

**National Institute of Technology Calicut**  
**Department of Computer Science and Engineering**  
**Winter Semester 2020 – 2021**  
**CS3093D: Networks Laboratory**

**Experiment No. 6**

FTAP is a File Transfer Application Program that is used for moving files between local and remote file systems. The FTAPClient logs in to a FTAPServer using username and password. The username and password is stored for the users in a text file logincred.txt separated with commas. The username is sent to the server using the USERN command, and the password is sent using the PASSWD command. If the credentials provided by the FTAPClient is accepted by the FTAPServer, the FTAPServer will send a "Welcome, <User>!" message to the FTAPClient and the session will commence.

FTAPServer should listen on port 4035 for incoming connections from FTAPClient. FTAPServer and FTAPClient programs should reside in different folders, for e.g., /home/user/FirstName\_Roll/FTAPServer/FTAPServer.c and /home/user/ FirstName\_Roll /FTAPClient/FTAPClient.c

**FTAP should implement the following commands**

- 1) START: FTAPClient starts the connection
- 2) USERN: Sends user identification to FTAPServer
- 3) PASSWD: Sends password to FTAPServer in plaintext
- 4) CreateFile: Request to create an empty text file in the FTAPServer directory
- 5) ListDir: Sends a request to display the list of all files present in the FTAPServer Directory
- 6) StoreFile: Sends the file (can be text, image, audio, or video file) to FTAPServer (Display the time required for sending the file)
- 7) GetFile: Retrieves the specified file (can be text, image, audio, or video file) from FTAPServer (Display the time required for sending the file)
- 8) QUIT: Terminates a user if no file transfer in place.

**FTAPServer should display the following server return codes to FTAPClient at respective places:**

- |     |                                  |
|-----|----------------------------------|
| 200 | OK Connection is set up          |
| 300 | Correct Username; Need password  |
| 301 | Incorrect Username               |
| 305 | User Authenticated with password |
| 310 | Incorrect password               |
| 505 | Command not supported            |

**Command format:**

- 1) USERN <username>
- 2) PASSWD <password>
- 3) CreateFile <filename.txt
- 4) ListDir <no-parameters>
- 5) StoreFile <filename>
- 6) GetFile <filename>

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**Login contents of logincred.txt file**

stallings,network\$security

fourouzan,d@t@comm

cs3093d,networkL@b

admin,@ministr@tor

**Instructions to Students**

- **Folder Name: FirstName\_RollNo**
  - **Subfolders: FTAPServer, FTAPClient, and OUTPUT**
  - Files: logincred.txt and README file
- **FTAPServer**
  - FTAPServer.c and other files (image, text, and media files; the student is free to choose)
- **FTAPClient**
  - FTAPClient.c and other files (image, text, and media files; the student is free to choose)
- **Under OUTPUT folder, the Screenshot of the output should be legible and should contain all implementation of messages and server codes as indicated in the Question.**
- **Create a simple README file (text file) that should contain your implementation in brief. Write as bullet points. Evaluators should be able to execute your code after reading the README file**
- **Compress the entire *FirstName\_RollNo* folder that contains all the subfolders and files and upload in Eduserver**