```
Protocol Length Info
                              Time
                                                      Source
                                                                                         Destination
PART 1 No.
                          40 1.710261
                                                                                                                            HTTP
                                                                                                                                                     GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
                                                      10.204.51.30
                                                                                         128.119.245.12
                                                                                                                                          492
                  Frame 40: 492 bytes on wire (3936 bits), 492 bytes captured (3936 bits) on interface 0
                 Ethernet II, Src: IntelCor_60:1e:36 (70:1c:e7:60:1e:36), Dst: ArubaNet_01:5d:d0 (00:1a:1e:01:5d:d0)
                                                                                                                                                                                                  Browser Running
                  Internet Protocol Version 4, Crc: 10.204.51.30, Ost: 128.119.245.12

Transmission Control Protocol, Src Port: 65432, Dst Port, 80, Seq: 1, Ack: 1, Len: 438
                 Hypertext Transfer Protocol
                        GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
                        Host: gaia.cs.umass.edu\r\n
                        Upgrade-Insecure-Requests: 1\r\n
                                                                                           3
                                                                                                   Server IP
                        User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/69.0.3497.100 Safari/537.36\r\n
                        Accept-Encoding: gzip, deflate\r\r
                                                                                                              Languages Accepted
                       Accept-Language: en-GB,en-US;q=0.9,en;q=0.8\r\n
                        [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
                         [HTTP request 1/1]
                        [Response in frame: 42]
                  No.
                                 Time
                                                              Source
                                                                                                        Destination
                                                                                                                                                   Protocol Length Info
                            42 1.747390
                                                              128.119.245.12
                                                                                                        10.204.51.30
                                                                                                                                                                                HTTP/1.1 200 OK (text/html)
                                                                                                                                                  HTTP
                                                                                                                                                                    540
                  Frame 42: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface 0 \,
                  Ethernet II, Src: ArubaNet_01:5d:d0 (00:1a:1e:01:5d:d0), Dst: IntelCor_60:1e:36 (70:1c:e7:60:1e:36)
                  Internet Protocol Version 4, Src: 128.119.245.12, Dst: 10.204.51.30
                  Transmission Control Protocol, Src Port: 80, Dst Port: 65432, Seq: 1, Ack: 439, Len: 486
                  Hypertext Transfer Protocol

    Return Status

                      HTTP/1.1 200 OK)r\n 4
                      1 Date: Tue, 02 Oct 2018 17:36:27 GMT\r\n
      Server
                          Server: <u>Apache/2.4.6 (CentOS) OpenSSL/1.0.2</u>k-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
   Running Cast-Modified: Tue, 02 Oct 2018 05:59:02 GMT\r\n
                          ETag: "80-5//389e5a7acb"\r\n
                                                                                                                     5
                          Accept-Ranges: bytes\r\n
                          Content-Length: 128\r\n 6
                                                                                                                                   Last-Modified
                          Keep-Alive: timeout=5, max=100\r\n
                          Connection: Keep-Alive\r\n
                          Content-Type: text/html; charset=UTF-8\r\n
                                                                                                   Content Length
                          [HTTP response 1/1]
                           [Time since request: 0.037129000 seconds]
                          [Request in frame: 40]
                          File Data: 128 bytes
                  Line-based text data: text/html (4 lines)
        7. No, I do not see any headers within the data that are not listed.
                                     ÿÿ ∥ ±0o?àV∥\ \
                                                                    0Áaëí [t06#] E N S €[ À"[fÀ"[h]- ¡ :,P00 [ []public # [0 ] [ 0]0[[]+[[]]]] [
                                                                                                                                                                  PART 2 Host: gaia.cs.umass.edu
                  User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.0.2) Gecko/20021120 Netscape/7.01
Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8,video/x-mng,image/png,image/jpeg,image/gif;q=0.2,text/css,*/*;q=0.1
                 Accept-Language: en-us, en;q=0.50
Accept-Language: en-us, en;q=0.50
Accept-Encoding: gzip, deflate, compress;q=0.9
Accept-Charset: ISO-8859-1, utf-8;q=0.66, *;q=0.66

**There is no IF-MODIFIED-SINCE in this initial GET

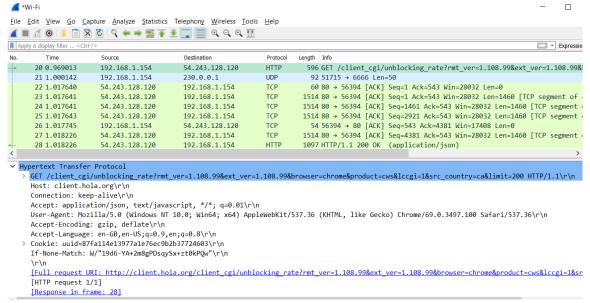
Keep-Alive: 300

**There is no IF-MODIFIED-SINCE in this initial GET

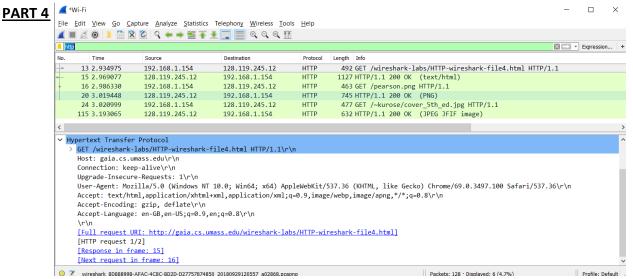
**Recomparison of the complete of the compression of the complete of the com
                 Connection: keep-alive
                                       €wõ♠À"[f P[-j³ú^[&P]] X• HTTP/1.1 200 OK
                 Date: Tue, 23 Sep 2003 05:35:00 GMT
Server: Apache/2.0.40 (Red Hat Linux)
Last-Modified: Tue, 23 Sep 2003 05:35:00 GMT
                  ETag: "1bfef-173-8f4ae900"
Accept-Ranges: bytes
                 Content-Length: 371
Keep-Alive: timeout=10, max=100
                  Connection: Keep-Alive
                                                                                    9 Text from response to initial GET
                  Content-Type: text/html; charset=ISO-8859-1
                 Contml>Congratulations again! Now you've downloaded the file lab2-2.html. <br>This file's last modification date will not change. Thus if you download timest: gaia.cs.umass.edu
                 Host: gala.Cs.umass.edu
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.0.2) Gecko/20021120 Netscape/7.01
Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8,video/x-mng,image/png,image/jpeg,image/gif;q=0.2,text/css,*/*;q=0.1
Accept-Language: en-us, en;q=0.50
Accept-Encoding: gzip, deflate, compress;q=0.9
Accept-Charset: ISO-8859-1, utf-8;q=0.66
*;q=0.66
                  Keep-Alive: 300
               If-Modified-Since: Tue, 23 Sep 2003 05:35:00 GMT 10 Next GET has IF-MODIFIED-SINCE
                  Cache-Control: max-age=0
                 ·θογφκ ὁ ὁ [to6# [%ú] ε ἀθ]@ 7].φεκό•Αὰ"Η ΡΗ-j9.ú"[ΕΡΡ].%7 HTTP/1.1 304 Not Modified 11 Has not been modified, so text is not returned Date: Tue, 23 Sep 2003 05:35:53 GMT
                  Server: Apache/2.0.40 (Red Hat Linux)
Connection: Keep-Alive
                  Keep-Alive: timeout=10, max=99
                  ETag: "1bfef 173 8f4ae9
```

DO'S BOO#DE (d@ €] À"Bf€wŏ♠]- Pú®Ej9ëPB÷†7- 00?±Ü] \ \ ØÁaĕî BtO6#]E N e €] À"BÂ"BÅ"BL" ¡:9M00 l Mpublic # 0« 0 1 00000+0000 l 0 0 0 0

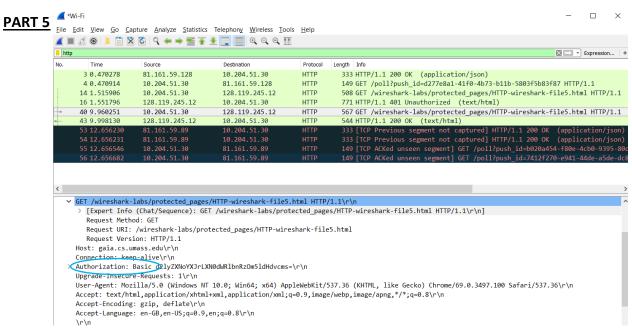
PART 3



- 12. There is 1 GET message numbered Packet 20.
- 13. Packet 23.
- 14. 200 (OK).
- 15. 4 (Packets 23, 24, 25, 27).



- 16. There were 3 GET messages all sent to the IP address 128.119.245.12.
- 17. The two images were downloaded serially, seen by the .png packet request and response being packets 16 and 20, whereas the .jpg pack request and response being packets 24 and 115. Since the response to the .png request came before the .jpg request, I can see that they were done serially.



- 18. Packet 14 contains the first GET and packet 16 contains the response, which is "401 Unauthorized."
- 19. The following GET includes Authorization: Basic.