A close up of a sign

Description automatically generated

**COMP 4320**

**Introduction to Computer Networks**

Project #: Computer Network Lab 1

Logan Bolton

9/22/2025

# Executive Summary

Format:

* Font: Arial
* Font Size: 11
* Spacing: Double

This section should begin on a new page. The executive summary should include a summary of the findings and decisions

# Table of Contents

This section should begin on a new page. The table of contents below is generated using the "References" menu.

Table of Contents

[Executive Summary 2](#_Toc208308380)

[Table of Contents 3](#_Toc208308381)

[List of Figures 4](#_Toc208308382)

[List of Tables 5](#_Toc208308383)

[1 Part (1) 6](#_Toc208308384)

[2 Part (2) 6](#_Toc208308385)

[2.1 First Subheading 6](#_Toc208308386)

[2.2 Second Subheading 6](#_Toc208308387)

[2.2.1 First Sub-subheading 6](#_Toc208308388)

[2.2.2 Second Sub-subheading 7](#_Toc208308389)

[3 Acknowledgements 7](#_Toc208308390)

[4 References 7](#_Toc208308391)

[5 AI Generated Statement 7](#_Toc208308392)

[Appendix A: Place the title of appendix here 8](#_Toc208308393)

# List of Figures

This section should begin on a new page. This should be one of the last pages to be completed. Each Figure should have a descriptive caption.

# List of Tables

This section should begin on a new page. All tables must have a caption. If no tables are needed this section can be omitted.

# 1 Part (1)

## 1.1 Wireshark Basics

1. List 3 different protocols that appear in the protocol column in the *unfiltered* packet-listing window.

DNS, TCP and TLSv1.2 are protocols that are listed in Wireshark.

1. How long did it take from when the HTTP GET message was sent until the first HTTP 200 OK reply was received? (By default, the Time column shows seconds since capture start. To display time-of-day, use *View* → *Time Display Format* → *Time of Day*.)

It took approximately 0.360844 seconds for the 200 OK reply to be received.

1. What is the Internet address of your computer? What is the Internet address of the *server you accessed*?

The internet address of my computer is 172.16.0.12. The address of the server I accessed was 217.21.95.185

1. Print the two HTTP messages (GET and OK) referred to above. Select *File* → *Print*, choose “Selected Packet Only” and “Print as displayed,” then click OK.

/var/folders/kp/vdv61pd97vd0x29b257r8h7h0000gn/T/wireshark\_Wi-Fi4ARUC3.pcapng 340 total packets, 2 shown

No. Time Source Destination Protocol Length Info

124 15:41:38.568843 172.16.0.12 217.21.95.185 HTTP 528 GET / HTTP/

1.1

Frame 124: 528 bytes on wire (4224 bits), 528 bytes captured (4224 bits) on interface en0, id 0

Ethernet II, Src: Apple\_33:36:98 (80:a9:97:33:36:98), Dst: Netgear\_5a:71:18 (9c:c9:eb:5a:71:18)

Internet Protocol Version 4, Src: 172.16.0.12, Dst: 217.21.95.185

Transmission Control Protocol, Src Port: 65341, Dst Port: 80, Seq: 1, Ack: 1, Len: 462

Hypertext Transfer Protocol

GET / HTTP/1.1\r\n

Host: cybernetlab.org\r\n

Connection: keep-alive\r\n

Cache-Control: max-age=0\r\n

Upgrade-Insecure-Requests: 1\r\n

User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10\_15\_7) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/140.0.0.0 Safari/537.36\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/

apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.7\r\n

Accept-Encoding: gzip, deflate\r\n

Accept-Language: en-US,en;q=0.9\r\n

\r\n

No.

[Response in frame: 128]

[Full request URI: http://cybernetlab.org/]

Time Source

128 15:41:38.929687 217.21.95.185

Destination

172.16.0.12

Protocol Length Info

HTTP 218 HTTP/1.1

200 OK (text/html)

Frame 128: 218 bytes on wire (1744 bits), 218 bytes captured (1744 bits) on interface en0, id 0

Ethernet II, Src: Netgear\_5a:71:18 (9c:c9:eb:5a:71:18), Dst: Apple\_33:36:98 (80:a9:97:33:36:98)

Internet Protocol Version 4, Src: 217.21.95.185, Dst: 172.16.0.12

Transmission Control Protocol, Src Port: 80, Dst Port: 65341, Seq: 1449, Ack: 463, Len: 152

[2 Reassembled TCP Segments (1600 bytes): #127(1448), #128(152)]

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

Connection: Keep-Alive\r\n

Keep-Alive: timeout=5, max=100\r\n

Content-Type: text/html\r\n

Last-Modified: Fri, 05 Sep 2025 20:02:49 GMT\r\n

Etag: "b9e-68bb41e9-d0b55a139fbdf97a;gz"\r\n

Accept-Ranges: bytes\r\n

Content-Encoding: gzip\r\n

Vary: Accept-Encoding\r\n

Content-Length: 1229\r\n

Date: Sat, 20 Sep 2025 20:41:38 GMT\r\n

Server: LiteSpeed\r\n

platform: hostinger\r\n

panel: hpanel\r\n

\r\n

[Request in frame: 124]

[Time since request: 0.360844000 seconds]

[Request URI: /]

[Full request URI: http://cybernetlab.org/]

Content-encoded entity body (gzip): 1229 bytes -> 2974 bytes

File Data: 2974 bytes

Line-based text data: text/html (94 lines)

1. What was the HTTP status code in the HTTP response?

The HTTP status code was 200.

1. Refresh the website (http://cybernetlab.org), is the HTTP response code still the same? If not, what is the new HTTP status code and why is there a difference?

The HTTP status code changed to 304. Since the website did not change since the last time it was loaded, a cached version of the page was shown.

1. Which field in the HTTP request indicates the OS used? And what is the value of that field?

The User-Agent field indicates the OS used. The OS value is Mac OS X 10\_15\_7.

1. Which field in the HTTP request indicates the browser used? And what is the value of that field?

The User-Agent field indicates the OS used. The value of the browser field is Chrome/140.0.0.0.

## 1.1 Login Packets

1. Were there any additional HTTP GET requests? If so, what pages were fetched?

Yes, the login.html page was fetched through a GET request.

1. Put in your Auburn username, and password MUST be notsafepassword and click on Submit. After doing this, what type of HTTP request is sent? [GET, POST, PUT, DELETE, PATCH]

A POST request was sent.

1. Do you see the credentials that you have just put in on Wireshark? If so, in which packet and which field do you see them?

# 2 Part (2)

This section does not begin on a new page and should use "Heading 1" style font settings for the heading, then “Normal” style for the content.

## 2.1 2a) DNS & Name Resolution

Subheadings are sections beneath headings. These sections should use "Heading 2" style font settings.

Subheadings and sub-subheadings are not mandatory. However, if there is one subheading, there must be at least a second subheading. Otherwise, there is no reason for the subdivisions under the primary headings.

## 2.2 2) HTTP

This paragraph is repeated. Subheadings are sections beneath headings. These sections should use "Heading 2" style font settings.

Subheadings and sub-subheadings are not mandatory. However, if there is one subheading, there must be at least a second subheading. Otherwise, there is no reason for the subdivisions under the primary headings.

### 2.2.1 First Sub-subheading

This paragraph is repeated. Subheadings are sections beneath headings. These sections should use "Heading 3" style font settings.

Subheadings and sub-subheadings are not mandatory. However, if there is one subheading, there must be at least a second subheading. Otherwise, there is no reason for the subdivisions under the primary headings.

### 2.2.2 Second Sub-subheading

Avoid any further divisions under the sub-subheading. Otherwise, the number of divisions becomes distracting and difficult to follow.

# 3 Acknowledgements

This section allows authors to acknowledge contributors and other sources that are not appropriate to list in the references section.

# 4 References

This is the last section of the report, prior to any appendices. The references should not be double-spaced, but single-spaced. For a technical report, use the CSE style.

[1] Reference 1 information.

[2] Reference 2 information.

[3] Reference 3 information.

# 5 AI Use Reflation Statement

As part of this assignment, you are required to explain how Artificial Intelligence (AI) tools were used in your work. For this you need to describe:

* Purpose of Use – Why you chose to use AI (for example: brainstorming, outlining, checking grammar, simplifying complex ideas, or generating examples).
* Extent of Use – To what degree AI contributed (for example: “I used AI to help refine my outline, but the analysis and arguments were entirely my own”).
* My Contribution – How I ensured the final assignment represents my own original thinking, understanding, and interpretation.

Reflections – What I found useful, what limitations I noticed, and how AI influenced my learning process.

**By writing this reflection, I acknowledge that AI is a support tool, not a substitute for my own effort, and I take full responsibility for the final submission.**