**Exercise 3:**

**Question 1: What is the status code and phrase returned from the server to the client browser?**

* 200, OK

**Question 2: When was the HTML file that the browser is retrieving last modified at the server? Does the response also contain a DATE header? How are these two fields different?**

* Last-Modified: Tue, 23 Sep 2003 05:29:00 GMT
* Yes, it does
* Date header field indicates when the message was sent, Last-Modified is the last modification time of the resource on the source server

**Question 3: Is the connection established between the browser and the server persistent or non-persistent? How can you infer this?**

* is persistent because Connection: Keep-Alive

**Question 4: How many bytes of content are being returned to the browser?**

* 73 bytes

**Question 5: What is the data contained inside the HTTP response packet?**

* is the text data of html --“Congratulations. You've downloaded the file lab2-1.html!\n”

**Exercise 4:**

**Question 1: Inspect the contents of the first HTTP GET request from the browser to the server. Do you see an “IF-MODIFIED-SINCE” line in the HTTP GET?**

* Can not

**Question 2: Does the response indicate the last time that the requested file was modified?**

* No, nothing

**Question 3: Now inspect the contents of the second HTTP GET request from the browser to the server. Do you see an “IF-MODIFIED-SINCE:” and “IF-NONE-MATCH” lines in the HTTP GET? If so, what information is contained in these header lines?**

* If-Modified-Since: indicates that the server is asked if the resource has been modified since a certain point in time. This point in time is usually the time returned by Last-Modified on the server side.
* If-None-Match: It asks the server if a tag string value does not match, and the tag value is usually the latest string identifier returned by the server's Etag.

**Question 4: What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.**

* 304 Not Modified
* The request resource is the same as the local cache, unmodified. No page content is returned but only an HTTP Header, thus greatly reducing bandwidth consumption

**Question 5: What is the value of the ETag field in the 2nd response message and how it is used? Has this value changed since the 1 stresponse message was received?**

* ETag: "1bfef-173-8f4ae900"
* ETag can quickly determine if a resource has changed
* No changes have been made

**Exercise 5:**

**Server:**

电脑屏幕的照片上有文字

描述已自动生成

**Client:**

图片包含 文本

描述已自动生成