```
No.
       Time
                                  Source
                                                        Destination
                                                                             Protocol
Length Info
    13 2022/313 11:56:41.214055
                                  192.168.1.7
                                                        128.119.245.12
                                                                             HTTP
                                                                                      544
GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
Frame 13: 544 bytes on wire (4352 bits), 544 bytes captured (4352 bits) on interface en0, id
    Section number: 1
   Interface id: 0 (en0)
       Interface name: en0
       Interface description: Wi-Fi
   Encapsulation type: Ethernet (1)
   Arrival Time: Nov 9, 2022 11:56:41.214055000 EET
    [Time shift for this packet: 0.00000000 seconds]
   Epoch Time: 1667987801.214055000 seconds
    [Time delta from previous captured frame: 0.000670000 seconds]
    [Time delta from previous displayed frame: 0.000000000 seconds]
    [Time since reference or first frame: 2.204374000 seconds]
   Frame Number: 13
   Frame Length: 544 bytes (4352 bits)
   Capture Length: 544 bytes (4352 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
    [Protocols in frame: eth:ethertype:ip:tcp:http]
    [Coloring Rule Name: HTTP]
    [Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: Apple_24:87:4e (50:ed:3c:24:87:4e), Dst: zte_b4:e2:25 (24:d3:f2:b4:e2:25)
   Destination: zte_b4:e2:25 (24:d3:f2:b4:e2:25)
       Address: zte b4:e2:25 (24:d3:f2:b4:e2:25)
       .... ..0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: Apple_24:87:4e (50:ed:3c:24:87:4e)
       Address: Apple_24:87:4e (50:ed:3c:24:87:4e)
       .... ..0. .... (factory default)
        .... - IG bit: Individual address (unicast)
   Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 192.168.1.7, Dst: 128.119.245.12
   0100 .... = Version: 4
    \dots 0101 = Header Length: 20 bytes (5)
   Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
       0000 00.. = Differentiated Services Codepoint: Default (0)
        .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
   Total Length: 530
   Identification: 0x0000 (0)
   010. .... = Flags: 0x2, Don't fragment
       0... = Reserved bit: Not set
       .1.. .... = Don't fragment: Set
       ..0. .... = More fragments: Not set
    ...0 0000 0000 0000 = Fragment Offset: 0
   Time to Live: 64
   Protocol: TCP (6)
   Header Checksum: 0x01b3 [validation disabled]
   [Header checksum status: Unverified]
   Source Address: 192.168.1.7
   Destination Address: 128.119.245.12
Transmission Control Protocol, Src Port: 65506, Dst Port: 80, Seq: 1, Ack: 1, Len: 478
   Source Port: 65506
   Destination Port: 80
    [Stream index: 1]
    [Conversation completeness: Incomplete, DATA (15)]
    [TCP Segment Len: 478]
                        (relative sequence number)
   Sequence Number: 1
   Sequence Number (raw): 3033946166
    [Next Sequence Number: 479 (relative sequence number)]
   Acknowledgment Number: 1 (relative ack number)
   Acknowledgment number (raw): 2143700587
```

1000 = Header Length: 32 bytes (8)

```
Flags: 0x018 (PSH, ACK)
       000. .... = Reserved: Not set
        ...0 .... = Accurate ECN: Not set
        .... 0... = Congestion Window Reduced: Not set
        .... .0.. .... = ECN-Echo: Not set
        .... ..0. .... = Urgent: Not set
        .... = Acknowledgment: Set
        .... 1... = Push: Set
        .... .0.. = Reset: Not set
        \dots Not set
        \dots Not set
       [TCP Flags: ·····AP···]
   Window: 2063
    [Calculated window size: 132032]
    [Window size scaling factor: 64]
   Checksum: 0xaf04 [unverified]
   [Checksum Status: Unverified]
   Urgent Pointer: 0
   Options: (12 bytes), No-Operation (NOP), No-Operation (NOP), Timestamps
       TCP Option - No-Operation (NOP)
           Kind: No-Operation (1)
       TCP Option - No-Operation (NOP)
           Kind: No-Operation (1)
       TCP Option - Timestamps
           Kind: Time Stamp Option (8)
           Length: 10
           Timestamp value: 791171842: TSval 791171842, TSecr 1774131279
           Timestamp echo reply: 1774131279
    [Timestamps]
       [Time since first frame in this TCP stream: 0.154220000 seconds]
        [Time since previous frame in this TCP stream: 0.000670000 seconds]
    [SEQ/ACK analysis]
       [iRTT: 0.153550000 seconds]
       [Bytes in flight: 478]
        [Bytes sent since last PSH flag: 478]
   TCP payload (478 bytes)
Hypertext Transfer Protocol
   GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
        [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
   Connection: keep-alive\r\n
   Upgrade-Insecure-Requests: 1\r\n
   User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML,
like Gecko) Chrome/107.0.0.0 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\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
    [HTTP request 1/2]
    [Response in frame: 15]
    [Next request in frame: 17]
       Time
                                                         Destination
                                                                               Protocol
No.
                                   Source
Length Info
     15 2022/313 11:56:41.350918
                                   128.119.245.12
                                                         192.168.1.7
                                                                               HTTP
                                                                                        552
HTTP/1.1 200 OK (text/html)
Frame 15: 552 bytes on wire (4416 bits), 552 bytes captured (4416 bits) on interface en0, id
```

a

```
Section number: 1
   Interface id: 0 (en0)
       Interface name: en0
       Interface description: Wi-Fi
   Encapsulation type: Ethernet (1)
   Arrival Time: Nov 9, 2022 11:56:41.350918000 EET
   [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1667987801.350918000 seconds
    [Time delta from previous captured frame: 0.000001000 seconds]
    [Time delta from previous displayed frame: 0.136863000 seconds]
    [Time since reference or first frame: 2.341237000 seconds]
   Frame Number: 15
   Frame Length: 552 bytes (4416 bits)
   Capture Length: 552 bytes (4416 bits)
    [Frame is marked: False]
    [Frame is ignored: False]
    [Protocols in frame: eth:ethertype:ip:tcp:http:data-text-lines]
    [Coloring Rule Name: HTTP]
    [Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: zte_b4:e2:25 (24:d3:f2:b4:e2:25), Dst: Apple_24:87:4e (50:ed:3c:24:87:4e)
   Destination: Apple_24:87:4e (50:ed:3c:24:87:4e)
       Address: Apple_24:87:4e (50:ed:3c:24:87:4e)
       .... ..0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Source: zte b4:e2:25 (24:d3:f2:b4:e2:25)
       Address: zte_b4:e2:25 (24:d3:f2:b4:e2:25)
       .... ..0. .... (factory default)
       .... = IG bit: Individual address (unicast)
   Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.7
   0100 .... = Version: 4
    \dots 0101 = Header Length: 20 bytes (5)
   Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
       0000 00.. = Differentiated Services Codepoint: Default (0)
        .... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
   Total Length: 538
   Identification: 0x5eb4 (24244)
   010. .... = Flags: 0x2, Don't fragment
       0... = Reserved bit: Not set
       .1.. .... = Don't fragment: Set
       ..0. .... = More fragments: Not set
    ...0 0000 0000 0000 = Fragment Offset: 0
   Time to Live: 46
   Protocol: TCP (6)
   Header Checksum: 0xb4f6 [validation disabled]
   [Header checksum status: Unverified]
   Source Address: 128.119.245.12
   Destination Address: 192.168.1.7
Transmission Control Protocol, Src Port: 80, Dst Port: 65506, Seq: 1, Ack: 479, Len: 486
   Source Port: 80
   Destination Port: 65506
    [Stream index: 1]
    [Conversation completeness: Incomplete, DATA (15)]
    [TCP Segment Len: 486]
   Sequence Number: 1 (relative sequence number)
   Sequence Number (raw): 2143700587
   [Next Sequence Number: 487 (relative sequence number)]
Acknowledgment Number: 479 (relative ack number)
   Acknowledgment number (raw): 3033946644
   1000 .... = Header Length: 32 bytes (8)
   Flags: 0x018 (PSH, ACK)
       000. .... = Reserved: Not set
       ...0 .... = Accurate ECN: Not set
        .... 0... = Congestion Window Reduced: Not set
        .... .0.. .... = ECN-Echo: Not set
```

.... ..0. = Urgent: Not set

```
.... = Acknowledgment: Set
        .... 1... = Push: Set
        .... .0.. = Reset: Not set
        .... .... ..0. = Syn: Not set
        \dots Not set
        [TCP Flags: ·····AP···]
   Window: 235
    [Calculated window size: 30080]
    [Window size scaling factor: 128]
    Checksum: 0xcaf1 [unverified]
    [Checksum Status: Unverified]
   Urgent Pointer: 0
    Options: (12 bytes), No-Operation (NOP), No-Operation (NOP), Timestamps
        TCP Option - No-Operation (NOP)
           Kind: No-Operation (1)
        TCP Option - No-Operation (NOP)
           Kind: No-Operation (1)
        TCP Option - Timestamps
           Kind: Time Stamp Option (8)
           Length: 10
           Timestamp value: 1774131417: TSval 1774131417, TSecr 791171842
            Timestamp echo reply: 791171842
    [Timestamps]
        [Time since first frame in this TCP stream: 0.291083000 seconds]
        [Time since previous frame in this TCP stream: 0.000001000 seconds]
    [SEQ/ACK analysis]
        [iRTT: 0.153550000 seconds]
        [Bytes in flight: 486]
        [Bytes sent since last PSH flag: 486]
    TCP payload (486 bytes)
Hypertext Transfer Protocol
   HTTP/1.1 200 OK\r\n
        [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
            [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
    Date: Wed, 09 Nov 2022 09:56:41 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.30 mod_perl/2.0.11 Perl/
v5.16.3\r\n
    Last-Modified: Wed, 09 Nov 2022 06:59:01 \text{ GMT}\r\n
    ETag: "80-5ed043103b344"\r\n
    Accept-Ranges: bytes\r\n
   Content-Length: 128\r\n
        [Content length: 128]
    Keep-Alive: timeout=5, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=UTF-8\r\n
    \r\n
    [HTTP response 1/2]
    [Time since request: 0.136863000 seconds]
    [Request in frame: 13]
    [Next request in frame: 17]
    [Next response in frame: 18]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
    File Data: 128 bytes
Line-based text data: text/html (4 lines)
    <html>\n
    Congratulations. You've downloaded the file \n
   http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html!\n
    </html>\n
```