

Government Engineering College, Thrissur

CS334 – Network Programming Lab

Documentation -

## Exp 5 – Simple Mail Transfer Protocol

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# Experiment 5

Implement Simple Mail Transfer Protocol.

## Executing program

- Code is provided in **Client.java** and **Server.java** along with this documentation. You can open the terminal in Linux (Ubuntu 20.04 tested). Then run the command

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

- Open a **new terminal** and then run. We can *run as many clients in parallel*.

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

- Server and Client will start their respective sockets and work on the same machine (IP 127.0.0.1, Port 5000).
- **Note: Server is fully automated. Client has to verify recipient email address before emailing (as per test case).**
- **Note: If client receive anytime even he is typing email, then message will be displayed in between two separators.**
- We can see output side-by-side in the console

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## Output / Screenshots

Server

Client 1  
*aaa@xyz.com*

Client 2  
*bbb@xyz.com*

<pre>hp@hp ~/Documents/S6/Network Lab/Exp5 &lt;master*&gt; \$ java Server Server socket created New client request received : Socket[addr=/127.0.0.1,port=43202,localport=1234] Creating a new handler for this client... Adding this client to active client list New client request received : Socket[addr=/127.0.0.1,port=43204,localport=1234] Creating a new handler for this client... Adding this client to active client list client 0 is now aaa@xyz.com client 1 is now bbb@xyz.com @bbb@xyz.com Hello#bbb@xyz.com @aaa@xyz.com Hi#aaa@xyz.com █</pre>	<pre>hp@hp ~/Documents/S6/Network Lab/Exp5 &lt;master*&gt; \$ java Client Client socket created Send your email id: aaa@xyz.com Enter recipient email id: bbb@xyz.com  ===== Message: Exists ===== Enter your message: Hello Enter recipient email id:  ===== Message: bbb@xyz.com : Hi ===== █</pre>	<pre>hp@hp ~/Documents/S6/Network Lab/Exp5 &lt;master*&gt; \$ java Client Client socket created Send your email id: bbb@xyz.com Enter recipient email id:  ===== Message: aaa@xyz.com : Hello ===== aaa@xyz.com  ===== Message: Exists ===== Enter your message: Hi Enter recipient email id: █</pre>
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### Explanation:

1. Client 1 connects to server
2. Client 2 connects to server
3. Client 1 sets his email id as [aaa@xyz.com](mailto:aaa@xyz.com)
4. Client 2 sets his email id as [bbb@xyz.com](mailto:bbb@xyz.com)
5. Client 1 checks whether [bbb@xyz.com](mailto:bbb@xyz.com) exists or not, and receives message from server.
6. Client 1 sends message *Hello* to [bbb@xyz.com](mailto:bbb@xyz.com)
7. During this time Client 2 hasn't typed recipient email address, but receives mail from [aaa@xyz.com](mailto:aaa@xyz.com). This message is separated by two lines.
8. Client 2 was prompted to set recipient email address before message came, that still works (in thread). Even though there is message in between prompted message and email, Client 2 can still enter recipient email address.
9. Client 2 sets recipient email as [aaa@xyz.com](mailto:aaa@xyz.com)
10. Client 2 sends message *Hi* to [aaa@xyz.com](mailto:aaa@xyz.com)

***All the messages are logged by server during communication.***