```
Time
                                                            Destination
No.
                                      Source
                                                                                  Length Protocol
Info
                                      10.12.92.76
     39 2023-09-22 14:05:14.358687
                                                            128.119.245.12
                                                                                  558
                                                                                         \mathsf{HTTP}
GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
Frame 39: 558 bytes on wire (4464 bits), 558 bytes captured (4464 bits) on interface en0, id 0
    Section number: 1
    Interface id: 0 (en0)
        Interface name: en0
        Interface description: Wi-Fi
    Encapsulation type: Ethernet (1)
    Arrival Time: Sep 22, 2023 14:05:14.358687000 MDT
    [Time shift for this packet: 0.000000000 seconds]
    Epoch Time: 1695413114.358687000 seconds
    [Time delta from previous captured frame: 0.000113000 seconds]
    [Time delta from previous displayed frame: 0.000000000 seconds]
    [Time since reference or first frame: 5.823968000 seconds]
    Frame Number: 39
    Frame Length: 558 bytes (4464 bits)
    Capture Length: 558 bytes (4464 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_8d:db:36 (f4:d4:88:8d:db:36), Dst: Cisco_80:9b:df (6c:8b:d3:80:9b:df)
    Destination: Cisco_80:9b:df (6c:8b:d3:80:9b:df)
        Address: Cisco_80:9b:df (6c:8b:d3:80:9b:df)
        .... ..0. .... = LG bit: Globally unique address (factory default)
        .... ...0 .... = IG bit: Individual address (unicast)
    Source: Apple 8d:db:36 (f4:d4:88:8d:db:36)
        Address: Apple_8d:db:36 (f4:d4:88:8d:db:36)
        .... ..0. .... = LG bit: Globally unique address (factory default)
        .... ...0 .... = IG bit: Individual address (unicast)
    Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 10.12.92.76, Dst: 128.119.245.12
    0100 .... = Version: 4
    .... 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: 544
    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: 0x5cfc [validation disabled]
    [Header checksum status: Unverified]
    Source Address: 10.12.92.76
    Destination Address: 128.119.245.12
Transmission Control Protocol, Src Port: 57672, Dst Port: 80, Seq: 1, Ack: 1, Len: 504
    Source Port: 57672
    Destination Port: 80
    [Stream index: 9]
    [Conversation completeness: Incomplete, DATA (15)]
    [TCP Segment Len: 504]
    Sequence Number: 1
                        (relative sequence number)
    Sequence Number (raw): 364782832
```

(relative sequence number)]

[Next Sequence Number: 505

```
Acknowledgment Number: 1
                                (relative ack number)
    Acknowledgment number (raw): 3714818623
    0101 .... = Header Length: 20 bytes (5)
    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 Syn: Not set
        .... .... ...0 = Fin: Not set
        [TCP Flags: ·····AP···]
    Window: 4096
    [Calculated window size: 262144]
    [Window size scaling factor: 64]
    Checksum: 0x9eaa [unverified]
    [Checksum Status: Unverified]
    Urgent Pointer: 0
    [Timestamps]
        [Time since first frame in this TCP stream: 0.067714000 seconds]
        [Time since previous frame in this TCP stream: 0.000113000 seconds]
    [SEQ/ACK analysis]
        [iRTT: 0.067601000 seconds]
        [Bytes in flight: 504]
        [Bytes sent since last PSH flag: 504]
    TCP payload (504 bytes)
Hypertext Transfer Protocol
    GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n
        [Expert Info (Chat/Sequence): GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n]
            [GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n]
            [Severity level: Chat]
            [Group: Sequence]
        Request Method: GET
        Request URI: /wireshark-labs/INTRO-wireshark-file1.html
        Request Version: HTTP/1.1
    Host: gaia.cs.umass.edu\r\n
    If-None-Match: "51-605d8305477ae"\r\n
    Upgrade-Insecure-Requests: 1\r\n
    Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
    If-Modified-Since: Thu, 21 Sep 2023 05:59:02 GMT\r\n
    User-Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/605.1.15 (KHTML, like
Gecko) Version/16.6 Safari/605.1.15\r\n
    Accept-Language: en-CA, en-US; q=0.9, en; q=0.8\r\n
    Accept-Encoding: gzip, deflate\r\n
    Connection: keep-alive\r\n
    \r\setminus n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
    [HTTP request 1/1]
    [Response in frame: 41]
No.
        Time
                                      Source
                                                            Destination
                                                                                  Length Protocol
Info
     41 2023-09-22 14:05:14.430055
                                      128.119.245.12
                                                            10.12.92.76
                                                                                  492
                                                                                          HTTP
HTTP/1.1 200 OK (text/html)
Frame 41: 492 bytes on wire (3936 bits), 492 bytes captured (3936 bits) on interface en0, id 0
    Section number: 1
    Interface id: 0 (en0)
        Interface name: en0
        Interface description: Wi-Fi
```

Encapsulation type: Ethernet (1)

```
Arrival Time: Sep 22, 2023 14:05:14.430055000 MDT
    [Time shift for this packet: 0.000000000 seconds]
   Epoch Time: 1695413114.430055000 seconds
    [Time delta from previous captured frame: 0.000774000 seconds]
    [Time delta from previous displayed frame: 0.071368000 seconds]
    [Time since reference or first frame: 5.895336000 seconds]
   Frame Number: 41
   Frame Length: 492 bytes (3936 bits)
   Capture Length: 492 bytes (3936 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: Cisco_80:9b:df (6c:8b:d3:80:9b:df), Dst: Apple_8d:db:36 (f4:d4:88:8d:db:36)
   Destination: Apple_8d:db:36 (f4:d4:88:8d:db:36)
       Address: Apple_8d:db:36 (f4:d4:88:8d:db:36)
       .... ..0. .... = LG bit: Globally unique address (factory default)
        .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: Cisco_80:9b:df (6c:8b:d3:80:9b:df)
       Address: Cisco_80:9b:df (6c:8b:d3:80:9b:df)
       .... .0. .... = LG bit: Globally unique address (factory default)
       .... = IG bit: Individual address (unicast)
   Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 10.12.92.76
   0100 \dots = Version: 4
    .... 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: 478
   Identification: 0x072a (1834)
   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: 32
   Protocol: TCP (6)
   Header Checksum: 0x7614 [validation disabled]
    [Header checksum status: Unverified]
   Source Address: 128.119.245.12
   Destination Address: 10.12.92.76
Transmission Control Protocol, Src Port: 80, Dst Port: 57672, Seq: 1, Ack: 505, Len: 438
   Source Port: 80
   Destination Port: 57672
    [Stream index: 9]
    [Conversation completeness: Incomplete, DATA (15)]
    [TCP Segment Len: 438]
   Sequence Number: 1
                        (relative sequence number)
   Sequence Number (raw): 3714818623
    [Next Sequence Number: 439
                               (relative sequence number)]
   Acknowledgment Number: 505
                                 (relative ack number)
   Acknowledgment number (raw): 364783336
   0101 .... = Header Length: 20 bytes (5)
   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 0 = Fin: Not set
        [TCP Flags: ······AP···]
    Window: 237
    [Calculated window size: 30336]
    [Window size scaling factor: 128]
    Checksum: 0xbcfd [unverified]
    [Checksum Status: Unverified]
    Urgent Pointer: 0
    [Timestamps]
        [Time since first frame in this TCP stream: 0.139082000 seconds]
        [Time since previous frame in this TCP stream: 0.000774000 seconds]
    [SEQ/ACK analysis]
        [iRTT: 0.067601000 seconds]
        [Bytes in flight: 438]
        [Bytes sent since last PSH flag: 438]
    TCP payload (438 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: Fri, 22 Sep 2023 20:05:14 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
    Last-Modified: Fri, 22 Sep 2023 05:59:01 GMT\r\n
    ETag: "51-605ec4e276cfa"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 81\r\n
        [Content length: 81]
    Keep-Alive: timeout=5, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=UTF-8\r\n
    \r\setminus n
    [HTTP response 1/1]
    [Time since request: 0.071368000 seconds]
    [Request in frame: 39]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
    File Data: 81 bytes
Line-based text data: text/html (3 lines)
    <html>\n
    Congratulations! You've downloaded the first Wireshark lab file!\n
    </html>\n
```