CS3093D Networks Laboratory - Assignment 6

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Instructions

- Usernames are loaded from "logincred.txt"

- Code can be compiled using the following instructions
  gcc -lpthread FTAPClient/FTAPClient.c -o FTAPClient/FTAPClient
  gcc -lpthread FTAPServer/FTAPServer.c -o FTAPServer/FTAPServer

- FTAPServer listens on port 4035 and FTAPClient can connect to it

- "START" is used to initiate connection to server

- "USERN username" provides the username for the connection

- "PASSWD password" provides the password for the connection

- "GetFile filename" can be used to retrieve file from the server, remaining time to download is displayed

- "StoreFile filename" is used to upload file to the server, remaining time to upload is displayed.

- "ListDir" is used to list the files available in server

- "CreateFile filename" can be used to create an empty file in the server

- The status codes for the commands are given below

Status codes

Status Code	Reason
200	OK Connection is set up
300	Correct Username; Need password
301	Incorrect Username
302	Missing username
305	User Authenticated with password
310	Incorrect password
333	Authentication required
332	Username already provided
493	GoodBye
505	Command not supported
600	Ready for File
601	FileInfo
602	FileData
603	FileEnd
604	File create success
610	Invalid file
611	File already exists
700	ListDir response
710	ListDir error

Screenshots

Figure 1: Testing USERN, PASSWD

Figure 2: Testing CreateFile

Figure 3: Testing GetFile


```
cd FTAPServer && ./FTAPServer

anandu@inspiron [23:25:20] [~/Desktop/networkslab/assignment_06] [main *]
→ % cd FTAPServer && ./FTAPServer
Waiting for connections
Received client
User 'cs3093d' Authenticated
File file.bin', already exists
Uploading 'sintel.mkv' complete
File sintel.mkv', already exists
Sending directory listing
```

```
cd FTAPClient && ./FTAPClient

anandu@inspiron [23:25:20] [~/Desktop/networkslab/assignment_06] [main *]
→ % cd FTAPClient && ./FTAPClient
START
status_code = 200
OK Connection is setup
USERN cs3093d
status_code = 300
Correct Username; Need password
PASSWD networkL@b
status_code = 305
User Authenticated with password
Welcome, cs3093d!
StoreFile asdf.txt
Invalid filename
StoreFile file.bin
status_code = 611
File file.bin', already exists
StoreFile sintel.mkv
Transmission rate = 5830 kbps 0 s remaining
Upload sintel.mkv complete
StoreFile sintel.mkv
status_code = 611
File sintel.mkv', already exists
ListDir
status_code = 700
large.ogv
FTAPServer.c
file.bin
FTAPServer
.gitignore
sintel.mkv
GetFile large.ogv
Transmission rate = 6120 kbps 4 s remaining
```

```
1:./FTAPClient*                                              12/03  23:26:50
```

Figure 4: Testing StoreFile


```
cd FTAPServer && ./FTAPServer

anandu@inspiron [00:09:33] [~/Desktop/networkslab/assignment_06] [main *]
→ % cd FTAPServer && ./FTAPServer
Waiting for connections
Received client
User 'cs3093d' Authenticated
Sending directory listing
```

```
cd FTAPClient && ./FTAPClient

anandu@inspiron [00:09:33] [~/Desktop/networkslab/assignment_06] [main *]
→ % cd FTAPClient && ./FTAPClient
START
status_code = 200
OK Connection is setup
USERN cs3093d
status_code = 300
Correct Username; Need password
PASSWD networkL@b
status_code = 305
User Authenticated with password
Welcome, cs3093d!
ListDir
status_code = 700
FTAPServer.c
FTAPServer
.gitignore
sintel.mkv
StoreFile large.ogv
Transmission rate = 6000 kbps 3 s remaining
```

```
1:./FTAPClient*                                              13/03  00:10:18
```
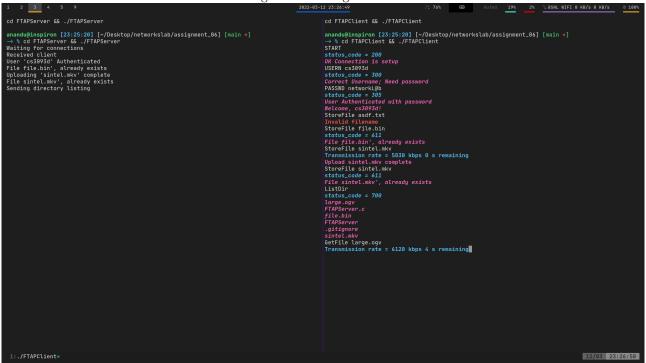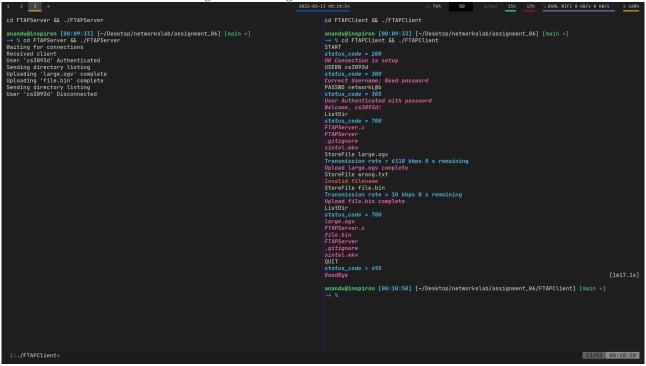
Figure 5: Testing ListDir and StoreFile error

Figure 6: Testing GetFile error