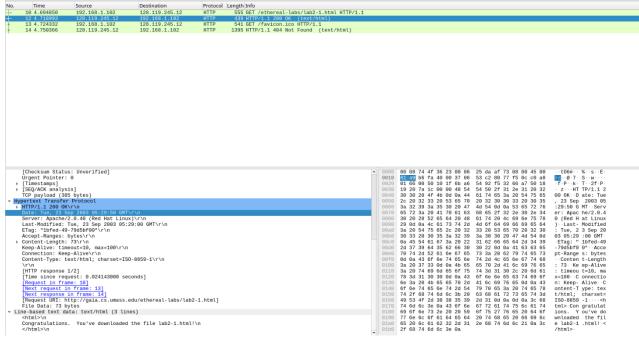
Exercise 3:



Q1: The status code is 200, The phrase is HTTP/1.1 200 OK

Q2: Last modified on: Tue, 23 Sep 2003 05:29:00 GMT Under DATE header: Tue, 23 Sep 2003 05:29:50 GMT

Where the last modified date is the last modified date of the Website/server, but the date under DATE header is the time the client received the information sent back from the server.

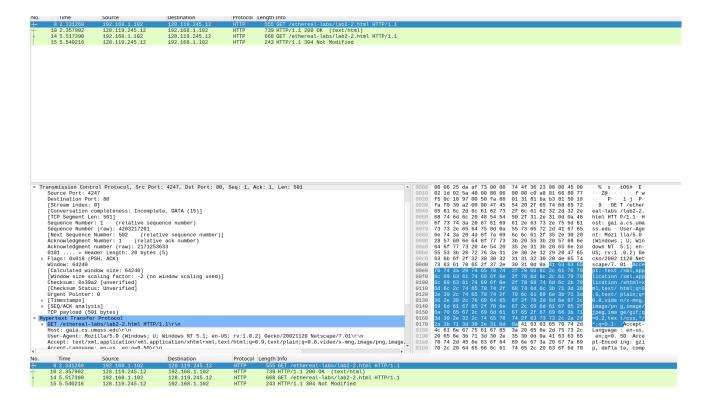
Q3: The connection established between the browser and the server is persistent, it can be found under KEEP-ALIVE header and CONNECTION header, it was said the connection status is "keep alive" which means the connection is persistent.

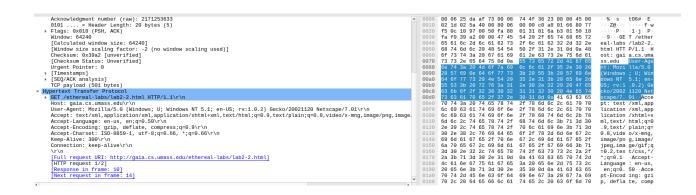
Q4: We can find there are 73 bytes content was sent back to the client from the server

Q5: The data contained inside the HTTP response packet is a text/html object, whose contents are:

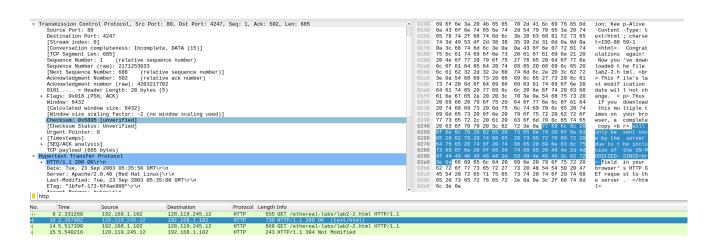
"Congratulations. You've downloaded the file lab2-1.html!\n"

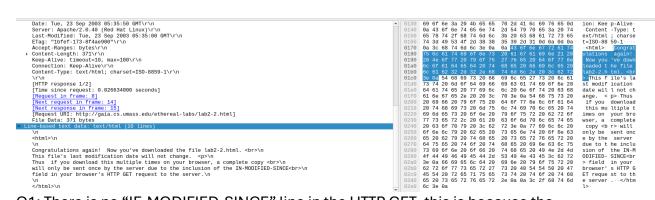
Exercise 4:





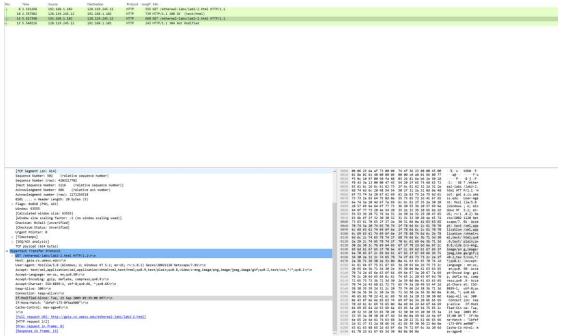
N Inth					
No.	Time	Source	Destination	Protocol	Length Info
-	8 2.331268	192.168.1.102	128.119.245.12	HTTP	555 GET /ethereal-labs/lab2-2.html HTTP/1.1
+	10 2.357902	128.119.245.12	192.168.1.102		739 HTTP/1.1 200 OK (text/html)
+	14 5.517390	192.168.1.102	128.119.245.12	HTTP	668 GET /ethereal-labs/lab2-2.html HTTP/1.1
+	15 5.540216	128.119.245.12	192.168.1.102	HTTP	243 HTTP/1.1 304 Not Modified





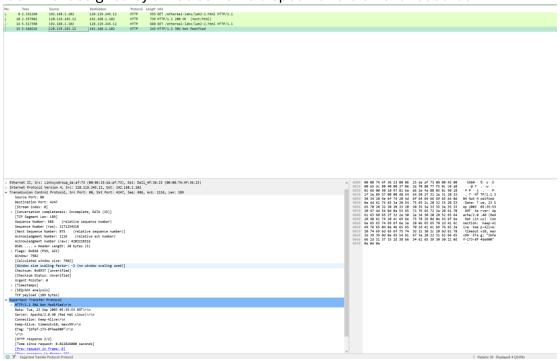
Q1: There is no "IF-MODIFIED-SINCE" line in the HTTP GET, this is because the local cache is not deleted yet.

Q2: Yes, it was shown under Last-Modified header which is: Tue,23 Sep 2003 05:35:00



Q3: Yes, there is an If-Modified-Since header and an If-None-Match header. Under the If-Modified-Since header, it contains the date and time that last modification time.

Under the If-None-Match header contains the same value of Etag, It is a unique identifier assigned by a web server to a specific version of a resource.



Q4: The HTTP code is 304 not modified. The server didn't return the contents, it means that the file doesn't change since the last modified date, which means the version of the file will be stored on the proxy server and the last version of file will

be sent by the proxy server. Therefore, there is no need to send it again since the whole version is already stored in proxy server.

Q5: The Etag value is "1bfef-173-8f4ae900". It is a unique identifier assigned by a web server to a specific version of a resource, not changed since the first response.

Exercise 5:

minimum = 8 ms, maximum = 196 ms, average = 103.69 ms

```
z5542052@vx16: ~/Downloads
File Edit Tabs Help
 Reply sent.
eceived from 127.0.0.1: PING 32338 2024-06-17 20:57:06
Reply sent.
Received from 127.0.0.1: PING 32339 2024-06-17 20:57:06
                                                                                                                                                       z5542052@vx16: ~/Documents/Lab2
                                                                                                                                                                                                                                                                                                            ^ _ □ ×
                                                                                                                                                         File Edit Tabs Help
 eceived from 127.0.0.1: PING 32340 2024-06-17 20:57:06
Reply sent.
eceived from 127.0.0.1: PING 32341 2024-06-17 20:57:06
                                                                                                                                                         bash: ./Lab2/: Is a directory
z5542052@vx16:~/Documents$ cd ./Lab2/
z5542052@vx16:~/Documents/Lab2$ ls
 Reply sent.
eceived from 127.0.0.1: PING 32342 2024-06-17 20:57:06
                                                                                                                                                        PingClient.py
z5542052@vx16:-/Documents/Lab2$ python3 PingCli
ping to 127.0.0.1, seq = 32334, rtt = 74 ms
ping to 127.0.0.1, seq = 32335, rtt = time out
ping to 127.0.0.1, seq = 32336, rtt = 163 ms
ping to 127.0.0.1, seq = 32337, rtt = 189 ms
ping to 127.0.0.1, seq = 32338, rtt = 27 ms
ping to 127.0.0.1, seq = 32339, rtt = 107 ms
ping to 127.0.0.1, seq = 32339, rtt = 107 ms
ping to 127.0.0.1, seq = 32341, rtt = 189 ms
ping to 127.0.0.1, seq = 32341, rtt = 189 ms
ping to 127.0.0.1, seq = 32342, rtt = time out
ping to 127.0.0.1, seq = 32343, rtt = 70 ms
ping to 127.0.0.1, seq = 32344, rtt = 8 ms
ping to 127.0.0.1, seq = 32344, rtt = 196 ms
                                                                                                                                                                                         /Documents/Lab2$ python3 PingClient.py 127.0.0.1 1234
 Reply not sent.
eceived from 127.0.0.1: PING 32343 2024-06-17 20:57:07
 Reply sent.
eceived from 127.0.0.1: PING 32344 2024-06-17 20:57:07
  Reply sent.
  Reply sent.
eceived from 127.0.0.1: PING 32346 2024-06-17 20:57:07
 Reply sent.
eceived from 127.0.0.1: PING 32347 2024-06-17 20:57:07
 eceived from 127.0.0.1: PING 32348 2024-06-17 20:57:08
                                                                                                                                                          ping to 127.0.0.1, seq = 32345, rtt = 196 ms
ping to 127.0.0.1, seq = 32346, rtt = 25 ms
    Reply sent.
                                                                                                                                                         ping to 127.0.0.1, seq = 32347, rtt = 150 ms
ping to 127.0.0.1, seq = 32348, rtt = 58 ms
                                                                                                                                                         minimum = 8 ms, maximum = 196 ms, average = 103.69 ms
z5542052@yx16:~/Documents/Lab2$
```