Computer Network
Lab 1: Wireshark Introduction

Lecturer: Mr. Nguyễn Mạnh Thìn
Student: Trần Quốc Anh - 1852247

1. List 3 different protocols that appear in the protocol column in the unfiltered packet-listing window in step 7 above.

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.1.106	172.217.163.228	UDP	1392	62379 → 443 Len=1350
2	0.000514	192.168.1.106	172.217.163.228	UDP	1255	62379 → 443 Len=1213
3	0.070056	172.217.163.228	192.168.1.106	UDP	1392	443 → 62379 Len=1350
4	0.070465	192.168.1.106	172.217.163.228	UDP	75	62379 → 443 Len=33
5	0.094470	172.217.163.228	192.168.1.106	UDP	67	443 → 62379 Len=25
6	0.107258	192.168.1.101	192.168.1.255	UDP	77	50560 → 15600 Len=35
7	0.115630	172.217.163.228	192.168.1.106	UDP	794	443 → 62379 Len=752
8	0.120996	172.217.163.228	192.168.1.106	UDP	68	443 → 62379 Len=26
9	0.121074	172.217.163.228	192.168.1.106	UDP	226	443 → 62379 Len=184
10	0.121262	192.168.1.106	172.217.163.228	UDP	75	62379 → 443 Len=33
11	0.147405	192.168.1.106	172.217.163.228	UDP	75	62379 → 443 Len=33

2. How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received?

No.	Time	Source	Destination	Protocol	Length	Info
16	2020-10-11 11:12:56.227590	192.168.1.106	128.119.245.12	HTTP	650	GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
20	2020-10-11 11:12:56.484062	128.119.245.12	192.168.1.106	HTTP	293	HTTP/1.1 304 Not Modified

Time when HTTP GET message was sent until the HTTP OK reply was receive is:

56.484062 - 56.227590 = 0.256472

3. What is the Internet address of the gaia.cs.umass.edu (also known as wwwnet.cs.umass.edu)? What is the Internet address of your computer?

As the picture above:
  - The Internet address of the gaia.cs.umass.edu is: 128.119.245.12
  - The Internet address of my computer is: 192.168.1.106

4. Print the two HTTP messages (GET and OK) referred to in question 2 above.

```
No.    Time         Source            Destination        Protocol Length Info
  29981 14.946584    192.168.1.106     128.119.245.12     HTTP     539    GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
Frame 29981: 539 bytes on wire (4312 bits), 539 bytes captured (4312 bits) on interface \Device\NPF_{E2397F76-8016-46FA-AC39-760CEF8B7FE3}, id 0
Ethernet II, Src: HonHaiPr_2d:67:d1 (90:32:4b:2d:67:d1), Dst: Tp-LinkT_c2:fb:fe (c0:4a:00:c2:fb:fe)
Internet Protocol Version 4, Src: 192.168.1.106, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 57343, Dst Port: 80, Seq: 1, Ack: 1, Len: 485
Hypertext Transfer Protocol
    GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n
        [Expert Info (Chat/Sequence): GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n]
        Request Method: GET
        Request URI: /wireshark-labs/INTRO-wireshark-file1.html
        Request Version: HTTP/1.1
    Host: gaia.cs.umass.edu\r\n
    Connection: keep-alive\r\n
    Upgrade-Insecure-Requests: 1\r\n
    User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/86.0.4240.75 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=0.9\r\n
    Accept-Encoding: gzip, deflate\r\n
    Accept-Language: en-US,en;q=0.9,vi;q=0.8\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
    [HTTP request 1/2]
    [Response in frame: 30518]
    [Next request in frame: 30652]
```