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Submitted by **Vivek Venu**

Roll No **61**

TCR18CS061

S6 CSE

Government Engineering College, Thrissur

CS334

NETWORK PROGRAMMING LAB

Experiment - 5

Aim

Implement Simple Mail Transfer Protocol

Theory

SMTP is an application layer protocol. The client who wants to send the mail opens a TCP connection to the SMTP server and then sends the mail across the connection. The SMTP server is always on listening mode. As soon as it listens for a TCP connection from any client, the SMTP process initiates a connection on that port (25). After successfully establishing the TCP connection the client process sends the mail instantly.

Mail is sent by a series of request and response messages between the client and a server. The message which is sent across consists of a header and the body. A null line is used to terminate the mail header. Everything which is after the null line is considered as the body of the message which is a sequence of ASCII characters. The message body contains the actual information read by the receipt.

The user agent at the server-side checks the mailboxes at a particular time of intervals. If any information is received it informs the user about the mail. When the user tries to read the mail it displays a list of mails with a short description of each mail in the mailbox. By selecting any of the mail users can view its contents on the terminal..

Running

Open 1 terminal for Server and 1 or more for Clients
Server should be set up first and after that Client.

Run Server application:

```
$javac Server.java  
$java Server
```

Run Client application

```
$javac Client.java  
$java Client
```

At first client should authorize its sender ID

After authorising, messages to corresponding client is entered in the format

message#recipient id

For logging out, send **logout**.

Screenshots

<pre>Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved. Try the new cross-platform PowerShell https://aka.ms/pscore6 PS X:\Labs\NPLab\ES> javac Server.java PS X:\Labs\NPLab\ES> java Server New client request received : Socket[addr=/127.0.0.1, port=60325, localport=1234] Creating a new handler for this client... Adding this client to active client list auth#1 auth#client 0 New client request received : Socket[addr=/127.0.0.1, port=60327, localport=1234] Creating a new handler for this client... Adding this client to active client list auth#client 1 hii#client 0 hello#client 1 bye#client 2 logout logout PS X:\Labs\NPLab\ES></pre>	<pre>Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved. Try the new cross-platform PowerShell https://aka.ms/pscore6 PS X:\Labs\NPLab\ES> javac Client.java PS X:\Labs\NPLab\ES> java Client Enter Sender ID 1 server : invalid ID Enter Sender ID client 0 server : valid ID client 1 : hii hello#client 1 bye#client 2 Server : invalid ID, message not sent logout logging out.... PS X:\Labs\NPLab\ES></pre>	<pre>Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved. Try the new cross-platform PowerShell https://aka.ms/pscore6 PS X:\Labs\NPLab\ES> javac Client.java PS X:\Labs\NPLab\ES> java Client Enter Sender ID client 1 server : valid ID hii#client 0 client 0 : hello logout logging out.... PS X:\Labs\NPLab\ES></pre>
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