

Faculty of Engineering and Technology   
Electrical and Computer Engineering Department

Computer Networks

ENCS3320– Section 1  
Project 1 Report

**Instructor:** Abdalkarim Awad

**Prepared by:**

|  |  |
| --- | --- |
| **Student Name** | **Student ID** |
| Eyass Mashaqi | 1200640 |
| Yousef Isaifan | 1193102 |
| Hanna Abudayeh | 1200085 |

Date: 18/12/2023

Table of Contents

[Table of Figures II](#_Toc154100507)

[ Part 1 3](#_Toc154100508)

[1- In your own words, what are ping, tracert, nslookup, and telnet? 3](#_Toc154100509)

[2- Run the following commands 3](#_Toc154100510)

# Table of Figures

[Figure 1: pinging device in same network 3](#_Toc154100497)

[Figure 2: pinging cornell 4](#_Toc154100498)

[Figure 3: Tracert cornell 4](#_Toc154100499)

[Figure 4: nslookup cornell 5](#_Toc154100500)

[Figure 5: Wireshark capture 5](#_Toc154100501)

# Part 1

## In your own words, what are ping, tracert, nslookup, and telnet?

* The ping command operates by transmitting a single datagram per second and generating a line of output for each received response. This command computes round-trip times, packet loss statistics, and provides a concise summary upon completion.
* The tracert command identifies the path to a destination by dispatching Internet Control Message Protocol (ICMP) echo packets to the specified destination.
* Nslookup communicates with a DNS server to retrieve details about a specific domain or IP. The DNS server, tasked with converting domain names to IP addresses and vice versa, provides the requested information in response.
* Telnet is a network protocol that enables users to remotely access and control a computer or network device through a text-based interface, allowing execution of commands as if physically present.

## Make sure that your computer is connected to the internet and then run the following commands:

* Ping a device in the same network, in **Figure 1**.

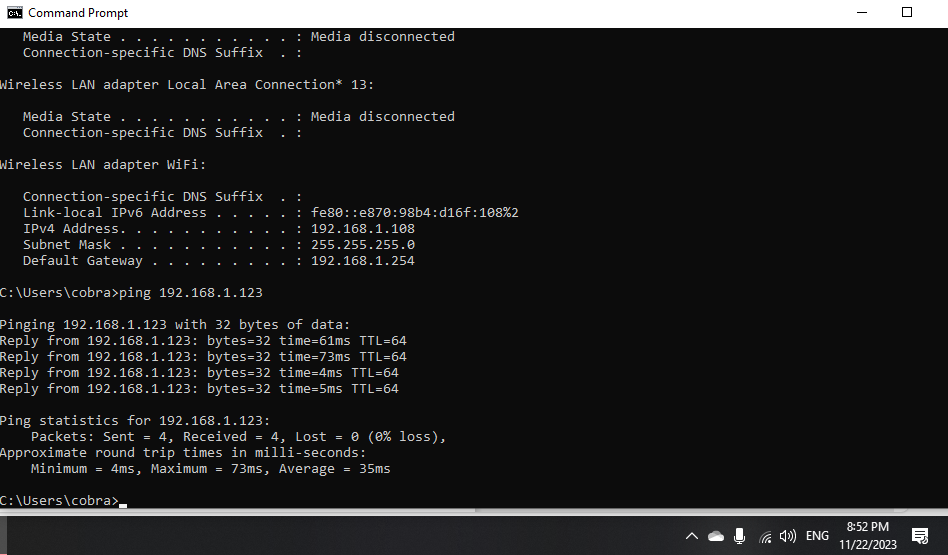


Figure : pinging device in same network

* ping <www.cornell.edu> in **Figure 2**.

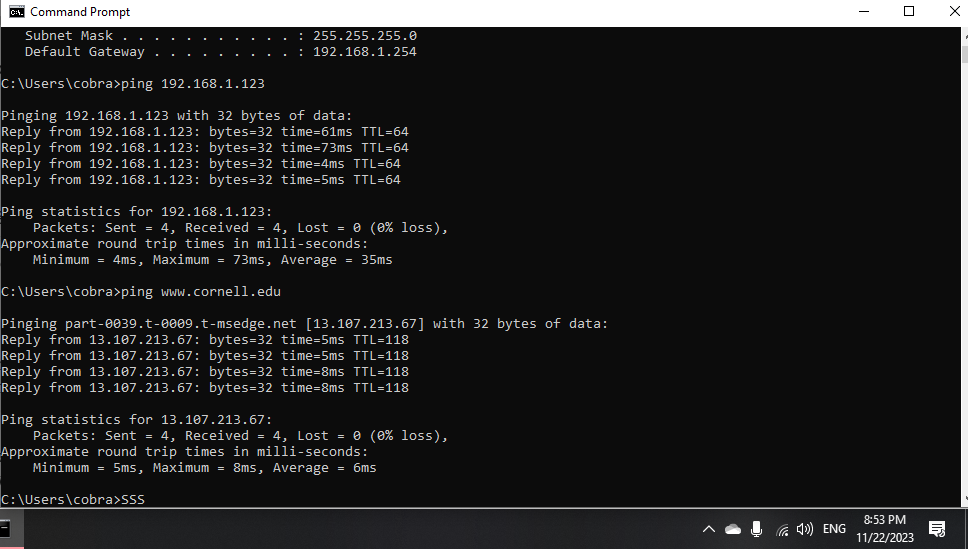


Figure : pinging cornell

* Tracert [www.cornell.edu](http://www.cornell.edu) in **Figure 3**.

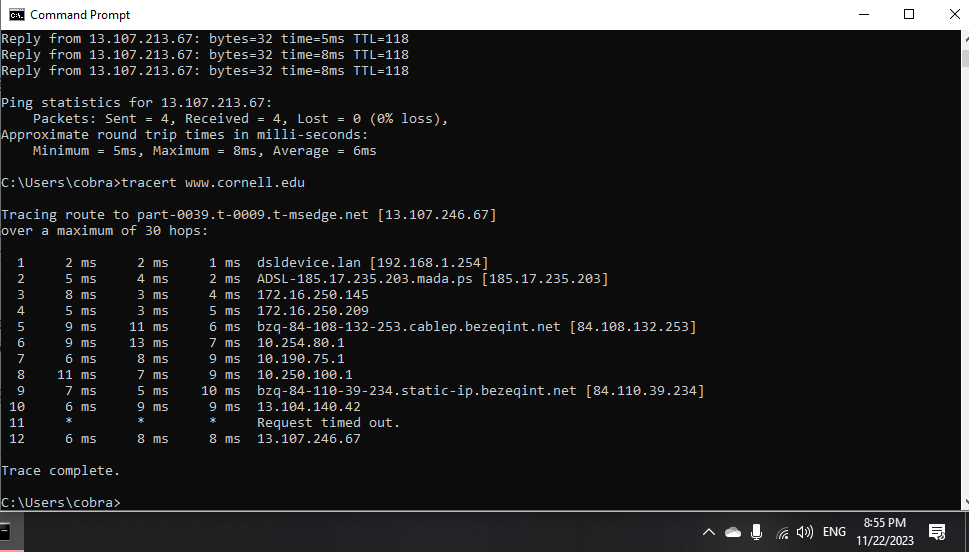


Figure : Tracert cornell

* Nslookup [www.cornell.edu](http://www.cornell.edu) in **Figure 4**.

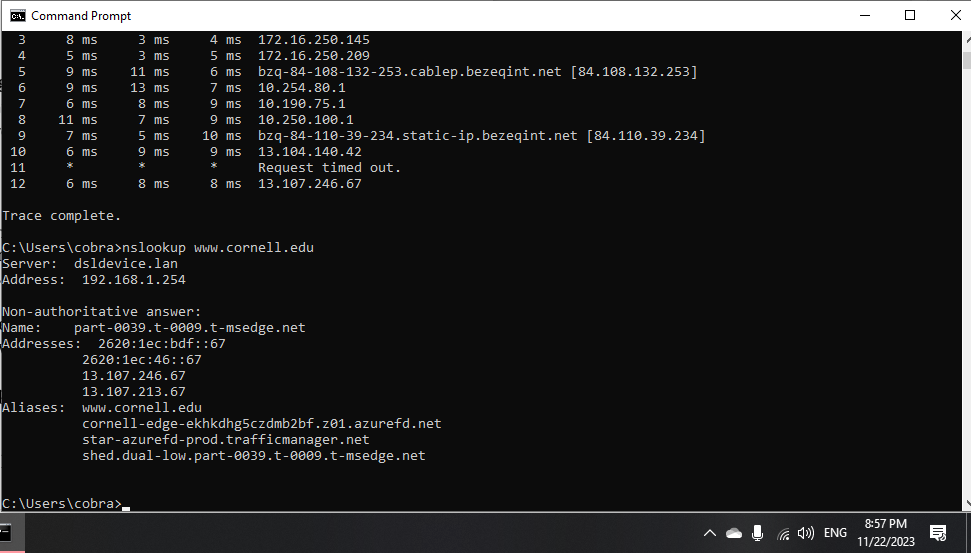


Figure : nslookup cornell

1. Use Wireshark to capture some DNS messages. Provide a screenshot of the runs and brief explanation of the output.

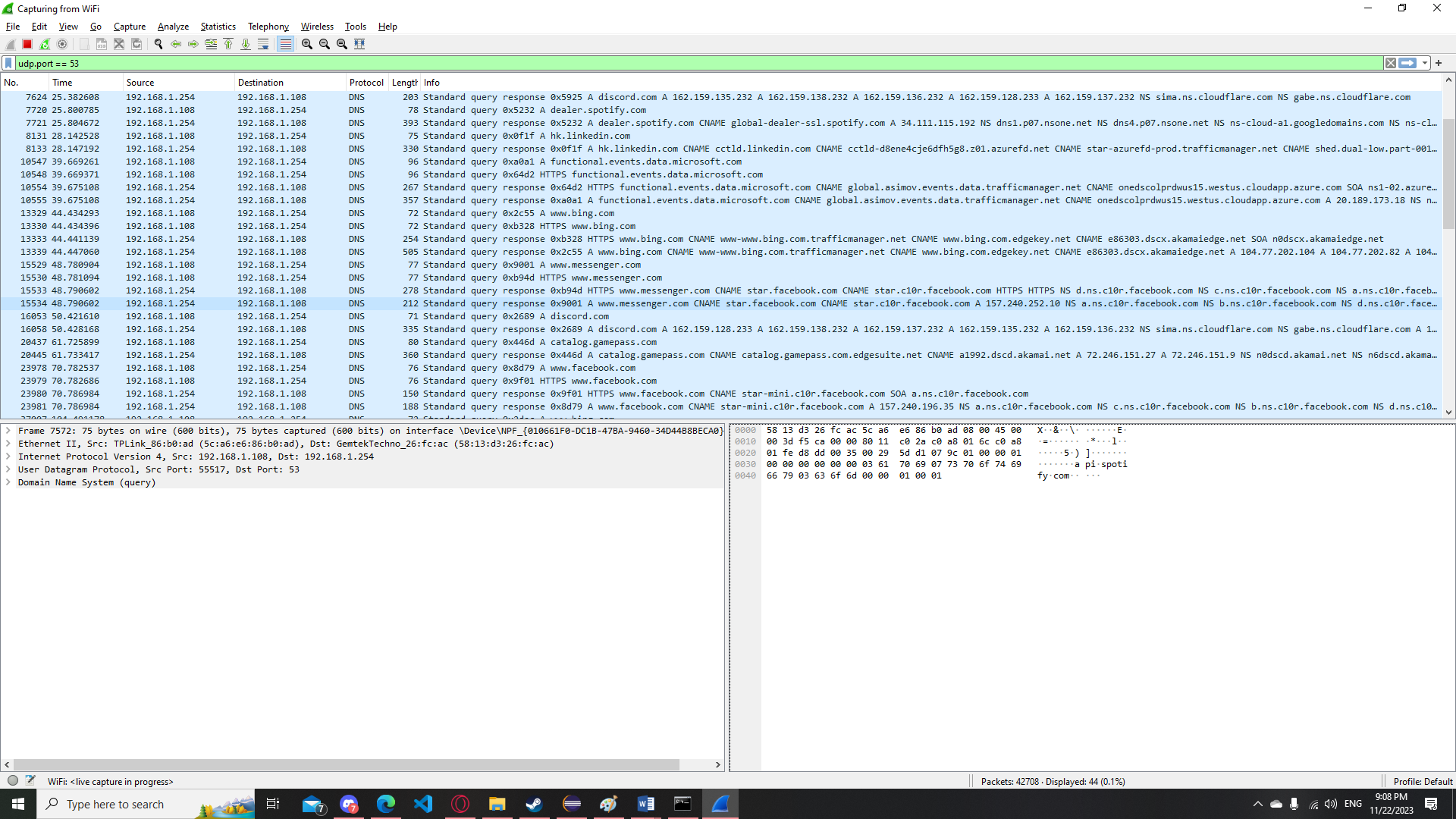


Figure : Wireshark capture

* The output is DNS messages captured by Wireshark using the DNS filter, revealing transactions, queries, and responses, supporting effective troubleshooting.

1. From the ping results, do you think the response you have got is from USA? Explain your answer briefly.

* For www.cornell.edu, while Cornell University is based in the USA, the ping response time alone cannot definitively confirm that the server is physically in the USA. It's important to note that websites can use content delivery networks (CDNs) or have servers in various locations worldwide to improve performance and reliability. So, a low or high ping time might not directly correlate to the server being in a specific country without using specialized geolocation tools.

# Part 2