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LabTask : 09

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Task1 : By looking at the information in the HTTP GET and response messages,

answer the following questions
1. Is your browser running HTTP version 1.0, 1.1, or 2?
2. What version of HTTP is the server running?
3. What languages (if any) does your browser indicate that it can accept to the server?
4. What is the IP address of your computer? What is the IP address of the gaia.cs.umass.edu server?
5. What is the status code returned from the server to your browser?
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?

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

To see that what version your browser is running select line one in which **GET** request is made.
Then Go to the Hypertext Transfer Protocol -> Select Get -> Request Version My browser is running on HTTP version 1.1.

```
Request Method: GET
Request URI: /wireshark-labs/HTTP-wireshark-file1.html
Request Version: HTTP/1.1
ost: gaia.cs.umass.edu\r\n
```

2. What version of HTTP is the server running?

To see that what version of HTTP server is running select second line in which **200** response is coming.

Then Go to the Hypertext Transfer Protocol -> Select HTTP/1.1 200 OK /r/n -> Response Version
Server has a HTTP Version 1.1.

```
     [Group: Sequence]
Response Version: HTTP/1.1
Status Code: 200
[Status Code Description: OK]
Response Phrase: OK
Date: Thu, 16 Nov 2023 04:08:28 GMT\r\n
```

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

```
Upgrade-Insecure-Requests: 1\r\n
User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_
Accept: text/html,application/xhtml+xml,application/xml
Accept-Encoding: gzip, deflate\r\n
Accept-Language: en-GB,en-US;q=0.9,en;q=0.8\r\n
```

4. What is the IP address of your computer? What is the IP address of the gaia.cs.umass.edu server?
IP address of my computer: 192.168.18.132
**IP address of the gaia.cs.umass.edu server = 128.119.245.12**

```
1687 41.644375    172.26.7.47    128.119.245.12    HTTP    629 GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
```

5. What is the status code returned from the server to your browser?
The status code returned from the server is **200** that mean **OK.** That means the page is successfully retrieved without any error.

```
[HTTP/1.1 200 OK\r\n]
[Severity level: Chat]
[Group: Sequence]
Response Version: HTTP/1.1
Status Code: 200
[Status Code Description: OK]
Response Phrase: OK
```

6. When was the HTML file that you are retrieving last modified at the server?
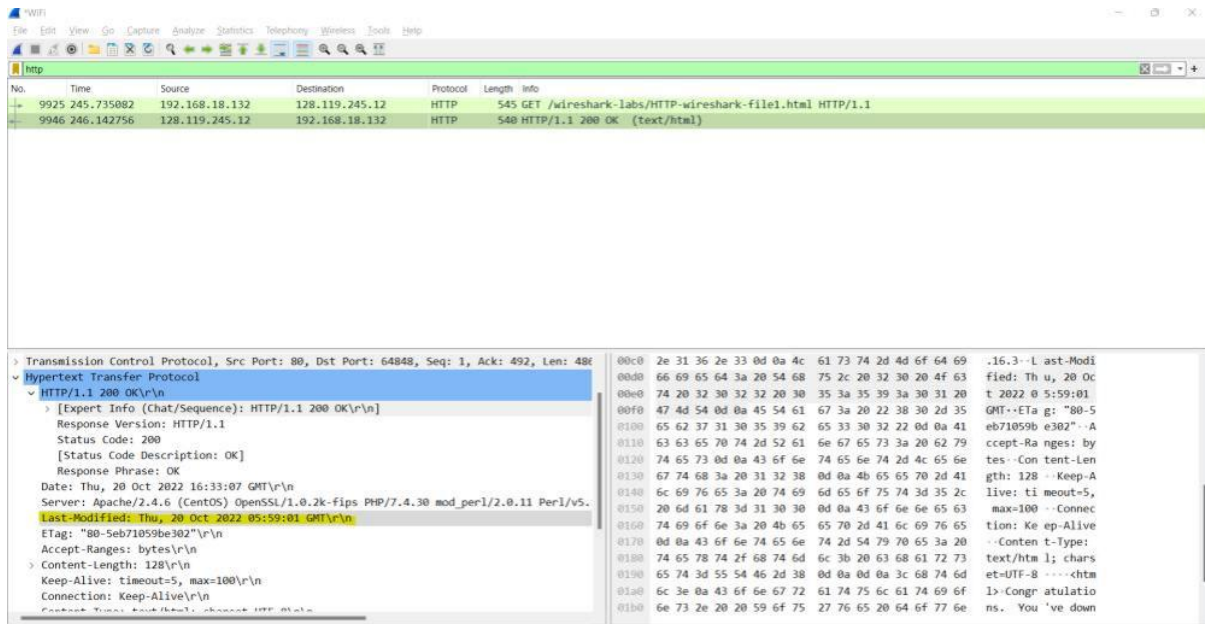
7. How many bytes of content are being returned to your browser?
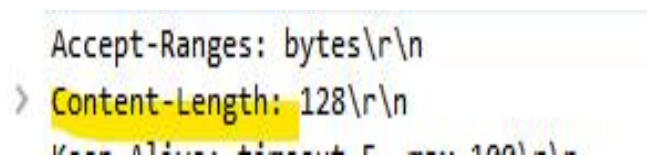
Task2: Answer the following questions:

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?
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?
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

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?

Ans: I inspected the first HTTP GET request from the browser but IF-MODIFIED-SINCE is not found. This is due to this because that is our first time, we are fetching the page so IF-MODIFIED-SINCE is not checked.

```
Connection: Keep-alive\r\n
Upgrade-Insecure-Requests: 1\r\n
User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebK
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/a
Accept-Encoding: gzip, deflate\r\n
Accept-Language: en-GB,en-US;q=0.9,en;q=0.8\r\n
If-None-Match: "173-609b2bd17c6d1"\r\n
If-Modified-Since: Thu, 09 Nov 2023 06:59:01 GMT\r\n
\r\n
```

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

Ans : I inspected the contents of the server response. Server is explicitly returning the contents of the file in
the option **Line-based text data: text/html (10 lines)**

```
rile Data: 5/1 bytes
Line-based text data: text/html (10 lines)
  \n
  <html>\n
  \n
  Congratulations again!  Now you've downloaded the file lab2-2.html. <br>\n
  This file's last modification date will not change.  <p>\n
  Thus  if you download this multiple times on your browser, a complete copy <br>\n
  will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE<br>\n
  field in your browser's HTTP GET request to the server.\n
  \n
  </html>\n
```

**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 GET? If so, what information follows the "IF-MODIFIED SINCE:" header?**

Ans: I inspected the second HTTP GET request. This time **IF-MODIFIED-SINCE found.** Reason for this is that because we are fetching the page second time page is already present in cache and if page is not modified then it will not fetch complete page from server rather it will pick page from cache and show to the user.

```
If None-Match:  1/5  ULUULUUI/UUUI \r \n
If-Modified-Since: Thu, 09 Nov 2023 06:59:01 GMT\r\n
\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: 304 status code returned from the server in response to this second HTTP Get. No, Server did not explicitly return the contents of the file.

```
Transmission Control Protocol, Src Port: 80, Dst Port: 53028, Seq: 1, Ack: 603, Len: 240
Hypertext Transfer Protocol
  ∨ HTTP/1.1 304 Not Modified\r\n
    ∨ [Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]
        [HTTP/1.1 304 Not Modified\r\n]
        [Severity level: Chat]
        [Group: Sequence]
      Response Version: HTTP/1.1
      Status Code: 304
      [Status Code Description: Not Modified]
      Response Phrase: Not Modified
    Date: Thu, 16 Nov 2023 05:51:09 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 Perl/v5.16.3\r\n
    Connection: Keep-Alive\r\n
    Keep-Alive: timeout=5, max=100\r\n
    ETag: "173-60a2b7029275b"\r\n
    \r\n
    [HTTP response 1/1]
    [Time since request: 0.235615000 seconds]
    [Request in frame: 1418]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
```