addr.arpa. 52618  IN      NS      ns2.hec.gov.pk.

;; ADDITIONAL SECTION:
ns1.hec.gov.pk.         1838    IN      A       103.4.93.5
ns2.hec.gov.pk.         1838    IN      A       103.4.93.6

;; Query time: 214 msec
;; SERVER: 129.94.242.2#53(129.94.242.2)
;; WHEN: Sun Jun 23 22:11:00 AEST 2019
;; MSG SIZE  rcvd: 172
```

Q7

```
weill % dig @129.94.242.33 yahoo.com MX

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @129.94.242.33 yahoo.com MX
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 23209
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 5, ADDITIONAL: 9

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;yahoo.com.                     IN      MX

;; ANSWER SECTION:
yahoo.com.              1800    IN      MX      1 mta7.am0.yahoodns.net.
yahoo.com.              1800    IN      MX      1 mta5.am0.yahoodns.net.
yahoo.com.              1800    IN      MX      1 mta6.am0.yahoodns.net.

;; AUTHORITY SECTION:
yahoo.com.              126324  IN      NS      ns2.yahoo.com.
yahoo.com.              126324  IN      NS      ns5.yahoo.com.
yahoo.com.              126324  IN      NS      ns3.yahoo.com.
yahoo.com.              126324  IN      NS      ns1.yahoo.com.
yahoo.com.              126324  IN      NS      ns4.yahoo.com.

;; ADDITIONAL SECTION:
ns1.yahoo.com.          24848   IN      A       68.180.131.16
ns1.yahoo.com.          37624   IN      AAAA    2001:4998:130::1001
ns2.yahoo.com.          367506  IN      A       68.142.255.16
ns2.yahoo.com.          42740   IN      AAAA    2001:4998:140::1002
ns3.yahoo.com.          171389  IN      A       203.84.221.53
ns3.yahoo.com.          1258    IN      AAAA    2406:8600:b8:fe03::1003
ns4.yahoo.com.          84775   IN      A       98.138.11.157
ns5.yahoo.com.          139483  IN      A       119.160.253.83

;; Query time: 154 msec
;; SERVER: 129.94.242.33#53(129.94.242.33)
;; WHEN: Sun Jun 23 22:15:33 AEST 2019
;; MSG SIZE  rcvd: 371
```

No, I did not get an authoritative answer. Because in the response from CSE nameserver, the flags do not include authoritative answer, which represents the authoritative answer. This is because this server has authority for only the cse.unsw.edu.au domain and not for the Yahoo domain.

Q8

```
weill % dig @ns2.cecs.anu.edu.au yahoo.com MX

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @ns2.cecs.anu.edu.au yahoo.com MX
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: REFUSED, id: 13573
;; flags: qr rd; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;yahoo.com.                     IN      MX

;; Query time: 8 msec
;; SERVER: 150.203.161.36#53(150.203.161.36)
;; WHEN: Sun Jun 23 22:20:10 AEST 2019
;; MSG SIZE  rcvd: 38
```

I did not get a response when I try with one of the nameservers obtained in Question 5. The status of the reply is refused , the reason may be that these nameservers do not reply to DNS queries that are sent from devices

Q9

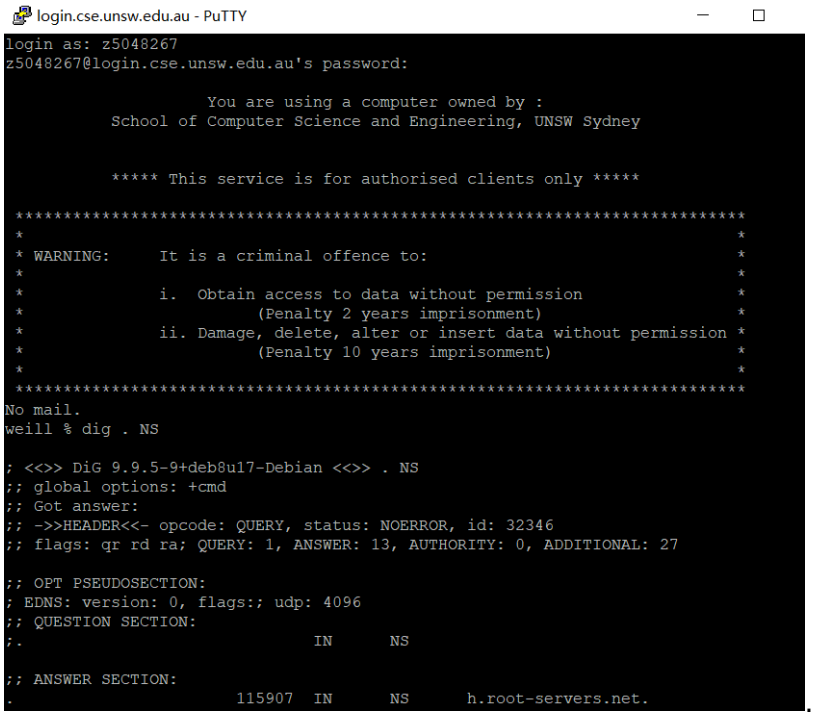
A MX type DNS query is sent to obtain this information

```
; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @ns2.yahoo.com yahoo.com MX
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 33192
;; flags: qr aa rd; QUERY: 1, ANSWER: 3, AUTHORITY: 5, ADDITIONAL: 9
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1272
;; QUESTION SECTION:
;yahoo.com.                     IN      MX

;; ANSWER SECTION:
yahoo.com.              1800    IN      MX      1 mta6.am0.yahoodns.net.
yahoo.com.              1800    IN      MX      1 mta7.am0.yahoodns.net.
yahoo.com.              1800    IN      MX      1 mta5.am0.yahoodns.net.

;; AUTHORITY SECTION:
yahoo.com.              172800  IN      NS      ns5.yahoo.com.
yahoo.com.              172800  IN      NS      ns4.yahoo.com.
yahoo.com.              172800  IN      NS      ns2.yahoo.com.
yahoo.com.              172800  IN      NS      ns1.yahoo.com.
yahoo.com.              172800  IN      NS      ns3.yahoo.com.

;; ADDITIONAL SECTION:
ns1.yahoo.com.          1209600 IN      A       68.180.131.16
ns2.yahoo.com.          1209600 IN      A       68.142.255.16
ns3.yahoo.com.          1209600 IN      A       203.84.221.53
ns4.yahoo.com.          1209600 IN      A       98.138.11.157
ns5.yahoo.com.          1209600 IN      A       119.160.253.83
ns1.yahoo.com.          86400   IN      AAAA    2001:4998:130::1001
ns2.yahoo.com.          86400   IN      AAAA    2001:4998:140::1002
ns3.yahoo.com.          86400   IN      AAAA    2406:8600:b8:fe03::1003

;; Query time: 148 msec
;; SERVER: 68.142.255.16#53(68.142.255.16)
;; WHEN: Sun Jun 23 22:23:18 AEST 2019
;; MSG SIZE  rcvd: 371
```

Q10

I am doing this exercise to use CSE terminal, I was sitting in tabla, so I assumed I was using tabla05.

We first need to query for the IP address of the root nameserver. The results are shown in the picture below.




```
;; ANSWER SECTION:
.                       115907  IN      NS      h.root-servers.net.
.                       115907  IN      NS      a.root-servers.net.
.                       115907  IN      NS      l.root-servers.net.
.                       115907  IN      NS      j.root-servers.net.
.                       115907  IN      NS      c.root-servers.net.
.                       115907  IN      NS      g.root-servers.net.
.                       115907  IN      NS      f.root-servers.net.
.                       115907  IN      NS      i.root-servers.net.
.                       115907  IN      NS      m.root-servers.net.
.                       115907  IN      NS      e.root-servers.net.
.                       115907  IN      NS      k.root-servers.net.
.                       115907  IN      NS      b.root-servers.net.
.                       115907  IN      NS      d.root-servers.net.

;; ADDITIONAL SECTION:
a.root-servers.net.     234975  IN      A       198.41.0.4
a.root-servers.net.     61515   IN      AAAA    2001:503:ba3e::2:30
b.root-servers.net.     82889   IN      A       199.9.14.201
b.root-servers.net.     61716   IN      AAAA    2001:500:200::b
c.root-servers.net.     241427  IN      A       192.33.4.12
c.root-servers.net.     186690  IN      AAAA    2001:500:2::c
d.root-servers.net.     320861  IN      A       199.7.91.13
d.root-servers.net.     55381   IN      AAAA    2001:500:2d::d
e.root-servers.net.     299417  IN      A       192.203.230.10
e.root-servers.net.     546727  IN      AAAA    2001:500:a8::e
f.root-servers.net.     228610  IN      A       192.5.5.241
f.root-servers.net.     186690  IN      AAAA    2001:500:2f::f
g.root-servers.net.     228611  IN      A       192.112.36.4
g.root-servers.net.     402065  IN      AAAA    2001:500:12::d0d
h.root-servers.net.     98925   IN      A       198.97.190.53
h.root-servers.net.     61716   IN      AAAA    2001:500:1::53
i.root-servers.net.     496771  IN      A       192.36.148.17
i.root-servers.net.     186689  IN      AAAA    2001:7fe::53
j.root-servers.net.     98925   IN      A       192.58.128.30
j.root-servers.net.     186690  IN      AAAA    2001:503:c27::2:30
k.root-servers.net.     330873  IN      A       193.0.14.129
k.root-servers.net.     378429  IN      AAAA    2001:7fd::1
l.root-servers.net.     225962  IN      A       199.7.83.42
l.root-servers.net.     61716   IN      AAAA    2001:500:9f::42
m.root-servers.net.     98922   IN      A       202.12.27.33
m.root-servers.net.     61716   IN      AAAA    2001:dc3::35

;; Query time: 0 msec
;; SERVER: 129.94.242.2#53(129.94.242.2)
;; WHEN: Sun Jun 23 22:28:30 AEST 2019
;; MSG SIZE  rcvd: 811
```

And then I choose to query the first nameserver 198.41.0.4.The result is below.

```
; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @198.41.0.4 TablaK05.cse.unsw.edu.au ns
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 42287
;; flags: qr rd; QUERY: 1, ANSWER: 0, AUTHORITY: 10, ADDITIONAL: 20
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;TablaK05.cse.unsw.edu.au.      IN      NS

;; AUTHORITY SECTION:
au.                     172800  IN      NS      d.au.
au.                     172800  IN      NS      v.au.
au.                     172800  IN      NS      u.au.
au.                     172800  IN      NS      q.au.
au.                     172800  IN      NS      t.au.
au.                     172800  IN      NS      s.au.
au.                     172800  IN      NS      r.au.
au.                     172800  IN      NS      b.au.
au.                     172800  IN      NS      a.au.
au.                     172800  IN      NS      c.au.

;; ADDITIONAL SECTION:
d.au.                   172800  IN      A       162.159.25.38
d.au.                   172800  IN      AAAA    2400:cb00:2049:1::a29f:1926
v.au.                   172800  IN      A       202.12.31.53
v.au.                   172800  IN      AAAA    2001:dd8:12::53
u.au.                   172800  IN      A       211.29.133.32
q.au.                   172800  IN      A       65.22.196.1
q.au.                   172800  IN      AAAA    2a01:8840:be::1
t.au.                   172800  IN      A       65.22.199.1
t.au.                   172800  IN      AAAA    2a01:8840:c1::1
s.au.                   172800  IN      A       65.22.198.1
s.au.                   172800  IN      AAAA    2a01:8840:c0::1
r.au.                   172800  IN      A       65.22.197.1
r.au.                   172800  IN      AAAA    2a01:8840:bf::1
b.au.                   172800  IN      A       58.65.253.73
b.au.                   172800  IN      AAAA    2407:6e00:253:306::73
a.au.                   172800  IN      A       58.65.254.73
a.au.                   172800  IN      AAAA    2407:6e00:254:306::73
c.au.                   172800  IN      A       162.159.24.179
c.au.                   172800  IN      AAAA    2400:cb00:2049:1::a29f:18b3

;; Query time: 158 msec
;; SERVER: 198.41.0.4#53(198.41.0.4)
;; WHEN: Sun Jun 23 22:33:45 AEST 2019
```

As we can see that we have been referred to the .au nameservers, so we continue to query one of these .au nameservers. I choose 162.159.25.38 .And the result is shown below.

```
weill % dig @162.159.25.38 Tabla05.cse.unsw.edu.au NS

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @162.159.25.38 Tabla05.cse.unsw.edu.au NS
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 33797
;; flags: qr rd; QUERY: 1, ANSWER: 0, AUTHORITY: 4, ADDITIONAL: 9
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;Tabla05.cse.unsw.edu.au.       IN      NS

;; AUTHORITY SECTION:
edu.au.                 7200    IN      NS      r.au.
edu.au.                 7200    IN      NS      q.au.
edu.au.                 7200    IN      NS      t.au.
edu.au.                 7200    IN      NS      s.au.

;; ADDITIONAL SECTION:
q.au.                   7200    IN      A       65.22.196.1
r.au.                   7200    IN      A       65.22.197.1
s.au.                   7200    IN      A       65.22.198.1
t.au.                   7200    IN      A       65.22.199.1
q.au.                   7200    IN      AAAA    2a01:8840:be::1
r.au.                   7200    IN      AAAA    2a01:8840:bf::1
s.au.                   7200    IN      AAAA    2a01:8840:c0::1
t.au.                   7200    IN      AAAA    2a01:8840:c1::1

;; Query time: 14 msec
;; SERVER: 162.159.25.38#53(162.159.25.38)
;; WHEN: Sun Jun 23 22:38:00 AEST 2019
;; MSG SIZE  rcvd: 292
```

We can see that we are being leaded to the edu.au. nameservers, so we continue to query one of these, I choose 65.22.196.1.

```
weill % dig @65.22.196.1 Tabla05.cse.unsw.edu.au NS

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @65.22.196.1 Tabla05.cse.unsw.edu.au NS
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 31132
;; flags: qr rd; QUERY: 1, ANSWER: 0, AUTHORITY: 3, ADDITIONAL: 6
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;Tabla05.cse.unsw.edu.au.       IN      NS

;; AUTHORITY SECTION:
unsw.edu.au.            900     IN      NS      ns2.unsw.edu.au.
unsw.edu.au.            900     IN      NS      ns3.unsw.edu.au.
unsw.edu.au.            900     IN      NS      ns1.unsw.edu.au.

;; ADDITIONAL SECTION:
ns1.unsw.edu.au.        900     IN      A       129.94.0.192
ns2.unsw.edu.au.        900     IN      A       129.94.0.193
ns3.unsw.edu.au.        900     IN      A       192.155.82.178
ns1.unsw.edu.au.        900     IN      AAAA    2001:388:c:35::1
ns2.unsw.edu.au.        900     IN      AAAA    2001:388:c:35::2

;; Query time: 7 msec
;; SERVER: 65.22.196.1#53(65.22.196.1)
;; WHEN: Sun Jun 23 22:40:16 AEST 2019
;; MSG SIZE  rcvd: 210
```

Now we are being referred to the UNSW nameservers, we continue to query, this time I choose 129.94.0.192. As is shown in following picture.

```
weill % dig @129.94.0.192 Tabla05.cse.unsw.edu.au NS

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @129.94.0.192 Tabla05.cse.unsw.edu.au NS
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 52086
;; flags: qr rd; QUERY: 1, ANSWER: 0, AUTHORITY: 2, ADDITIONAL: 5
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;Tabla05.cse.unsw.edu.au.       IN      NS

;; AUTHORITY SECTION:
cse.unsw.edu.au.        10800   IN      NS      beethoven.orchestra.cse.unsw.edu.au.
cse.unsw.edu.au.        10800   IN      NS      maestro.orchestra.cse.unsw.edu.au.

;; ADDITIONAL SECTION:
beethoven.orchestra.cse.unsw.edu.au. 10800 IN A 129.94.242.2
beethoven.orchestra.cse.unsw.edu.au. 10800 IN A 129.94.172.11
beethoven.orchestra.cse.unsw.edu.au. 10800 IN A 129.94.208.3
maestro.orchestra.cse.unsw.edu.au. 10800 IN A   129.94.242.33

;; Query time: 3 msec
;; SERVER: 129.94.0.192#53(129.94.0.192)
;; WHEN: Sun Jun 23 22:42:03 AEST 2019
;; MSG SIZE  rcvd: 172
```

We are currently being referred to the CSE nameservers, so we do the same query as above. But we cannot use a NS type query, we now need a type A query to get the IP address of tabla05. And we can see from the ANSWER SECTION that the IP address of tabla05 is 129.94.209.105.

```
weill % dig @129.94.242.2 Tabla05.cse.unsw.edu.au A

; <<>> DiG 9.9.5-9+deb8u17-Debian <<>> @129.94.242.2 Tabla05.cse.unsw.edu.au A
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 2727
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 3

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;Tabla05.cse.unsw.edu.au.       IN      A

;; ANSWER SECTION:
Tabla05.cse.unsw.edu.au. 3600   IN      A       129.94.209.105

;; AUTHORITY SECTION:
cse.unsw.edu.au.        3600    IN      NS      beethoven.orchestra.cse.unsw.edu.au.
cse.unsw.edu.au.        3600    IN      NS      maestro.orchestra.cse.unsw.edu.au.

;; ADDITIONAL SECTION:
maestro.orchestra.cse.unsw.edu.au. 3600 IN A    129.94.242.33
beethoven.orchestra.cse.unsw.edu.au. 3600 IN A  129.94.242.2

;; Query time: 0 msec
;; SERVER: 129.94.242.2#53(129.94.242.2)
;; WHEN: Sun Jun 23 22:44:22 AEST 2019
;; MSG SIZE  rcvd: 156
```

Q11

That is correct , it can have several names and/or IP addresses associated with it. A physical machine may have several network interfaces, and a network interface can have several IP addresses associated with it at any given time. Moreover, IP addresses may be associated with few hostnames.

Exercise 4

WebServer.py