**第二次作业**

**P1.**

答：

1. With non-persistent connections between browser and origin server, it is possible for a single TCP segment to carry two distinct HTTP request messages.

**【F】**

1. A user requests a Web page that consists of some text and three images. For this page, the client will send one request message and receive four response messages.

**【F】**

1. Two distinct Web pages ( for example, [www.mit.edu/research.html](http://www.mit.edu/research.html) and [www. mit.Edu/ students. html](http://www.mit.Edu/%20students.%20html)) can be sent over the same persistent connection.

**【T】**

1. The Date: header in the HTTP response message indicates when the object in the response was last modified.

**【F】**

**P3.** Read RFC 959 for FTP. List all of the client commands that are supported by the RFC.

答：

1. **Access control commands (8):**

USER, PASS, ACT, CWD, CDUP, SMNT, RELN, QUIT

1. **Transfer parameter commands (5):**

PORT, PASV, TYPE, STRU, MODE

1. **Service commands (20):**

RETR, STOR, STOU, APPE, ALLO, REST, RNFR, RNTO, ABOR, DELE, RMD, MRD, PWD, LIST, NLST, SITE, SYST, STAT, HELP, NOOP

**P6.** Obtain the HTTP/1.1 specification (RFC 2616). Answer the following questions:

答：

1. What encryption services are provided by HTTP?

HTTP **不提供任何的加密服务** (encryption services)

1. Explain the mechanism used for signaling between the client and server to indicate that a persistent connection is being closed. Can the client, the server, or both signal the close of a connection?

RFC的8.1.2.1节指出，客户机或服务器可以向对方表明它将关闭持久性连接。它通过在HTTP请求或者回复的Connection-header字段中加入**connection-token "close "** 达成此目的。

P11. What is the difference between MAIL FROM: in SMTP and From: in the mail message itself?

答：

1. **MAIL FROM: in SMTP** 是 SMTP 客户端向 SMTP 服务器发出的信息，用于识别邮件的发件人；
2. **FROM in the mail** 本身不是 SMTP 信息，而只是邮件信息正文中的一行。

P15. Consider accessing your e-mail with POP3

答：

1. Suppose you have configured your POP mail client to operate in the download-and-delete mode. Complete the following transaction:

**C:** list

**S:** 1 498

**S:** 2 912

**S:** .

**C:** retr 1

**S:** blah blah …

**S:** …………blah

**S:** .

***C:*** *dele 1*

***C:*** *retr 2*

***S:*** *blah blah …*

***S:*** *…………blah*

***S:*** *.*

***C:*** *dele 2*

***C:*** *quit*

***S:*** *+OK POP3 server signing off*

1. Suppose you have configured your POP mail client to operate in the  
   download-and-keep mode. Complete the following transaction:  
   **C:** list  
   **S:** 1 498  
   **S:** 2 912  
   **S:** .  
   **C:** retr 1  
   **S:** blah blah ...  
   **S:** ..........blah  
   **S:** .

***C:*** *retr 2****S:*** *blah blah …****S:*** *………..blah****S:*** *.****C:*** *quit****S:*** *+OK POP3 server signing off*

1. Suppose you have configured your POP mail client to operate in the download-and-keep mode. Complete the following transaction:  
   ***C:*** *list****S:*** *1 498****S:*** *2 912****S:*** *.****C:*** *retr 1****S:*** *blah …..****S:*** *….blah****S:*** *.****C:*** *retr 2****S:*** *blah blah …****S:*** *………..blah****S:*** *.****C:*** *quit****S:*** *+OK POP3 server signing off*