Exercise 1 :

http://www.cancercouncil.org.au/
http://www.hola.hp/

This web page is not available.

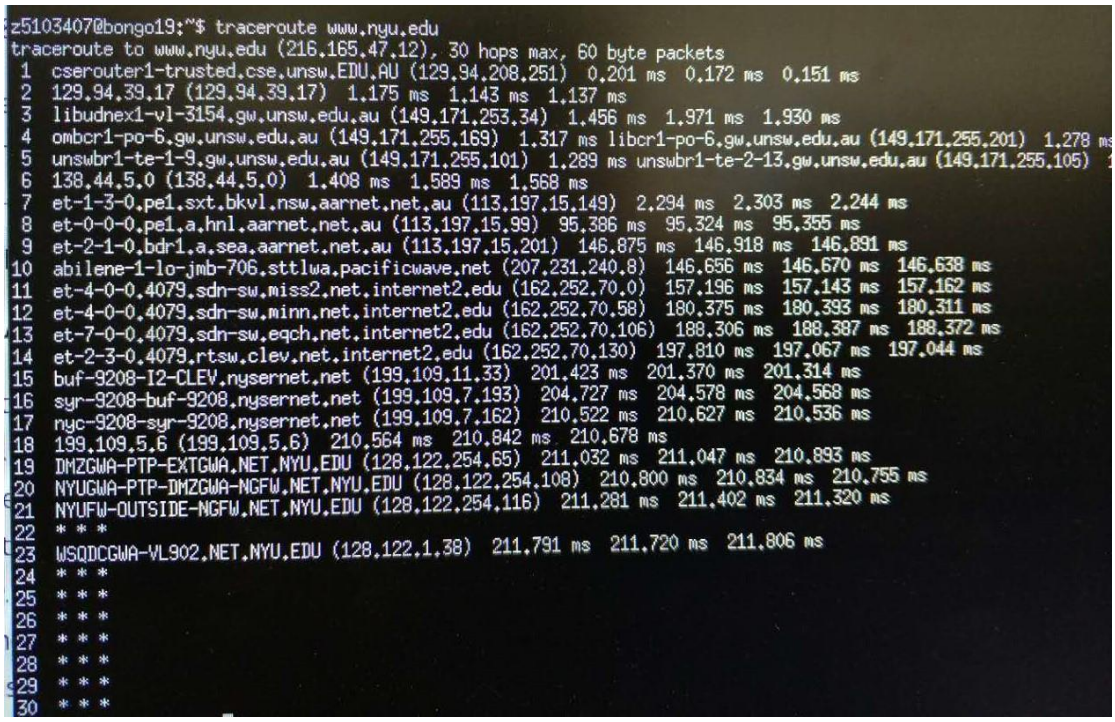
www.kremlin.ru
can visit, cannot ping and receive the packet

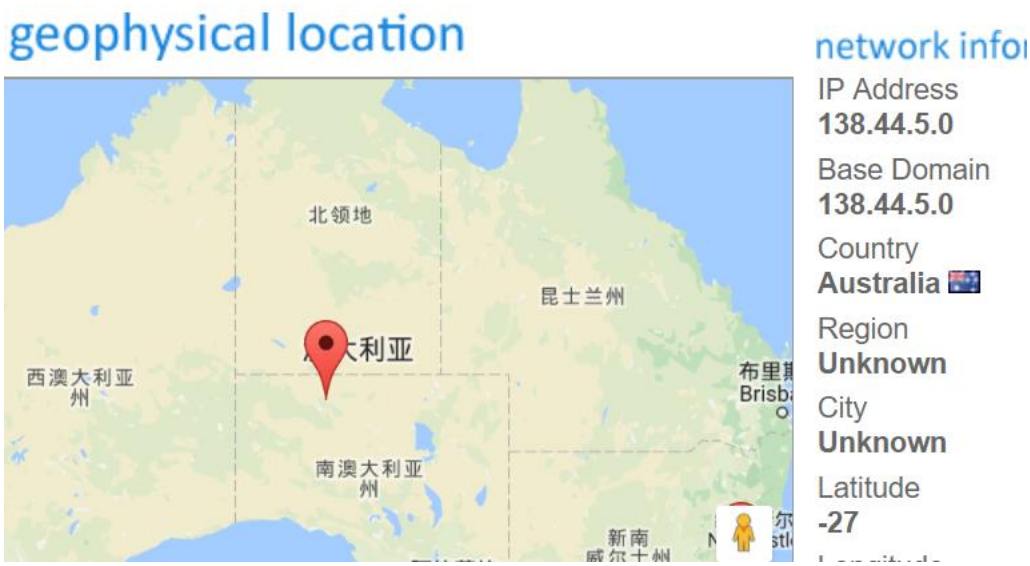
because of security reason, although website receive the packet, it rejects to reponse to ping packet, due to ICMP

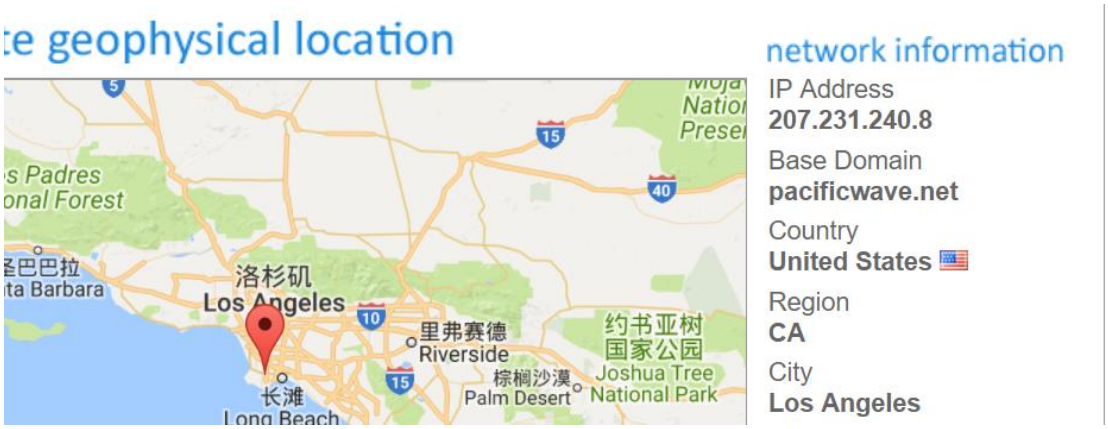
other website can visit normally.

Exercise 2:

Question1:





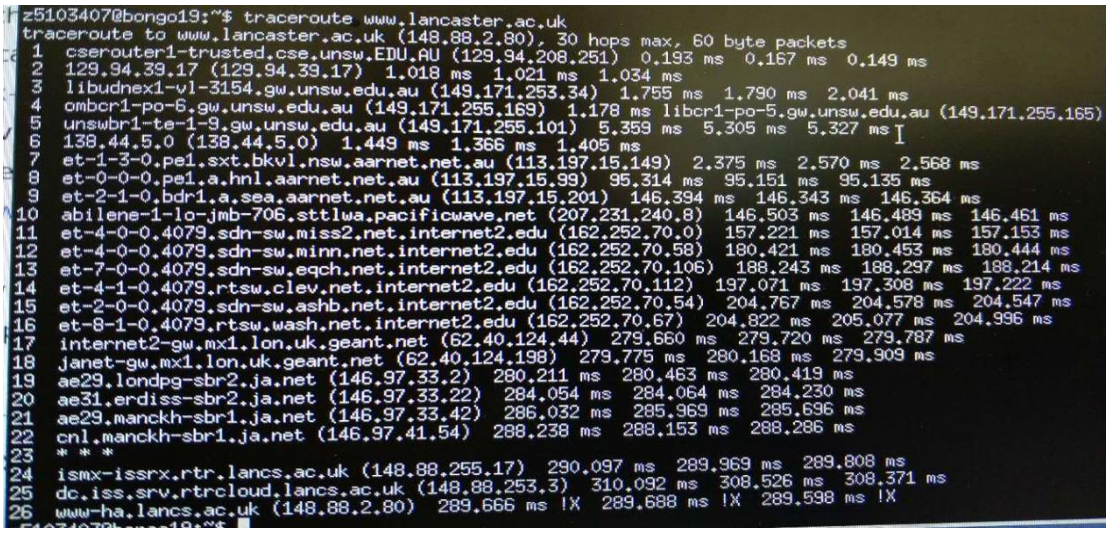


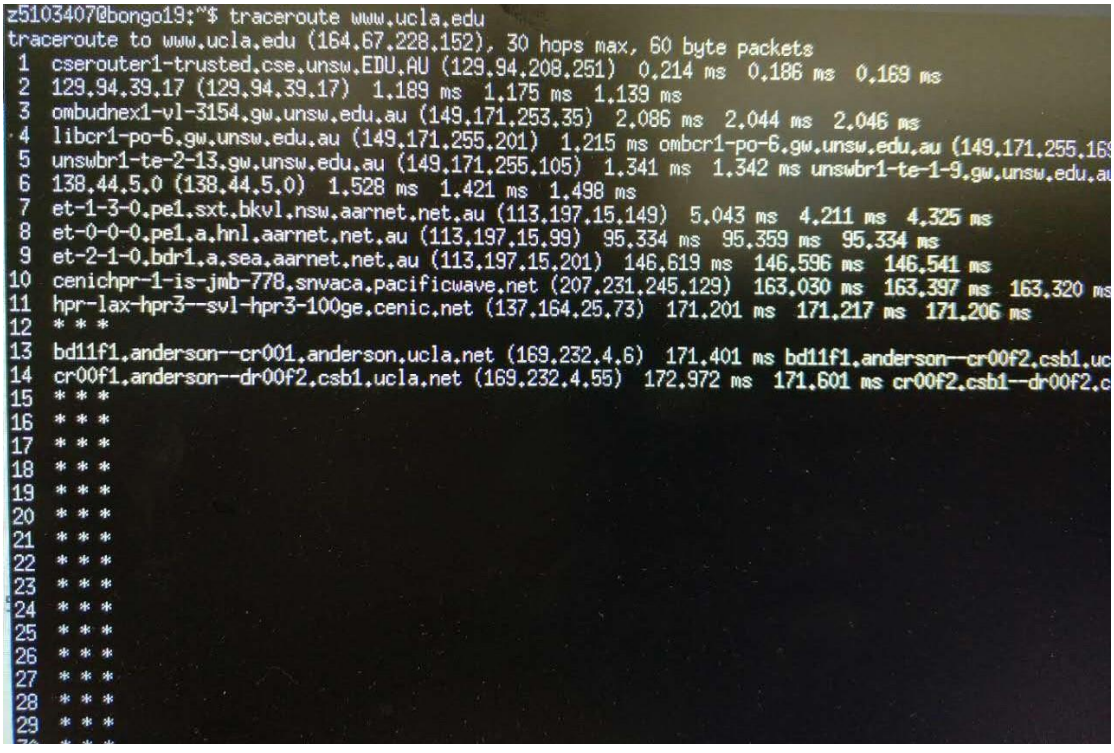
routers>=23 (include 1-21,23 and destination)

from IP address , it shows there are 5 routers in UNSW(138.44.5.0 is not in UNSW)

if depends on number of ping's change, between route 7 and 8 is Pacific Ocean. However, the truth is route 9 in AU and route 10 in USA.

Question 2:





at least 7 hops are the same during the path,from 1-7,although some routers have different url, IP address is similar in these url, for example , 113.197.15.147 in www.u-tokyo.ac.jp and 113.197.15.149 in www.ucla.edu, these two IP are in same router, because only the last part of IP is different. The number of hops on each path is not proportional the physical distance, oversea visit will just cover several hops and local visit will cover many hops.

Question 3:

Enter the desired destination host.domain or IPv4 or IPv6 address:

```
 1  gigabitethernet3-3.exi2.melbourne.telstra.net (203.50.77.53)  0.346 ms  0.205 ms  0.237
 2  bundle-ether3-100.win-core10.melbourne.telstra.net (203.50.80.129)  1.489 ms  1.477 ms
 3  bundle-ether12.ken-core10.sydney.telstra.net (203.50.11.122)  12.856 ms  12.100 ms  12.8
 4  bundle-ether1.ken-edge901.sydney.telstra.net (203.50.11.95)  11.863 ms  11.974 ms  11.98
 5  aarnet6.lnk.telstra.net (139.130.0.78)  13.484 ms  11.726 ms  11.610 ms
 6  ge-6-0-0.bb1.a.syd.aarnet.net.au (202.158.202.17)  11.860 ms  11.725 ms  11.735 ms
 7  ae9.pe2.brwy.nsw.aarnet.net.au (113.197.15.56)  12.111 ms  11.974 ms  12.109 ms
 8  et-3-1-0.pe1.brwy.nsw.aarnet.net.au (113.197.15.146)  12.109 ms  12.098 ms  12.111 ms
 9  138.44.5.1 (138.44.5.1)  12.361 ms  12.353 ms  12.360 ms
10  libcr1-te-1-5.gw.unsw.edu.au (149.171.255.102)  12.361 ms  12.349 ms  12.236 ms
11  libudnex1-po-1.gw.unsw.edu.au (149.171.255.166)  12.734 ms  12.725 ms
12  ufw1-ae-1-3154.gw.unsw.edu.au (149.171.253.36)  12.846 ms  12.847 ms  12.859 ms
13  129.94.39.23 (129.94.39.23)  12.986 ms  12.976 ms  12.984 ms
```

```
traceroute to www.telstra.net (203.50.5.178), 30 hops max, 60 byte packets
 1  cserouter1-server.cse.unsw.EDU.AU (129.94.242.251)  0.148 ms  0.141 ms  0.129
 ms
 2  129.94.39.17 (129.94.39.17)  1.008 ms  0.986 ms  1.088 ms
 3  ombudnex1-vl-3154.gw.unsw.edu.au (149.171.253.35)  4.582 ms libudnex1-vl-3154
.gw.unsw.edu.au (149.171.253.34)  1.675 ms  1.437 ms
 4  ombcr1-po-6.gw.unsw.edu.au (149.171.255.169)  1.311 ms libcr1-po-6.gw.unsw.ed
u.au (149.171.255.201)  1.347 ms ombcr1-po-5.gw.unsw.edu.au (149.171.255.197)  1.
357 ms
 5  unswbr1-te-2-13.gw.unsw.edu.au (149.171.255.105)  1.378 ms  1.362 ms  1.372 m
s
 6  138.44.5.0 (138.44.5.0)  1.439 ms  1.528 ms  1.477 ms
 7  et-0-3-0.pe1.alxd.nsw.aarnet.net.au (113.197.15.153)  1.631 ms  1.729 ms  1.7
38 ms
 8  ae9.bb1.b.syd.aarnet.net.au (113.197.15.65)  7.186 ms  1.985 ms  1.954 ms
 9  gigabitethernet1-1.pe1.b.syd.aarnet.net.au (202.158.202.18)  2.071 ms  2.156
ms  2.058 ms
10  gigabitethernet3-11.ken37.sydney.telstra.net (139.130.0.77)  2.775 ms  2.534
ms  2.799 ms
11  bundle-ether13.ken-core10.sydney.telstra.net (203.50.11.94)  3.382 ms  3.968
ms  3.947 ms
12  bundle-ether12.win-core10.melbourne.telstra.net (203.50.11.123)  15.796 ms  1
5.773 ms  14.931 ms
13  gigabitethernet5-0.exi-service2.melbourne.telstra.net (203.50.80.132)  13.510
 ms  13.615 ms  13.444 ms
14  * * *
15  * * *
16  * * *
```

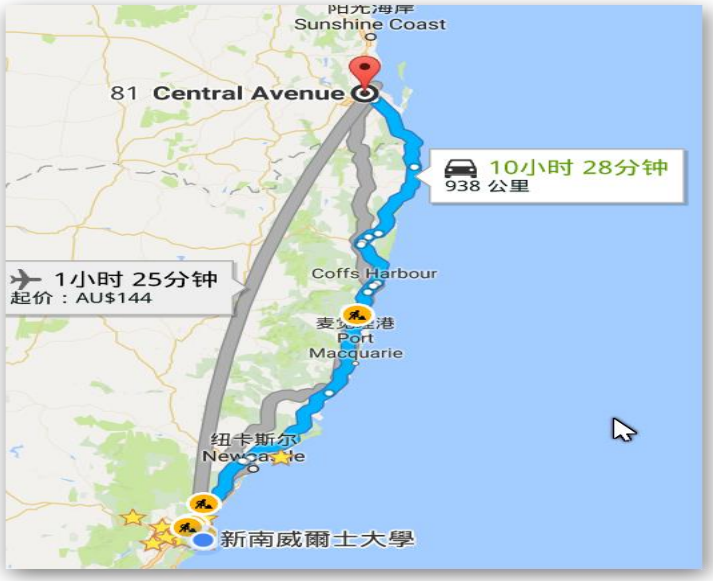
cannot traceroute http://www.speedtest.com.sg,
instead of this ,use school's ip address and traceroute www.telstra.net , it shows that the path is reversed.

Exercise 3:

1.

www.uq.edu.au

proportion= （16.692/10^3)/{[938*1000/(3*10^8)]*2} =2.669



www.nus.edu.sg

proportion= (145.480/10^3)/{[6.47*10^6/(3*10^8)]*2} =3.39

www.tu-berlin.de
proportion= (303.057/10^3)/{[1.64*10^7/(3*10^8)]*2}=2.743

2.
from delay.pdf, it shows the delay to the destinations is constant.

from scatter.pdf, when packet size over 1200 that the line will have obvious change.

3.
Due to the ppt in lectures, nodal processing delay and queuing delay will depend on packet size. When packet size is large, it will cause pressure during these duration and then affect delay.