

AJAY S RAM

ROLL NO 3

S6 CSE

## EXPERIMENT 5 :

### IMPLEMENT SMTP SYSTEM

#### SMTP:

The Simple Mail Transfer Protocol (SMTP) is an internet standard communication protocol for electronic mail transmission. Mail servers and other message transfer agents use SMTP to send and receive mail messages. User-level email clients typically use SMTP only for sending messages to a mail server for relaying, and typically submit outgoing email to the mail server on port 587 or 465 per RFC 8314. For retrieving messages, IMAP and POP3 are standard, but proprietary servers also often implement proprietary protocols, e.g., Exchange ActiveSync.

**Note :** For authentication, server expects a **creds.txt** file in the directory of java file. The structure of file contents is

email id:password



```
creds.txt
1 bob@test.com:password
2 alice@test.com:wonderland
3
```

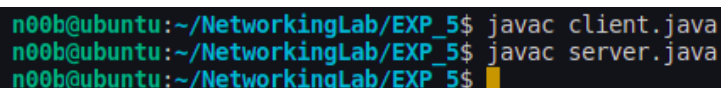
#### PROGRAM

Both client and server programs are written in Java.

1. Compile the java code :

*javac client.java*

*javac server.java*



```
n00b@ubuntu:~/NetworkingLab/EXP_5$ javac client.java
n00b@ubuntu:~/NetworkingLab/EXP_5$ javac server.java
n00b@ubuntu:~/NetworkingLab/EXP_5$
```

2. Run the program

Note : Both programs take command line arguments. Server expects a valid port number and the client expects both server ip and the port it listens on

*java server [VALID PORT]*

*java client [SERVER IP] [SERVER PORT]*

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java server
FORMAT : java server [VALID PORT]
n00b@ubuntu:~/NetworkingLab/EXP_5$
```

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java client
FORMAT : java client [SERVER IP][SERVER PORT]
n00b@ubuntu:~/NetworkingLab/EXP_5$
```

## Getting started

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java server 9090
Server socket created
Server listening on port 9090
[03/05/2021 09:52:55:638]      New IP connected : 127.0.0.1
█
```

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java client 127.0.0.1 9090
#####
##                                     ##
##                               AUTHENTICATE                               ##
##                                     ##
#####
Email : █
```

Authentication is carried out at server side and the user can use the client only if logged in, otherwise the client just exits on execution

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java server 9090
Server socket created
Server listening on port 9090
[03/05/2021 09:52:55:638]      New IP connected : 127.0.0.1
[03/05/2021 09:56:13:124]      [ LOGIN ] : bob@test.com
█
```

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java client 127.0.0.1 9090
#####
##                                     ##
##                               AUTHENTICATE                               ##
##                                     ##
#####
Email : bob@test.com
Password:

>> █
```

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java client 127.0.0.1 9090
```

```
#####
##                                     ##
##                               AUTHENTICATE                               ##
##                                     ##
#####
Email : bob@test.com
Password:
```

```
>> help
```

```
help    : Get help commands
send    : Send new mail
view    : View inbox
read    : Read a specific mail
exit    : Exit the program
```

```
>> █
```

## 1. Send mail

Here bob is logged in as first user

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java server 9090
Server socket created
Server listening on port 9090
[03/05/2021 10:04:49:885] New IP connected : 127.0.0.1
[03/05/2021 10:04:56:10] [ LOGIN ] : bob@test.com
[03/05/2021 10:06:29:207] [ NEW MAIL ] : bob@test.com
█

n00b@ubuntu:~/NetworkingLab/EXP_5$ java client 127.0.0.1 9090
#####
## AUTHENTICATE ##
##
#####

Email : bob@test.com
Password:

>> send
Receipient : alice@test.com
Subject : First mail test
Message : Hey alice,please reply for this message.Test case : 12345 !
Message sent !
>> █
```

On successful sending, a message is print on the screen

## 2. View inbox

Here alice is logged in to view her mails

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java server 9090
Server socket created
Server listening on port 9090
[03/05/2021 10:07:55:785] New IP connected : 127.0.0.1
[03/05/2021 10:08:04:672] [ LOGIN ] : alice@test.com
[03/05/2021 10:08:07:432] [ VIEW MAIL ] : alice@test.com
█

n00b@ubuntu:~/NetworkingLab/EXP_5$ java client 127.0.0.1 9090
#####
## AUTHENTICATE ##
##
#####

Email : alice@test.com
Password:

>> view

-----
[0] (03-05-2021) { bob@test.com : First mail test [UNREAD] }
-----

>> █
```

Note that unread mails have **[UNREAD]** appended to distinguish from the read mails.

### 3. Read a mail

```
n00b@ubuntu:~/NetworkingLab/EXP_5$ java server 9090
Server socket created
Server listening on port 9090
[03/05/2021 10:09:21:915] New IP connected : 127.0.0.1
[03/05/2021 10:09:32:181] [ LOGIN ] : alice@test.com

[03/05/2021 10:09:35:597] [ VIEW MAIL ] : alice@test.com
0
[03/05/2021 10:09:41:502] [ READ MAIL ] : alice@test.com
[]

>> view
-----
[0] (03-05-2021) { bob@test.com : First mail test [UNREAD] }
-----

>> read
Enter the mail index : 0
#####
FROM : bob@test.com
Subject : First mail test
Message :
    Hey alice,please reply for this message.Test case : 12345 !
#####

>>

n00b@ubuntu:~/NetworkingLab/EXP_5$ java server 9090
Server socket created
Server listening on port 9090
[03/05/2021 10:09:21:915] New IP connected : 127.0.0.1
[03/05/2021 10:09:32:181] [ LOGIN ] : alice@test.com

[03/05/2021 10:09:35:597] [ VIEW MAIL ] : alice@test.com
0
[03/05/2021 10:09:41:502] [ READ MAIL ] : alice@test.com
[03/05/2021 10:10:23:387] [ VIEW MAIL ] : alice@test.com
[]

>> read
Enter the mail index : 0
#####
FROM : bob@test.com
Subject : First mail test
Message :
    Hey alice,please reply for this message.Test case : 12345 !
#####

>> view
-----
[0] (03-05-2021) { bob@test.com : First mail test }
-----

>>
```

Note that the **[UNREAD]** is removed on reading the email