

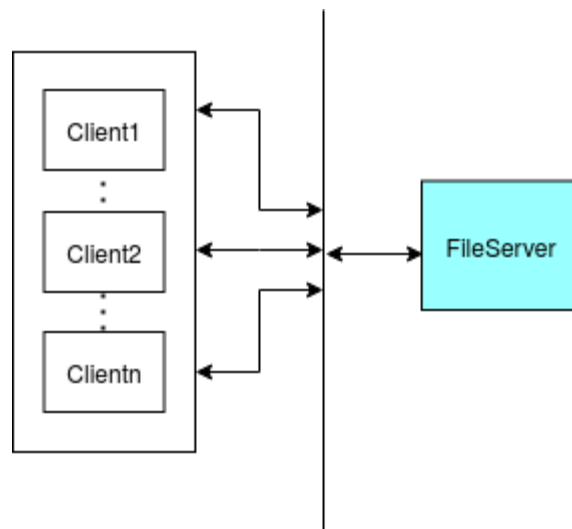
# Socket Programming

## 1. Part A

- a. Create a server (file server) program. It listens on a TCP socket. The server is meant to send specific file(s) (.txt/.png/.pdf) to its client depending on the file requested (file path).
- b. Create a client program which interacts with the file server on TCP. Client TCP connects to the file server to fetch a file given the file path in the server. Assume that a valid client knows the ip address, port number of the file server.

## 2. Part B

- a. Extend the file server program in **Part A** to serve multiple clients in parallel. i.e. if two different clients ask for a file, the server shall satisfy both the clients in parallel without making any client wait. Maximum number of clients to honor can be set at the server.



- b. Create one server program as per #a above and many instances of valid clients mentioned in Part A and check the working of parallel file download from the server. Check for all possible errors for which the server may give error message/error code to the client. E.g., file doesn't exist. Check the

situation when the server is busy serving other clients and one client has to wait for the server to start serving it after serving other clients.

## **Submission**

Add appropriate comments to your code in the programs to make it readable. Prepare a single zip file with name format **<assignment2\_roll no>.zip** including its source files and respective readme of your programs. Submit it to google classroom in the posted assignment section.

## **PLAGIARISM STATEMENT <Include it in your readme>**

I certify that this assignment/report is my own work, based on my personal study and/or research and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication. I also certify that this assignment/report has not previously been submitted for assessment in any other course, except where specific permission has been granted from all course instructors involved, or at any other time in this course, and that I have not copied in part or whole or otherwise plagiarized the work of other students and/or persons. I pledge to uphold the principles of honesty and responsibility at CSE@IITH. In addition, I understand my responsibility to report honor violations by other students if I become aware of it.

**Name of the student**

**Roll No**