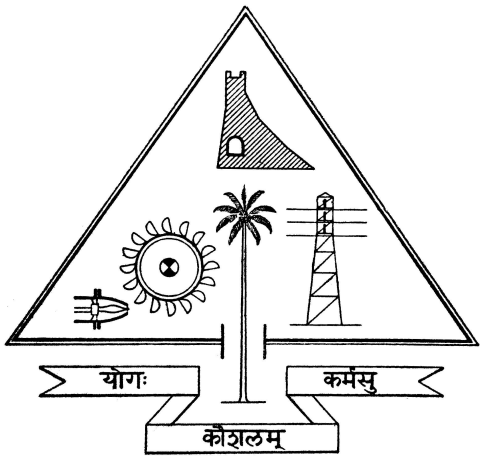

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Network Programming Lab

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Experiment 5

SMTP Server TCP

AIM

Implement Simple Mail Transfer Protocol.*

THEORY

SMTP was implemented using TCP protocol. TCP is a relatively simple and reliable protocol that enables a client to make a connection to a server and the two systems to communicate. In TCP, each entity knows that its communication payloads have been received.

The following points will help understand Server implementation :

- The server runs an infinite loop to keep accepting incoming requests.
- When a request comes, it assigns a new thread to handle the communication part.
- The server also stores the client name into a vector, to keep a track of connected devices. The vector stores the thread object corresponding to the current request. The helper class uses this vector to find the name of recipient to which message is to be delivered. As this vector holds all the streams, handler class can use it to successfully deliver messages to specific clients.
- Invoke the start() method.

Client Side Implementation:

- To send a message from any client, type the message, followed by a “#” and then the name of the recipient client. Please note that this implementation gives names as “client 0”, “client 1″….”client n” and so carefully names must be appended int the end. After that press Enter key.
- Once a message is sent, the handler for this client will receive the message and it will be delivered to the specified client.
- If any client sends a message to this client, the readMessage thread will automatically print the message on the console.
- Once a client is done with chatting, he can send a “logout” message without any recipient name so that the server would know that this client has logged off the system. It is recommended to send a logout message before closing the terminal for the client to avoid any errors.

HOW TO USE?

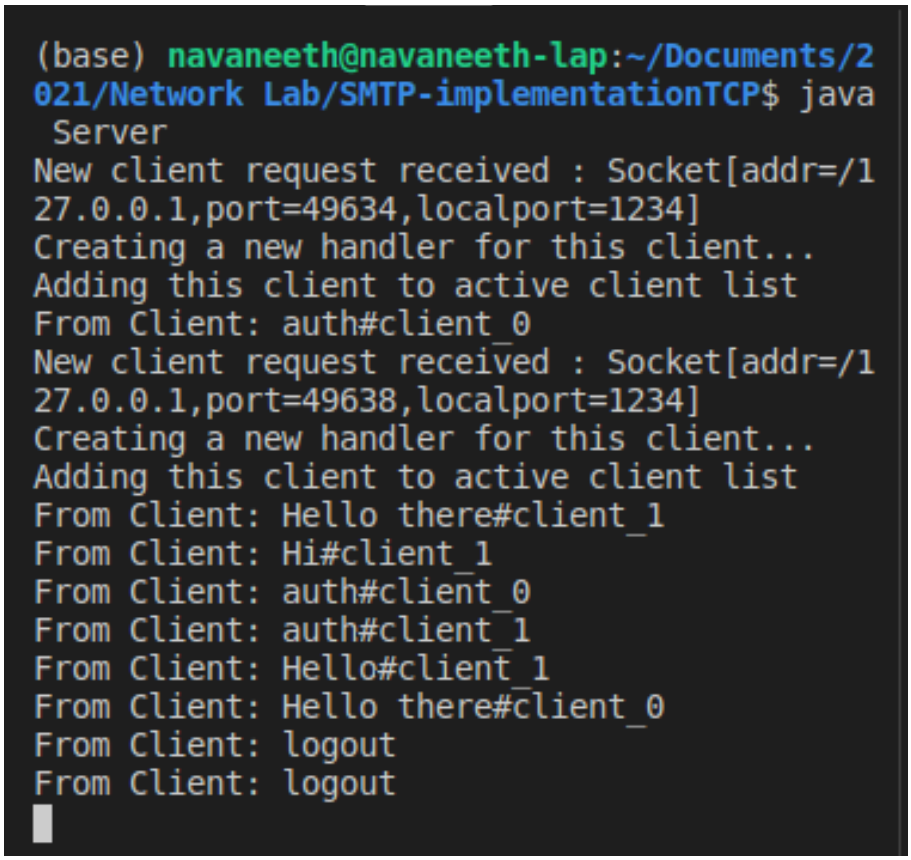
1. Navigate to the main directory containing the program.
2. Open terminal 1
3. Type `$ javac Server.java`
4. Enter `$ java Server`
5. Open a new terminal
6. Type `$ javac Cleint.java`
7. Enter `$ java Client`
8. Open more terminals and repeat the same for client
9. Type the input and test the output.

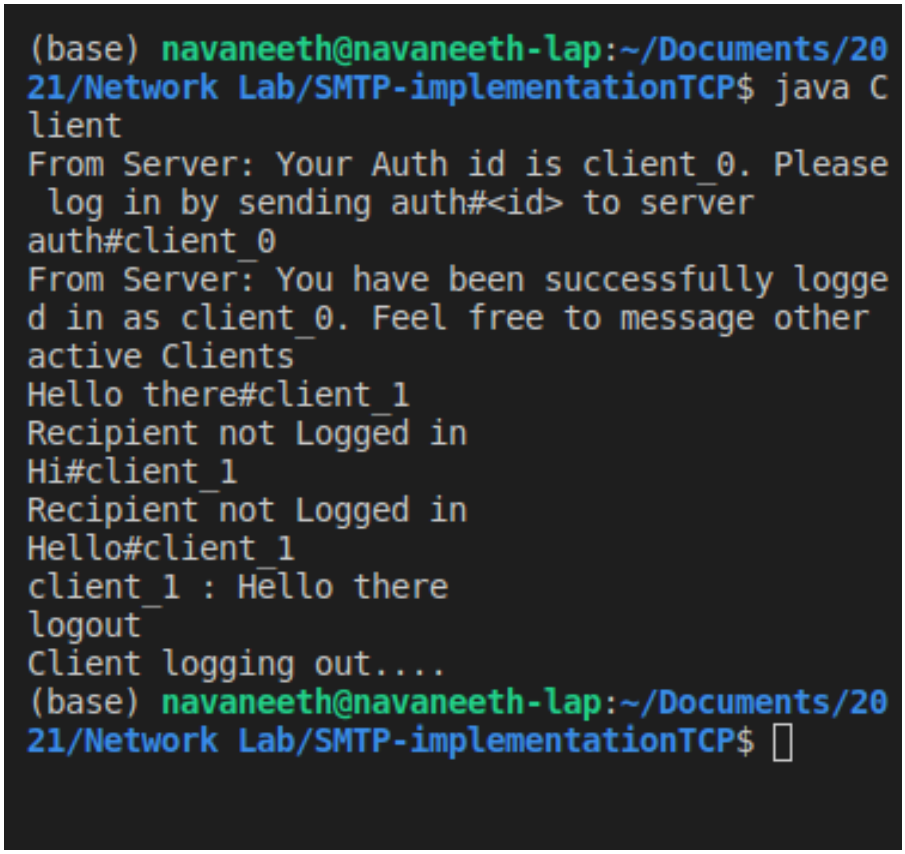
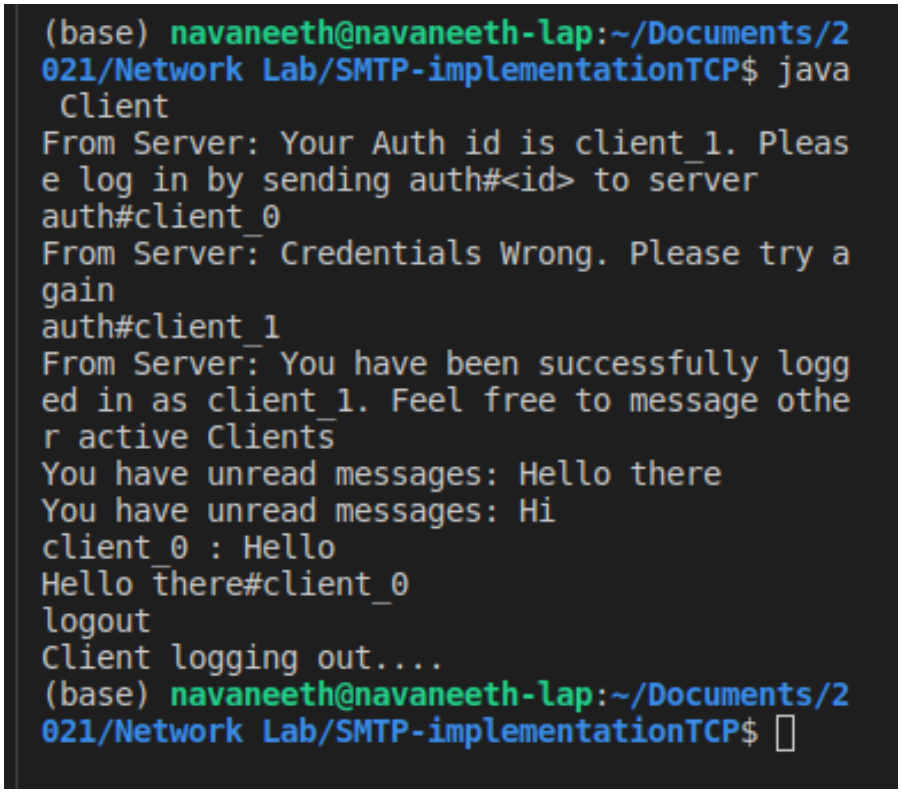
RESULT

Implemented Simple Mail Transfer Protocol.

P.T.O

Output Screenshots

TERMINAL 1 (Server)	

TERMINAL 2 (Client 1)	
TERMINAL 3 (Client 2)	

TERMINAL SNAPSHOT (Whole)