

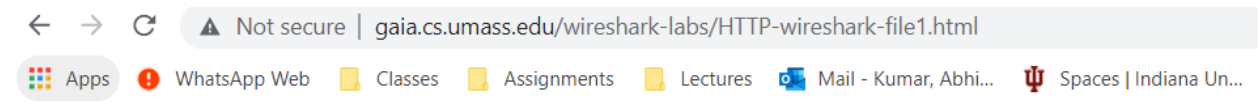
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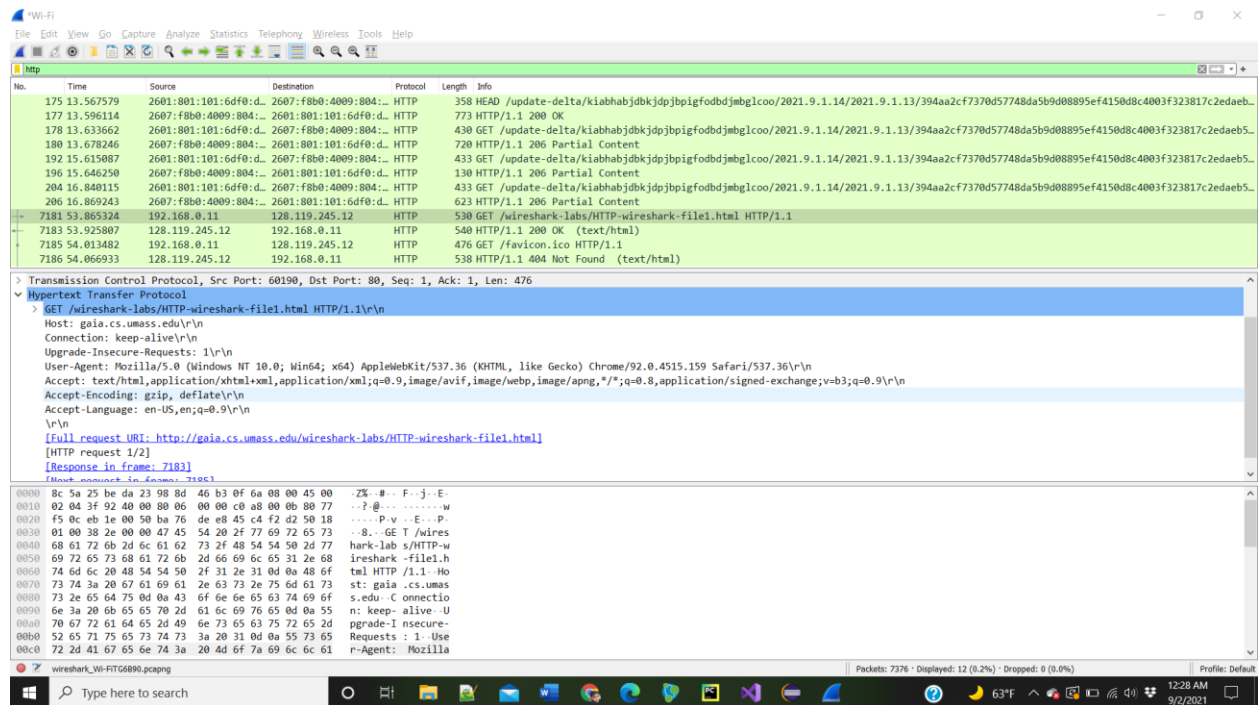
Task 1 - Explore HTTP

1. What is the IP address of your computer? Of the *gaia.cs.umass.edu* server?

Ip address of my computer is 192.168.0.11 and of the *gaia.cs.umass.edu* server is 128.119.245.12



Congratulations. You've downloaded the file <http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html>!



2. What is the status code and phrase returned from the server to your browser?

The status code is 200 and phrase is OK which is returned from the server to my browser.

No.	Time	Source	Destination	Protocol	Length	Info
175	13.567579	2601:801:101:6df0:d...	2607:f8b0:4009:804:...	HTTP	358	HEAD /update-delta/kiabhabjdbkjdjbpigfodbdjmbglcoo/2021.9.1.14/2021.9.1.13/394aa2cf7370d57748da5b9d08895ef4150d8c4003f32...
177	13.596114	2607:f8b0:4009:804:...	2601:801:101:6df0:d...	HTTP	773	HTTP/1.1 200 OK
178	13.633662	2601:801:101:6df0:d...	2607:f8b0:4009:804:...	HTTP	430	GET /update-delta/kiabhabjdbkjdjbpigfodbdjmbglcoo/2021.9.1.14/2021.9.1.13/394aa2cf7370d57748da5b9d08895ef4150d8c4003f32...
180	13.678246	2607:f8b0:4009:804:...	2601:801:101:6df0:d...	HTTP	720	HTTP/1.1 206 Partial Content
192	15.615087	2601:801:101:6df0:d...	2607:f8b0:4009:804:...	HTTP	433	GET /update-delta/kiabhabjdbkjdjbpigfodbdjmbglcoo/2021.9.1.14/2021.9.1.13/394aa2cf7370d57748da5b9d08895ef4150d8c4003f32...
196	15.646250	2607:f8b0:4009:804:...	2601:801:101:6df0:d...	HTTP	130	HTTP/1.1 206 Partial Content
204	16.840115	2601:801:101:6df0:d...	2607:f8b0:4009:804:...	HTTP	433	GET /update-delta/kiabhabjdbkjdjbpigfodbdjmbglcoo/2021.9.1.14/2021.9.1.13/394aa2cf7370d57748da5b9d08895ef4150d8c4003f32...
206	16.869243	2607:f8b0:4009:804:...	2601:801:101:6df0:d...	HTTP	623	HTTP/1.1 206 Partial Content
7183	53.925807	192.168.0.11	128.119.245.12	HTTP	538	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
7185	54.013482	192.168.0.11	128.119.245.12	HTTP	476	GET /favicon.ico HTTP/1.1
7186	54.066933	128.119.245.12	192.168.0.11	HTTP	538	HTTP/1.1 404 Not Found (text/html)

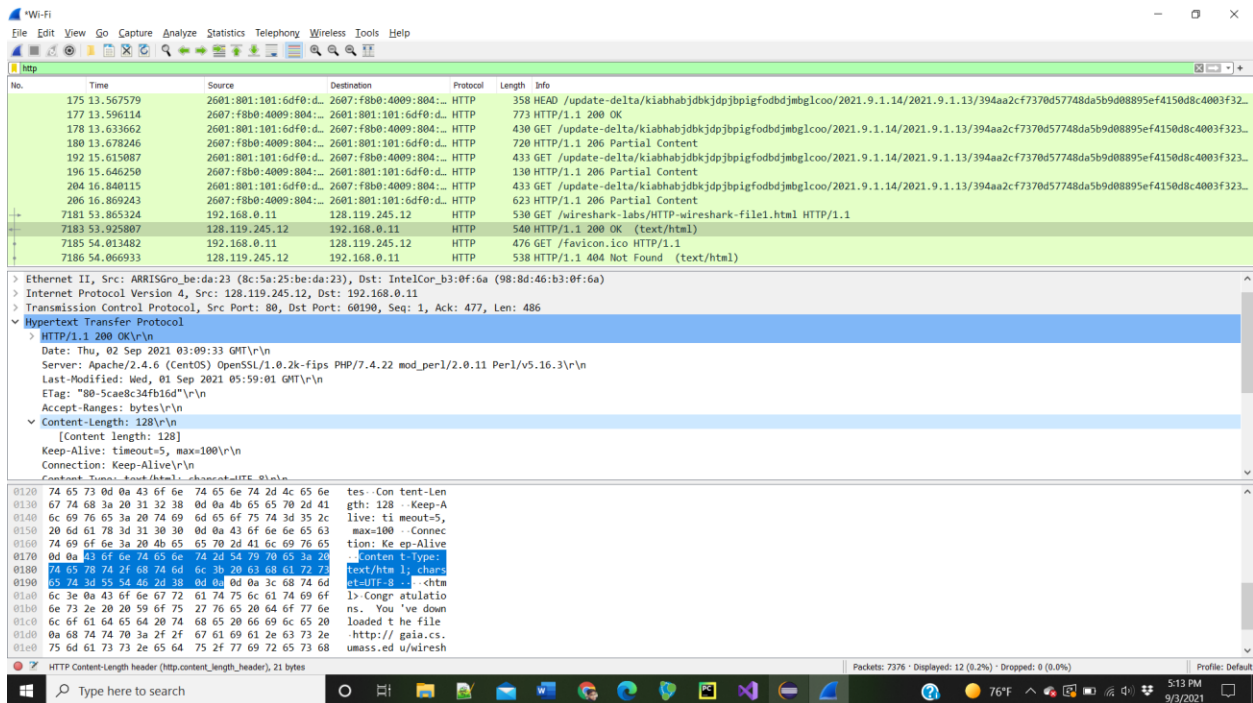
- What languages does your browser indicate to the server that it can accept? Which header line is used to indicate this information?

Languages which my browser indicated to the server are en-US and en. The header line which indicates this information is Accept Language Header.

Wireshark packet capture showing the details of the selected HTTP packet (7183). The 'Hypertext Transfer Protocol' section is expanded, showing the request line and various headers. The 'Accept-Language' header is highlighted, showing 'en-US,en;q=0.9'. The packet bytes section shows the raw data of the HTTP response, including the status line 'HTTP/1.1 200 OK' and the 'Content-Length' header '128'.

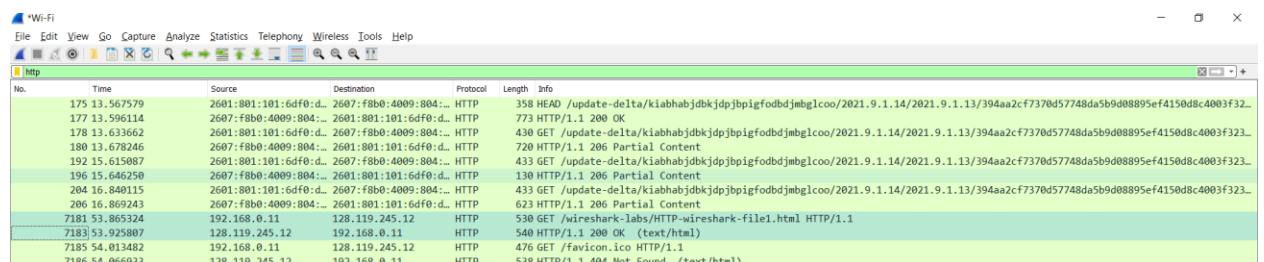
- How many bytes of content (size of file) are returned to your browser? Which header line is used to indicate this information?

128bytes as indicated by Content-Length header line.



- How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received? (By default, the value of the Time column in the packet listing window is the amount of time, in seconds, since Wireshark tracing began. To display the Time field in time-of-day format, select the Wireshark View pull down menu, then select Time Display Format, then select Time-of-day.)

53.925807 (OK) - 53.865324 (GET) = 0.060483 seconds it took from HTTP GET message to HTTP OK reply



Task 2 - Capture a traceroute

Command Prompt Screenshot

```
Microsoft Windows [Version 10.0.19043.1165]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Abhinav Kumar>tracert yahoo.com

Tracing route to yahoo.com [2001:4998:24:120d::1:1]
over a maximum of 30 hops:
  0  3 ms  2 ms  4 ms  2601:801:100:4620:4a4e:fcff:fedf:e8c6
  1 13 ms 12 ms 19 ms 2001:558:40a2:9::1
  2 12 ms 10 ms 11 ms 2001:558:3b1:182::1
  3 13 ms 11 ms 11 ms 2001:558:3b0:12::2
  4 21 ms 20 ms 20 ms 2001:558:3b0:21::1
  5 * * * Request timed out.
  6 * * * Request timed out.
  7 * * * Request timed out.
  8 * * * Request timed out.
  9 * * * Request timed out.
 10 30 ms 28 ms 26 ms 100ge6-2.core1.chi1.he.net [2001:470:0:5e5::1]
 11 27 ms 23 ms 25 ms 2001:504:38:1:0:a501:310::1
 12 50 ms 47 ms 50 ms ae-5.pat2.dnx.yahoo.com [2001:4998:f00d:200::1]
 13 80 ms 74 ms 75 ms ae-6.pat1.gob.yahoo.com [2001:4998:f00f:2::1]
 14 77 ms 75 ms 76 ms 2001:4998:f00f::1
 15 78 ms 75 ms 76 ms 2001:4998:c:fe29::1

C:\Users\Abhinav Kumar>X
```

ICMP Screenshot

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	fe80::295a:ae99:ce39:d4cf	ff02::1:6	ICMPv6	90	Multicast Listener Report Message v2
8	1.198449	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
9	1.198449	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
10	1.198449	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
11	1.198449	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
14	1.545653	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=50, hop limit=1 (no response found)
15	1.548913	2601:801:100:4620:4a4e:fcff:fedf:e8c6	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
16	1.549570	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=51, hop limit=1 (no response found)
17	1.551000	2601:801:100:4620:4a4e:fcff:fedf:e8c6	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
18	1.552291	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=52, hop limit=1 (no response found)
19	1.556727	2601:801:100:4620:4a4e:fcff:fedf:e8c6	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
28	3.408655	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=53, hop limit=2 (no response found)
29	3.422036	2001:558:40a2:9::1	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
30	3.423517	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=54, hop limit=2 (no response found)
31	3.435842	2001:558:40a2:9::1	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
32	3.438442	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=55, hop limit=2 (no response found)
33	3.457668	2001:558:40a2:9::1	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
38	4.262319	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
39	4.262319	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
40	4.262319	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
41	4.262319	fe80::4a4e:fcff:fedf:e8c6	ff02::1	ICMPv6	150	Router Advertisement from 48:4e:fc:df:e8:c6
44	4.484132	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=56, hop limit=3 (no response found)
45	4.495903	2001:558:3b1:182::1	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
46	4.499129	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=57, hop limit=3 (no response found)
47	4.509144	2001:558:3b1:182::1	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
48	4.512473	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=58, hop limit=3 (no response found)
49	4.521290	2001:558:3b1:182::1	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
52	5.557150	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=59, hop limit=4 (no response found)
53	5.570320	2001:558:3b0:12::2	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
54	5.573074	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=60, hop limit=4 (no response found)
55	5.584054	2001:558:3b0:12::2	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
56	5.585558	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=61, hop limit=4 (no response found)
57	5.596920	2001:558:3b0:12::2	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	174	Time Exceeded (hop limit exceeded in transit)
66	6.202499	fe80::4a4e:fcff:fedf:e8c6	2601:801:100:4620:748e:874c:17a0:2852	ICMPv6	86	Neighbor Solicitation for 2601:801:100:4620:748e:874c:17a0:2852 from 48:4e:fc:df:e8:c6
67	6.202619	2601:801:100:4620:748e:874c:17a0:2852	fe80::4a4e:fcff:fedf:e8c6	ICMPv6	86	Neighbor Advertisement 2601:801:100:4620:748e:874c:17a0:2852 (sol, ovr) is at 98:8d:46:b3:0f:c
70	6.626362	2601:801:100:4620:748e:874c:17a0:2852	2001:4998:24:120d::1:1	ICMPv6	126	Echo (ping) request id=0x0001, seq=62, hop limit=5 (no response found)