CFC Project 1 (My Network)

CFC020823

Intro to cyber (XE Basics)

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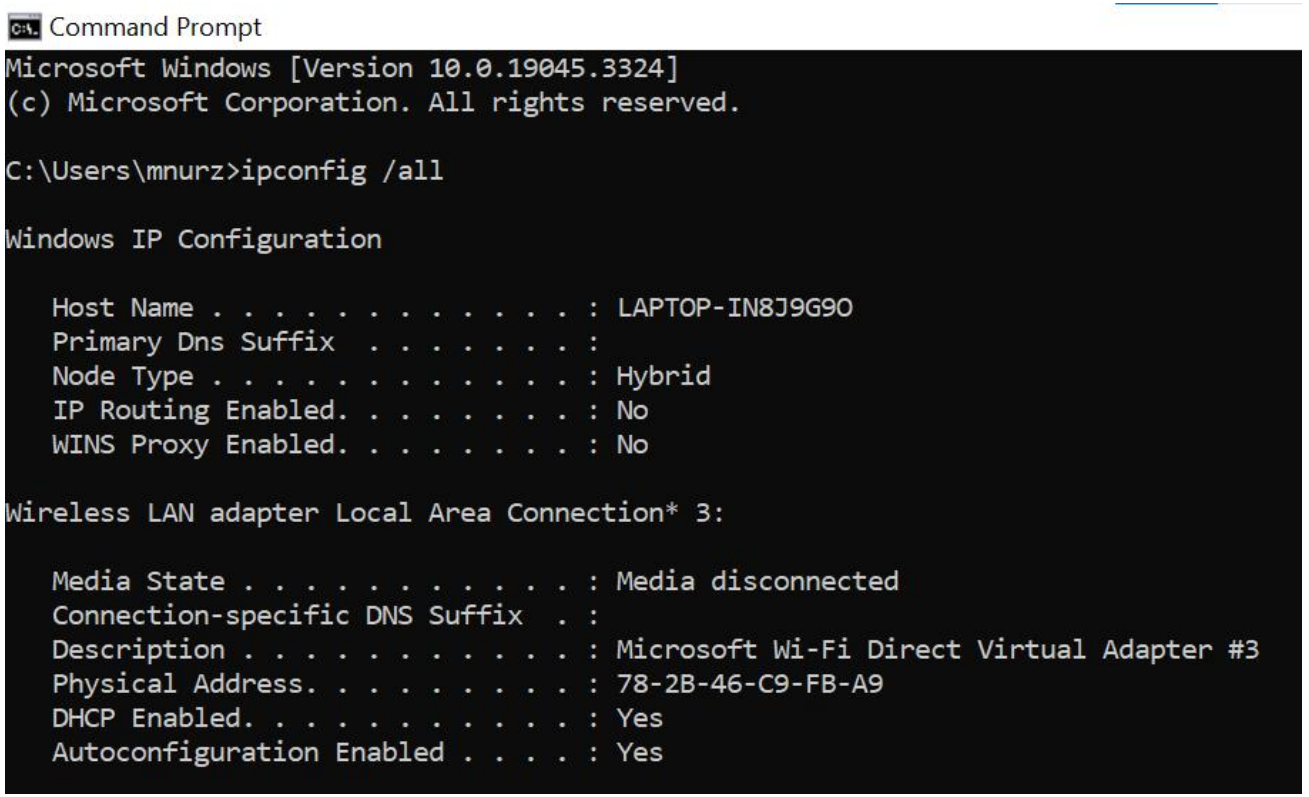
S17

Mapping my home network

- Using the command “ipconfig /all” to view all IP configurations.
- Allows to find key information for my network.



- Default gateway = Router’s internal IP address.

```
Default Gateway . . . . . : 192.168.1.254
```

- IPv4 address = My laptop’s IP address.

```
IPv4 Address. . . . . : 192.168.1.111
```

- DHCP server address.

```
DHCP Server . . . . . : 192.168.1.254
```

- DNS server address.

```
DNS Servers . . . . . : 192.168.1.254
```

- Physical address = MAC address.

```
Physical Address. . . . . :          C9-FB-A8
```

Devices connected to my network

- 1 method is to use the command arp -a to find some devices connected to the network.
- Tally *Interface* with *IPv4* from the results of ipconfig to find devices's MAC address.

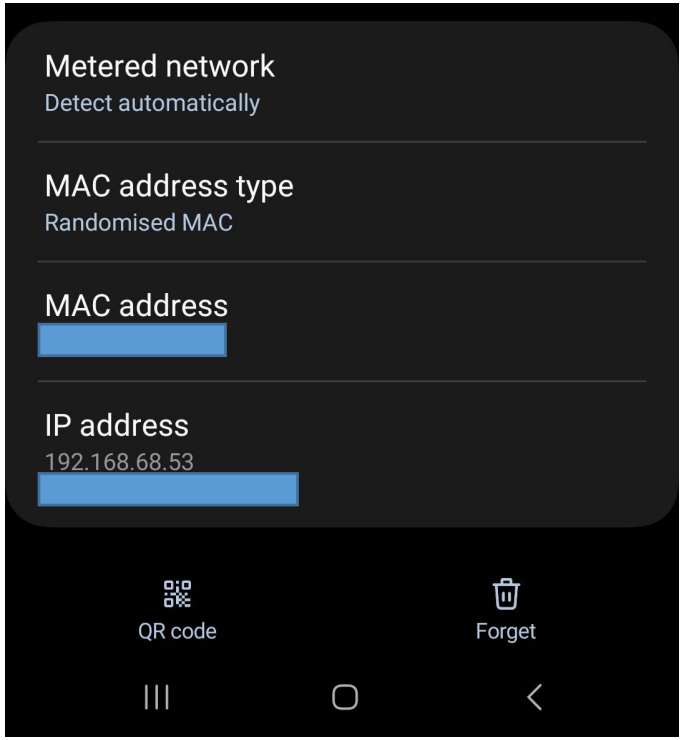
```
C:\Users\mnurz>arp -a

Interface: 192.168.5.1 --- 0x4
  Internet Address      Physical Address      Type
  192.168.5.254         00-50-56-e8-61-21     dynamic
  192.168.5.255         ff-ff-ff-ff-ff-ff     static
  224.0.0.2             01-00-5e-00-00-02     static
  224.0.0.22            01-00-5e-00-00-16     static
  224.0.0.251           01-00-5e-00-00-fb     static
  224.0.0.252           01-00-5e-00-00-fc     static
  224.77.77.77          01-00-5e-4d-4d-4d     static
  239.255.255.250       01-00-5e-7f-ff-fa     static
  255.255.255.255       ff-ff-ff-ff-ff-ff     static

Interface: 192.168.1.111 --- 0xd
  Internet Address      Physical Address      Type
  192.168.1.95          74-93-da-40-cd-9d     dynamic
  192.168.1.97          74-93-da-40-c6-b0     dynamic
  192.168.1.119         14-eb-b6-70-ee-5d     dynamic
  192.168.1.254         48-d5-39-67-71-3b     dynamic
  192.168.1.255         ff-ff-ff-ff-ff-ff     static
  224.0.0.2             01-00-5e-00-00-02     static
  224.0.0.22            01-00-5e-00-00-16     static
  224.0.0.251           01-00-5e-00-00-fb     static
  224.0.0.252           01-00-5e-00-00-fc     static
  224.77.77.77          01-00-5e-4d-4d-4d     static
  239.255.255.250       01-00-5e-7f-ff-fa     static
  255.255.255.255       ff-ff-ff-ff-ff-ff     static
```

Device’s details (LAPTOP-IN8J9G9O)

1. Go to start > *settings* > *system* > *about.*
2. Under *device specifications* > *system type* > to find system type info.
3. Under *Windows specifications* > to find info on OS build and version.

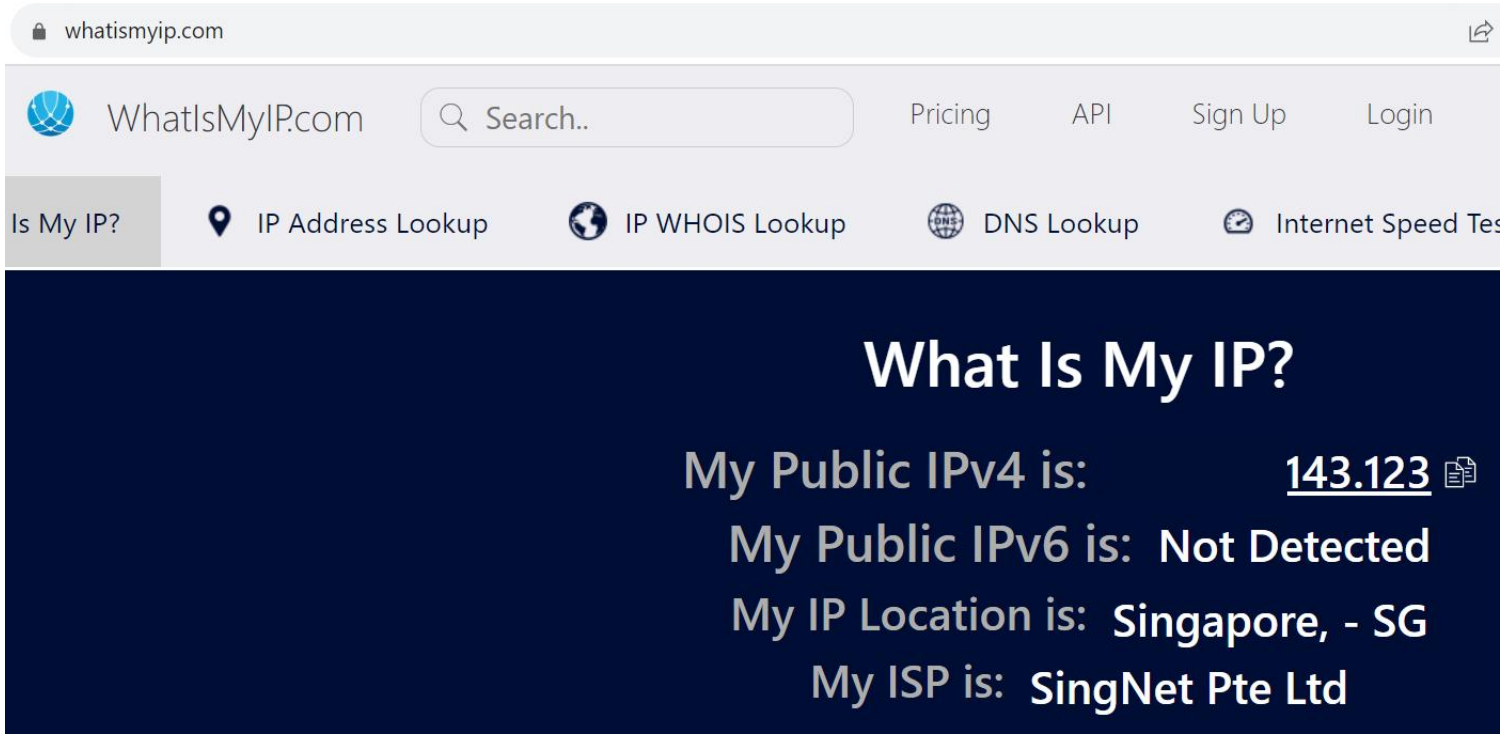
Device’s details (Samsung S22)

1. Go to *settings* > *about phone* > to find all the information about phone.
2. Go to *connections* > *wifi* > *settings* on the connected network > *view more* > to find IP address & MAC address.



Whatismyip.com

- Used this website as a quick way to find my external/public IP address.



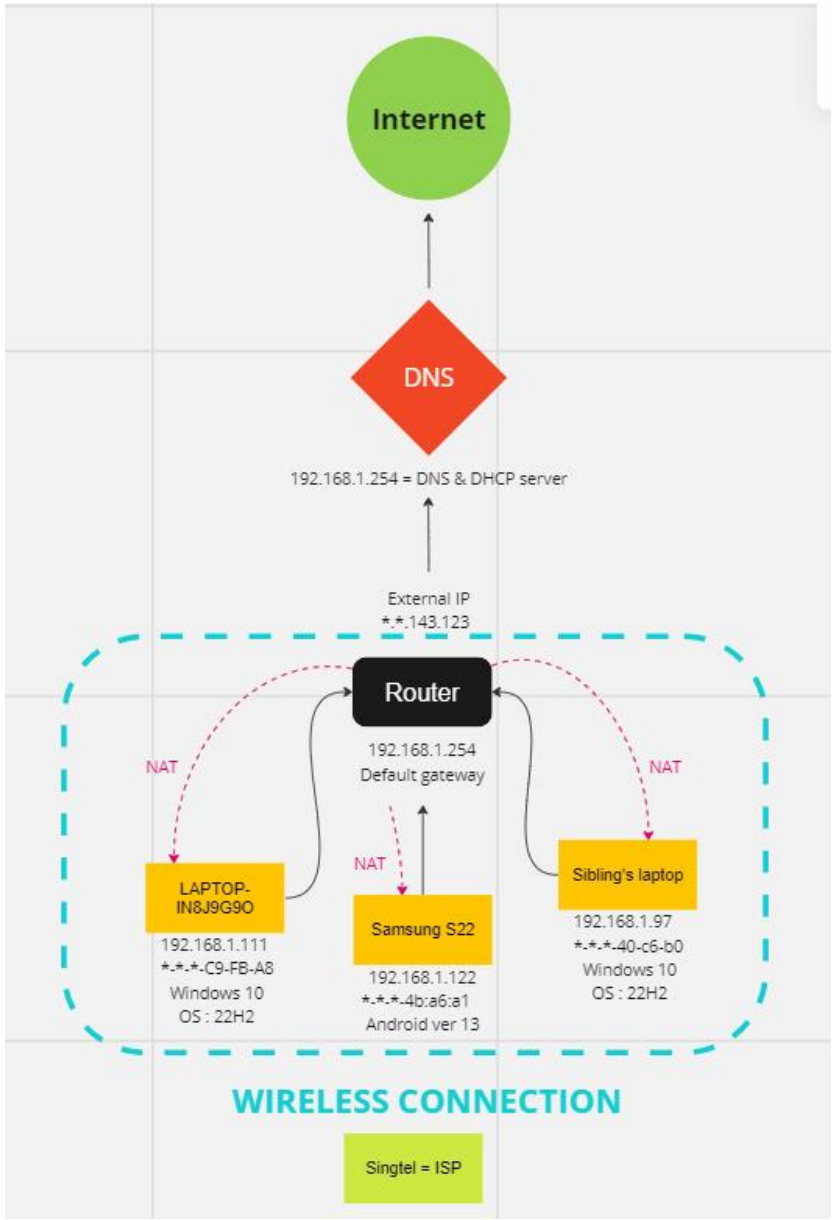
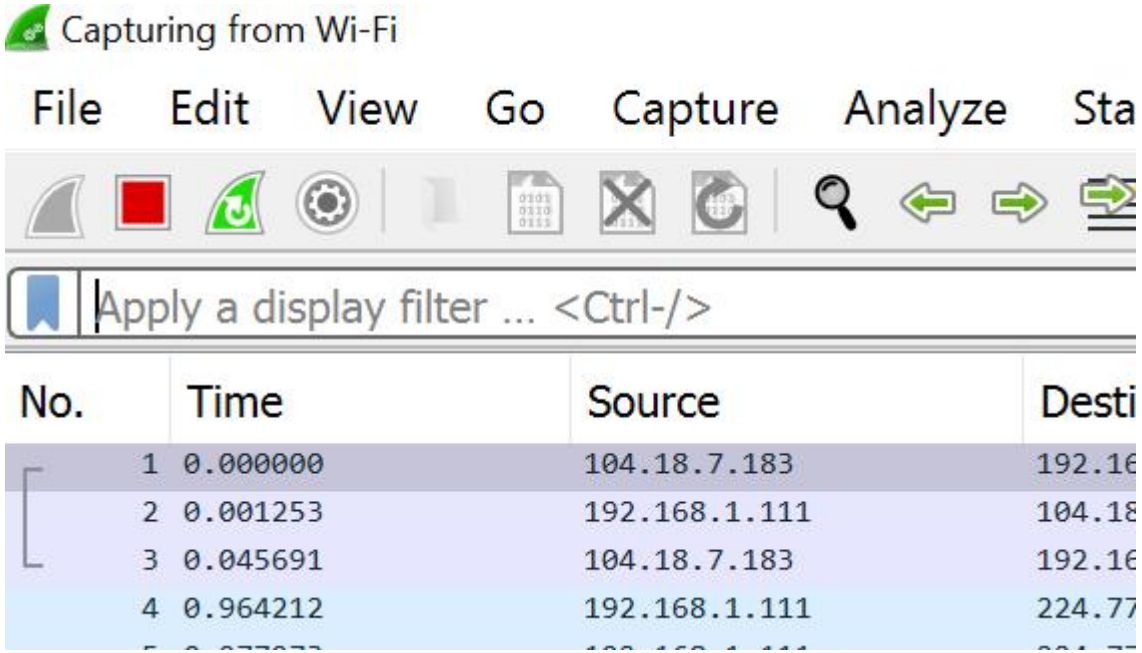


Diagram of home network

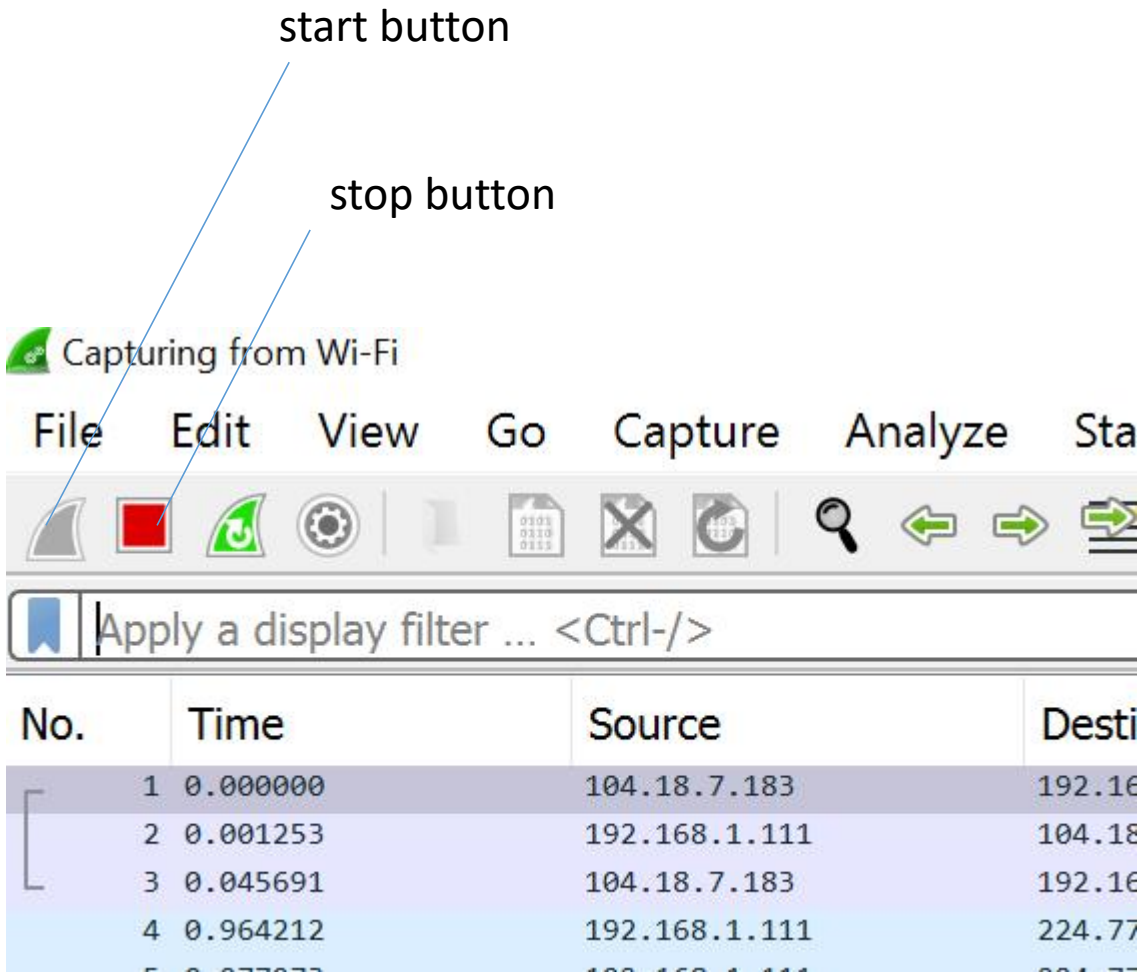
Wireshark

- A free and open-source packet analyzer.
- Here’s an illustration to show how to find a website’s IP address.



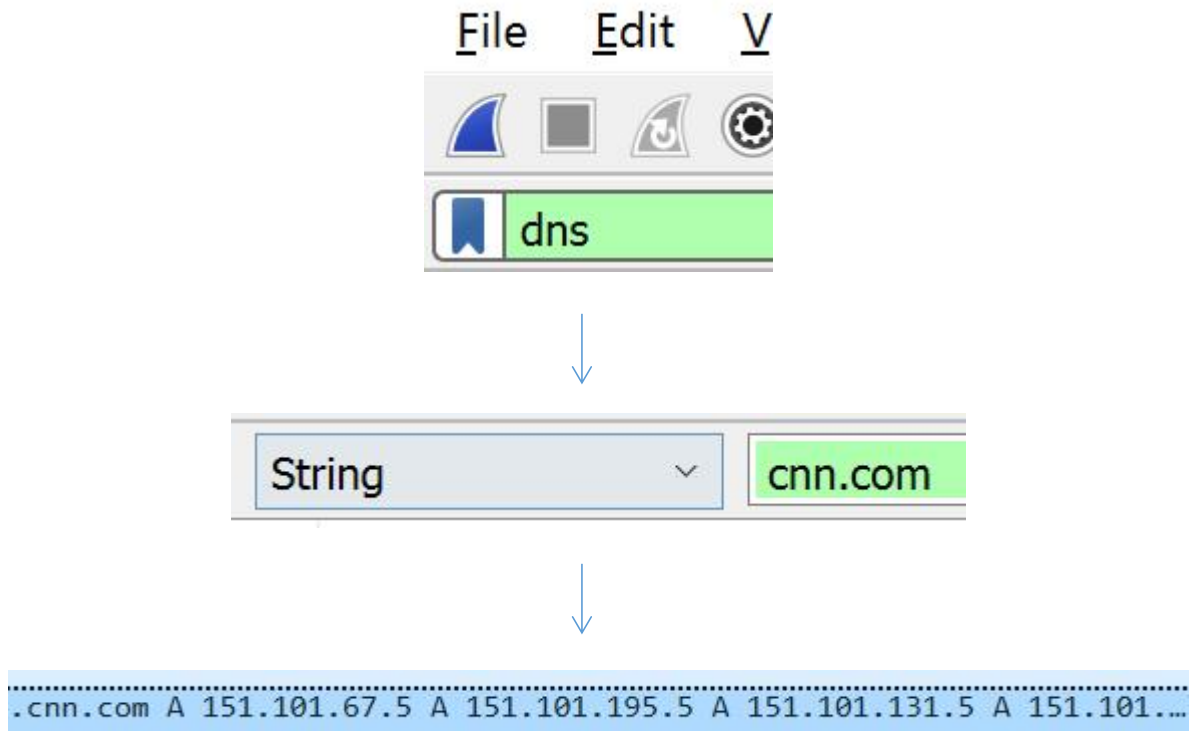
Wireshark

1. Begin capture by pressing start capturing button.
2. Go to web browser > key in website domain name > allow website to load.
3. Press the stop button.
4. Wireshark has captured the activity.



Wireshark

5. *Filter* by *dns* to view only DNS protocol.
6. Search for website using *string* to further narrow down the displayed packets.
7. *IP address* of website can be found after analyzing.



Wireshark

- Full view of the display.
- Win 10 to DNS server = Query
- DNS server to Win 10 = Response