Lab 2

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Exercise 2.

Q1. We have two answer from server.
    (1) Status code: 200 phrase: OK
    (2) Status code: 404 phrase: Not Found

Q2.

Last modified date of the file is Tue, 23 Sep 2003. It contains a Date header as well. Time appear in Date header and Last-Modified is different. Because Last-modified field reminds the data which document last modified while Date field shows the time when original server information send out.

Q3. Connection is persistent. We can see "Keep-Alive" in connection field.
Q4. 73 bytes.
Q5. Content type is text/html. Here is the data:

Exercise 3

Q1. No.

```
∨ Hypertext Transfer Protocol
    ∨ GET /ethereal-labs/lab2-2.html HTTP/1.1\r\n
        ⟩ [Expert Info (Chat/Sequence): GET /ethereal-labs/lab2-2.html HTTP/1.1\r\n]
            Request Method: GET
            Request URI: /ethereal-labs/lab2-2.html
            Request Version: HTTP/1.1
        Host: gaia.cs.umass.edu\r\n
        User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.0.2) Gecko/20021120 Ne
        Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=0.8
        Accept-Language: en-us, en;q=0.50\r\n
        Accept-Encoding: gzip, deflate, compress;q=0.9\r\n
        Accept-Charset: ISO-8859-1, utf-8;q=0.66, *;q=0.66\r\n
        Keep-Alive: 300\r\n
        Connection: keep-alive\r\n
        \r\n
        [Full request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-2.html]
        [HTTP request 1/2]
        [Response in frame: 10]
        [Next request in frame: 14]
```

Q2. Corresponding responding is this:

```
∨ Hypertext Transfer Protocol
    ∨ HTTP/1.1 200 OK\r\n
        ⟩ [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
            Response Version: HTTP/1.1
            Status Code: 200
            [Status Code Description: OK]
            Response Phrase: OK
        Date: Tue, 23 Sep 2003 05:35:50 GMT\r\n
        Server: Apache/2.0.40 (Red Hat Linux)\r\n
        Last-Modified: Tue, 23 Sep 2003 05:35:00 GMT\r\n
        ETag: "1bfef-173-8f4ae900"\r\n
        Accept-Ranges: bytes\r\n
    ⟩ Content-Length: 371\r\n
        Keep-Alive: timeout=10, max=100\r\n
        Connection: Keep-Alive\r\n
        Content-Type: text/html; charset=ISO-8859-1\r\n
        \r\n
        [HTTP response 1/2]
        [Time since request: 0.026634000 seconds]
        [Request in frame: 8]
        [Next request in frame: 14]
        [Next response in frame: 15]
        [Request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-2.html]
        File Data: 371 bytes
    ⟩ Line-based text data: text/html (10 lines)
```

We can find out Last-Modified is Tue, 23 Sep 2003.

Q3. Yes.
Date is Tue, 23 Sep 2003

```
˅  Hypertext Transfer Protocol
    ˅  GET /ethereal-labs/lab2-2.html HTTP/1.1\r\n
        ˅  [Expert Info (Chat/Sequence): GET /ethereal-labs/lab2-2.html HTTP/1.1\r\n]
                [GET /ethereal-labs/lab2-2.html HTTP/1.1\r\n]
                [Severity level: Chat]
                [Group: Sequence]
            Request Method: GET
            Request URI: /ethereal-labs/lab2-2.html
            Request Version: HTTP/1.1
        Host: gaia.cs.umass.edu\r\n
        User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.0.2) Gecko/20021120
        Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,text/plain;q=(
        Accept-Language: en-us, en;q=0.50\r\n
        Accept-Encoding: gzip, deflate, compress;q=0.9\r\n
        Accept-Charset: ISO-8859-1, utf-8;q=0.66, *;q=0.66\r\n
        Keep-Alive: 300\r\n
        Connection: keep-alive\r\n
        If-Modified-Since: Tue, 23 Sep 2003 05:35:00 GMT\r\n
        If-None-Match: "1bfef-173-8f4ae900"\r\n
        Cache-Control: max-age=0\r\n
        \r\n
        [Full request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-2.html]
        [HTTP request 2/2]
        [Prev request in frame: 8]
        [Response in frame: 15]
```

Q4. The corresponding response is this:

```
✓  Hypertext Transfer Protocol
    ˅  HTTP/1.1 304 Not Modified\r\n
        ˃  [Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]
            Response Version: HTTP/1.1
            Status Code: 304
            [Status Code Description: Not Modified]
            Response Phrase: Not Modified
        Date: Tue, 23 Sep 2003 05:35:53 GMT\r\n
        Server: Apache/2.0.40 (Red Hat Linux)\r\n
        Connection: Keep-Alive\r\n
        Keep-Alive: timeout=10, max=99\r\n
        ETag: "1bfef-173-8f4ae900"\r\n
        \r\n
        [HTTP response 2/2]
        [Time since request: 0.022826000 seconds]
        [Prev request in frame: 8]
        [Prev response in frame: 10]
        [Request in frame: 14]
        [Request URI: http://gaia.cs.umass.edu/ethereal-labs/lab2-2.html]
```

There is no data which can indicate the last time date request file was modified.

Q5. ETag in 2nd response is "1bfef-173-8fae900" (shows in previous graph). The value of Etag does not change. Because response message is exactly the same, server send out send out same Etag and 304 status code. That can let client know response data will be the same to previous one. So client will read data from local but not server.