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Roll no 20P-0646

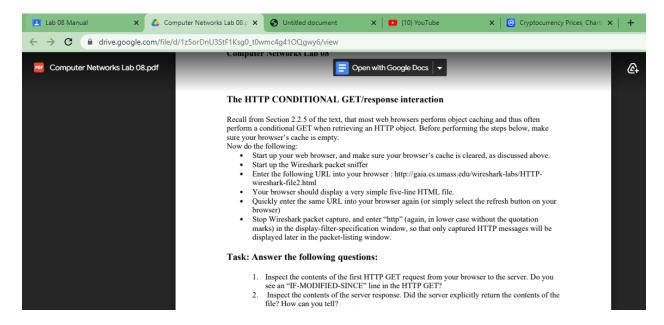
Course: Computer Network LAB

LAB 8 TASKS

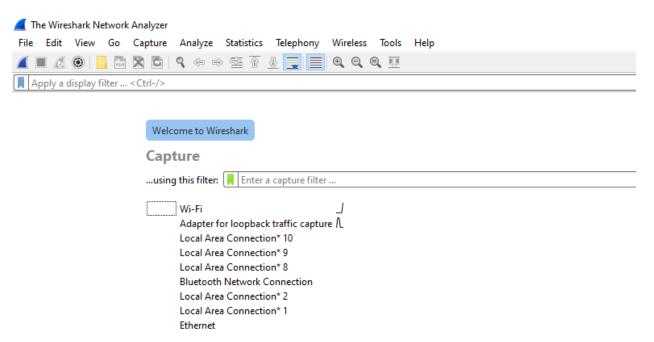
Submitted to Miss Hurmat Hidayat

TASK 1

Start Up the Browser



Start Up Wireshark



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18.64.142.12

192.168.18.11

http No. Time Source Destination Protocol Length Info 981 63.470939 192.168.18.11 18.64.142.138 HTTP 274 GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv 1030 63.578640 18.64.142.138 192.168.18.11 OCSP 387 Response 1115 64.184911 192.168.18.11 13.227.250.40 HTTP 304 GET /MFQwUjBQME4wTDAJBgUrDgMCGgUABBSIfaREXmfqfJR3TkMYnD705MhzEgQUnF 1129 64.297738 13.227.250.40 192.168.18.11 OCSP 1219 64.749641 192.168.18.11 1228 64.823868 18.64.142.12

68 Response

309 GET /MFQwUjBQME4wTDAJBgUrDgMCGgUABBRPWa0UU8%2B5VZ5%2Fa9jFTaU9pkK3FA

HTTP

OCSP

> Frame 981: 274 bytes on wire (2192 bits), 274 bytes captured (2192 bits) on interf	0000 a	7c c9 58 4d f4 a4 02 b9 81 7f 3b 08 00 4	5 00 - -					
> Ethernet II, Src: IntelCor_81:7f:3b (a4:02:b9:81:7f:3b), Dst: HuaweiTe_58:4d:f4 (a	0010 0	04 50 a4 40 00 80 06 35 d2 c0 a8 12 0b 1	2 40 ··P					
> Internet Protocol Version 4, Src: 192.168.18.11, Dst: 18.64.142.138	0020 8	8a f2 be 00 50 ae c9 e7 a5 2a f4 6f c0 5	0 18					
> Transmission Control Protocol, Src Port: 62142, Dst Port: 80, Seq: 1, Ack: 1, Len:	0030 0	00 6f ab 00 00 47 45 54 20 2f 2f 4d 45 6	f 77 ··o					
> Hypertext Transfer Protocol	0040 5	44 42 47 4d 45 51 77 51 6a 41 4a 42 67 5	5 72 SDB					
	0050 4	67 4d 43 47 67 55 41 42 42 53 4c 77 5a 3	6 45 DgM					
	0060 5	35 67 64 59 63 39 55 61 53 45 61 61 4c 6	a 6a W5g					
	0070 4	54 4e 74 6b 41 51 55 76 31 25 32 42 33 3	0 63 ETN					
	0080 3	64 48 34 62 30 57 31 57 73 33 4e 63 51 7	7 67 7dH					
	0090 3	70 69 4f 63 43 43 51 43 6e 44 6b 70 4d 4	e 49 6pi					
	00a0 4	33 66 77 25 33 44 25 33 44 20 48 54 54 5	0 2f K3f					
	00b0 3	2e 31 0d 0a 43 6f 6e 6e 65 63 74 69 6f 6	e 3a 1.1					
	00c0 2 0	4b 65 65 70 2d 41 6c 69 76 65 0d 0a 41 6	3 63 Ke					
	00d0 6	70 74 3a 20 2a 2f 2a 0d 0a 55 73 65 72 2	d 41 ept					
<								
△ ™ 11 1 T 2 B 1 1 B 1 1	<u> </u>							

TASK 2

1: Is your browser running HTTP version 1.0, 1.1, or 2?

Ans: Yes, It's running 1.1.

```
Frame 981: 274 bytes on wire (2192 bits), 274 bytes captured (2192 bits) on interface \Device\NPF {7DB606B1-2618-45E9-B990-9F1DA678ED2C}, id
 > Ethernet II, Src: IntelCor_81:7f:3b (a4:02:b9:81:7f:3b), Dst: HuaweiTe_58:4d:f4 (a4:7c:c9:58:4d:f4)
 > Internet Protocol Version 4, Src: 192.168.18.11, Dst: 18.64.142.138
 > Transmission Control Protocol, Src Port: 62142, Dst Port: 80, Seq: 1, Ack: 1, Len: 220

→ Hypertext Transfer Protocol

   > GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30c7dH4b0W1Ws3NcQwg6p1OcCCQCnDkpMNIK3fw%3D%3D HTTP/1.1\r\n
      Connection: Keep-Alive\r\
      Accept: */*\r\n
      User-Agent: Microsoft-CryptoAPI/10.0\r\n
      Host: o.ss2.us\r\n
      [Full request URI: http://o.ss2.us//MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30c7dH4b0W1Ws3NcQwg6piOcCCQCnDkpMNIK3f
      [HTTP request 1/1]
      [Response in frame: 1030]
 0010 01 04 50 a4 40 00 80 06 35 d2 c0 a8 12 0b 12 40 ···P·@····· 5······@
 0020 8e 8a f2 be 00 50 ae c9 e7 a5 2a f4 6f c0 50 18 ....P...*.o.P.
0030 02 00 6f ab 00 00 47 45 54 20 2f 2f 4d 45 6f 77 ...o...GE T //MEow
 0040 53 44 42 47 4d 45 51 77 51 6a 41 4a 42 67 55 72 SDBGMEQw QjAJBgUr
 0050 44 67 4d 43 47 67 55 41 42 42 53 4c 77 5a 36 45 DgMCGgUA BBSLwZ6E
 0060 57 35 67 64 59 63 39 55 61 53 45 61 61 4c 6a 6a W5gdYc9U aSEaaLjj
 0070 45 54 4e 74 6b 41 51 55 76 31 25 32 42 33 30 63 ETNtkAQU v1%2B30c
 0080 37 64 48 34 62 30 57 31 57 73 33 4e 63 51 77 67 7dH4b0W1 Ws3NcQwg
 0090 36 70 69 4f 63 43 43 51 43 6e 44 6b 70 4d 4e 49 6piOcCCQ CnDkpMNI
 00a0 4b 33 66 77 25 33 44 25 33 44 20 48 54 54 50 2f K3fw%3D% 3D HTTP/
 00b0 31 2e 31 0d 0a 43 6f 6e 6e 65 63 74 69 6f 6e 3a 1.1 Con nection:
 00c0 20 4b 65 65 70 2d 41 6c \, 69 76 65 0d 0a 41 63 63 \, Keep-Al ive \cdot Acc
 00d0 65 70 74 3a 20 2a 2f 2a 0d 0a 55 73 65 72 2d 41 ept: */* ··User-A
 00e0 67 65 6e 74 3a 20 4d 69 63 72 6f 73 6f 66 74 2d gent: Mi crosoft-
 00f0 43 72 79 70 74 6f 41 50 49 2f 31 30 2e 30 0d 0a CryptoAP I/10.0

☑ Show packet bytes
```

2. What version of HTTP is the server running?

Ans: Version of HTTP is 1.1

```
■ Wireshark · Packet 981 · Wi-Fi

 > Ethernet II, Src: IntelCor_81:7f:3b (a4:02:b9:81:7f:3b), Dst: HuaweiTe_58:4d:f4 (a4:7c:c9:58:4d:f4)
 > Internet Protocol Version 4, Src: 192.168.18.11, Dst: 18.64.142.138
 > Transmission Control Protocol, Src Port: 62142, Dst Port: 80, Seq: 1, Ack: 1, Len: 220

    Hypertext Transfer Protocol

    GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30c7dH4b0W1Ws3NcQwg6piOcCCQCnDI
      > [Expert Info (Chat/Sequence): GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%
        Request Method: GET
       Request URI: //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30c7dH4b0W1Ws3NcQwg
        Request Version: HTTP/1.1
      Connection: Keep-Alive\r\n
      Accept: */*\r\n
      User-Agent: Microsoft-CryptoAPI/10.0\r\n
      Host: o.ss2.us\r\n
      \r\n
 0010 01 04 50 a4 40 00 80 06 35 d2 c0 a8 12 0b 12 40 ··P·@··· 5·····@
 0020 8e 8a f2 be 00 50 ae c9 e7 a5 2a f4 6f c0 50 18 ·····P·· ··*·o·P·
 0030 02 00 6f ab 00 00 47 45 54 20 2f 2f 4d 45 6f 77 ···o···GE T //MEow
 0040 53 44 42 47 4d 45 51 77 51 6a 41 4a 42 67 55 72 SDBGMEOw OjAJBgUr
 0050 44 67 4d 43 47 67 55 41 42 42 53 4c 77 5a 36 45 DgMCGgUA BBSLwZ6E
 0060 57 35 67 64 59 63 39 55 61 53 45 61 61 4c 6a 6a W5gdYc9U aSEaaLjj
 0070 45 54 4e 74 6b 41 51 55 76 31 25 32 42 33 30 63 ETNtkAQU v1%2B30c
 0080 37 64 48 34 62 30 57 31 57 73 33 4e 63 51 77 67 7dH4b0W1 Ws3NcQwg
 0090 36 70 69 4f 63 43 43 51 43 6e 44 6b 70 4d 4e 49 6piOcCCO CnDkpMNI
```

3. What languages (if any) does your browser indicate that it can accept to the server?

Ans: It accept en-US language.

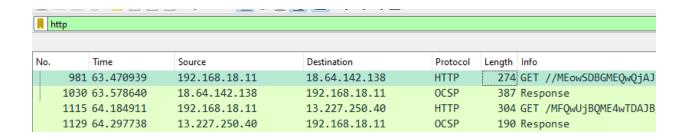
```
Wireshark · Packet 981 · Wi-Fi
      Checksum: 0x6fab [unverified]
      [Checksum Status: Unverified]
      Urgent Pointer: 0
    > [Timestamps]
    > [SEQ/ACK analysis]
      TCP payload (220 bytes)

    Hypertext Transfer Protocol

    GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30c7dH4b0W1Ws.
      [Expert Info (Chat/Sequence): GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaS
           [GET //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30c7dH4I
            [Severity level: Chat]
           [Group: Sequence]
         Request Method: GET
         Request URI: //MEowSDBGMEQwQjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEaaLjjETNtkAQUv1%2B30
         Request Version: HTTP/1.1
      Connection: Keep-Alive\r\n
      Accept: */*\r\n
      User-Agent: Microsoft-CryptoAPI/10.0\r\n
      Host: o.ss2.us\r\n
      \r\n
      [Full request URI: http://o.ss2.us//MEowSDBGMEOwOjAJBgUrDgMCGgUABBSLwZ6EW5gdYc9UaSEa
      [HTTP request 1/1]
```

4. What is the IP address of your computer? What is the IP address of the gaia.cs.umass.edu server?

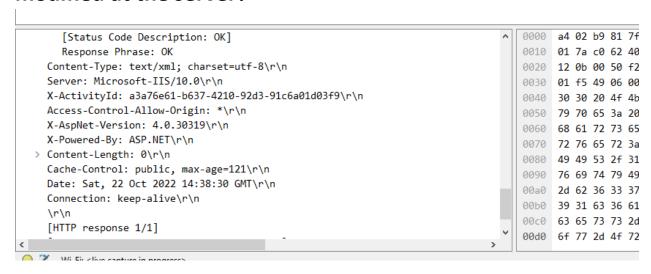
Ans: Source IP are computer IP and the Destination IP are the server IP.



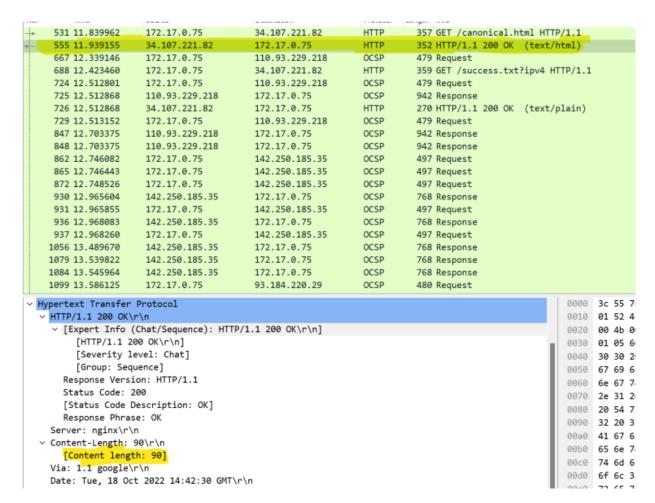
5. What is the status code returned from the server to your browser?

i						
H	708 41.546550	23.76.211.239	192.168.18.11	HTTP	392 HTTP/1.1 200 OK	

6. When was the HTML file that you are retrieving last modified at the server?



7. How many bytes of content are being returned to your browser?

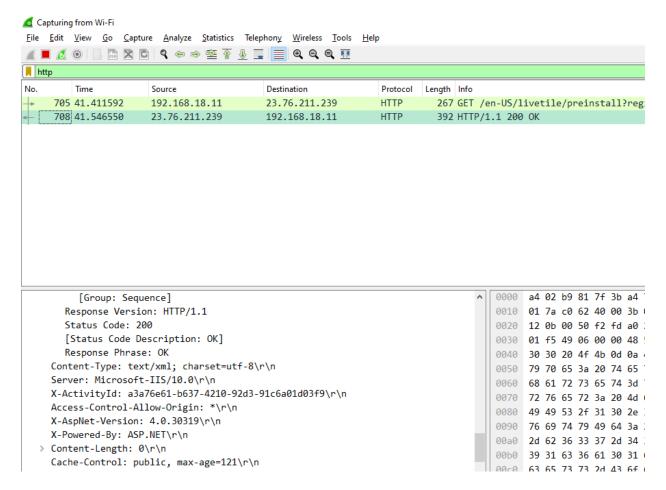


TASK 3

1. Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an "IF-MODIFIED-SINCE" line in the HTTP GET?

```
Hypertext Transfer Protocol
  GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
    v [Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]
         [GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]
         [Severity level: Chat]
         [Group: Sequence]
      Request Method: GET
      Request URI: /wireshark-labs/HTTP-wireshark-file1.html
      Request Version: HTTP/1.1
    Host: gaia.cs.umass.edu\r\n
    User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:106.0) Gecko/20100101 Firefox/106.0\r\r
    Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8\r\
    Accept-Language: en-US,en;q=0.5\r\n
    Accept-Encoding: gzip, deflate\r\n
    Connection: keep-alive\r\n
    Upgrade-Insecure-Requests: 1\r\n
    If-Modified-Since: Wed, 19 Oct 2022 05:59:01 GMT\r\n
    If-None-Match: "80-5eb5ce7c918bc"\r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
    [HTTP request 1/1]
```

2. Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?



3. Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see an "IF-MODIFIED-SINCE:" line in the HTTP GET6? If so, what information follows the "IF-MODIFIED-SINCE:" header?

```
Sequence Number (raw): 1335926859
   [Next Sequence Number: 214 (relative sequence number)]
   Acknowledgment Number: 1 (relative ack number)
   Acknowledgment number (raw): 2686811338
   0101 .... = Header Length: 20 bytes (5)
 > Flags: 0x018 (PSH, ACK)
   Window: 512
   [Calculated window size: 131072]
   [Window size scaling factor: 256]
   Checksum: 0xe68f [unverified]
   [Checksum Status: Unverified]
   Urgent Pointer: 0
  > [Timestamps]
  > [SEQ/ACK analysis]
   TCP payload (213 bytes)

    Hypertext Transfer Protocol

  ▼ GET /en-US/livetile/preinstall?region=US&appid=C98EA5B0842DBB9405BBF071E1DA76512D21FE36&FORM=Threshold HTTP/1.1\r\n
    [Expert Info (Chat/Sequence): GET /en-US/livetile/preinstall?region=US&appid=C98EA5B0842DBB9405BBF071E1DA76512D21
        [Severity level: Chat]
       [Group: Sequence]
     Request Method: GET
    > Request URI: /en-US/livetile/preinstall?region=US&appid=C98EA5B0842DBB9405BBF071E1DA76512D21FE36&F0RM=Threshold
     Request Version: HTTP/1.1
   Connection: Keep-Alive\r\n
   User-Agent: Microsoft-WNS/10.0\r\n
   Host: tile-service.weather.microsoft.com\r\n
          -----
```

4. What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.

Ans: The server did explicitly return the contents of the file. Wireshark includes a section titled "Line-Based Text Data" which shows what the server sent back to my browser which specifically what the website is showed when I brought it up on my browser.

```
מושו .... = neader, reudru: קמ parez (כ)
  > Flags: 0x018 (PSH, ACK)
    Window: 512
    [Calculated window size: 131072]
    [Window size scaling factor: 256]
    Checksum: 0xe68f [unverified]
    [Checksum Status: Unverified]
    Urgent Pointer: 0
  > [Timestamps]
  > [SEQ/ACK analysis]
    TCP payload (213 bytes)

    Hypertext Transfer Protocol

  GET /en-US/livetile/preinstall?region=US&appid=C98EA5B0842DBB9405BBF071E1DA76512
    v [Expert Info (Chat/Sequence): GET /en-US/livetile/preinstall?region=US&appid=0
         [GET /en-US/livetile/preinstall?region=US&appid=C98EA5B0842DBB9405BBF071E1D
         [Severity level: Chat]
         [Group: Sequence]
       Request Method: GET
    > Request URI: /en-US/livetile/preinstall?region=US&appid=C98EA5B0842DBB9405BBF(
       Request Version: HTTP/1.1
    Connection: Keep-Alive\r\n
    Hean Agant, Microsoft LIME /10 0\n\n
```