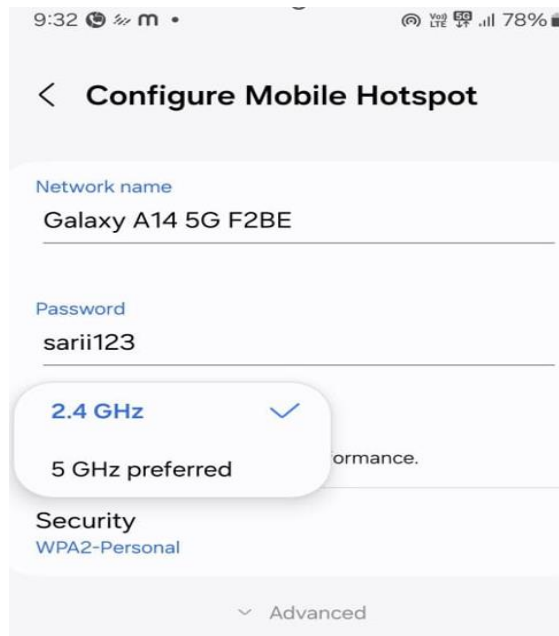**Q7. Configure your modem/hotspot to operate only in 2.4Ghz and connect your laptop/Wi-Fi device , and capture the capability/properties in your Wi-Fi device. Repeat the same in 5Ghz and tabulate all the differences you observed during this.**

I do not have a wifi router, I've changed the mobile hotspot setting to 2.4 GHz and 5GHz bandwidth.

netsh wlan show interface

```
C:\Users\Sharmila>netsh wlan show interface

There is 1 interface on the system:

    Name                   : Wi-Fi
    Description            : Realtek 8821CE Wireless LAN 802.11ac PCI-E NIC
    GUID                   : cdf8df5b-7136-44e0-834c-5926c834caa3
    Physical address       : f8:89:d2:61:0d:8b
    Interface type         : Primary
    State                  : connected
    SSID                   : Galaxy A14 5G F2BE
    BSSID                  : 82:92:3b:97:e4:e6
    Network type           : Infrastructure
    Radio type             : 802.11ac
    Authentication         : WPA2-Personal
    Cipher                 : CCMP
    Connection mode        : Auto Connect
    Band                   : 5 GHz
    Channel                : 149
    Receive rate (Mbps)    : 433.3
    Transmit rate (Mbps)   : 433.3
    Signal                 : 100%
    Profile                : Galaxy A14 5G F2BE

    Hosted network status  : Not available
```

5GHz is faster with 433.3 Mbps, while 2.4GHz is slower at 72.2 Mbps.

2.4GHz uses channel 11, which is common & crowded. 5GHz uses channel 149, which has less interference and better performance in high-speed data transfers.

For long-range coverage, 2.4GHz is better.

For maximum speed, 5GHz is the best.