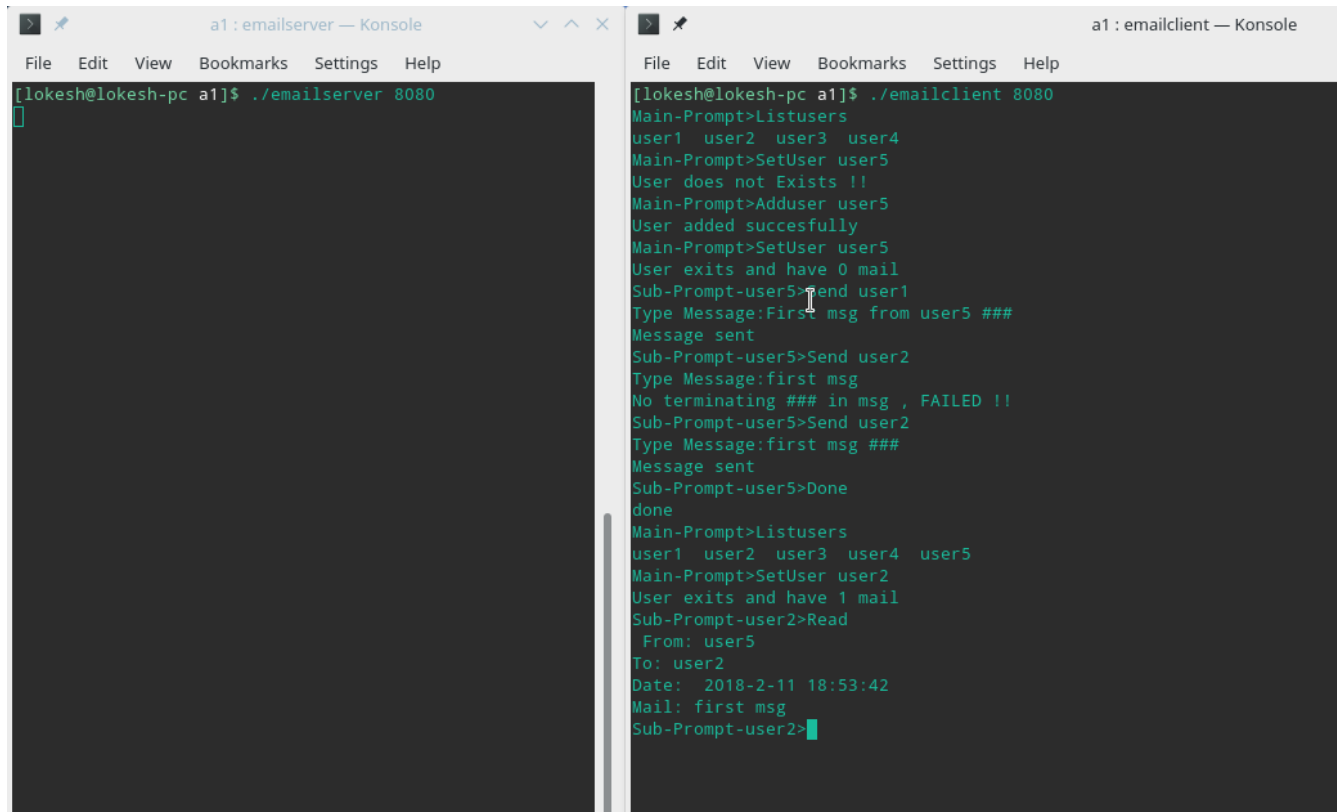# Snapshots :

1. client and server running on same system
shows : adding new user and sending emails ad reading emails
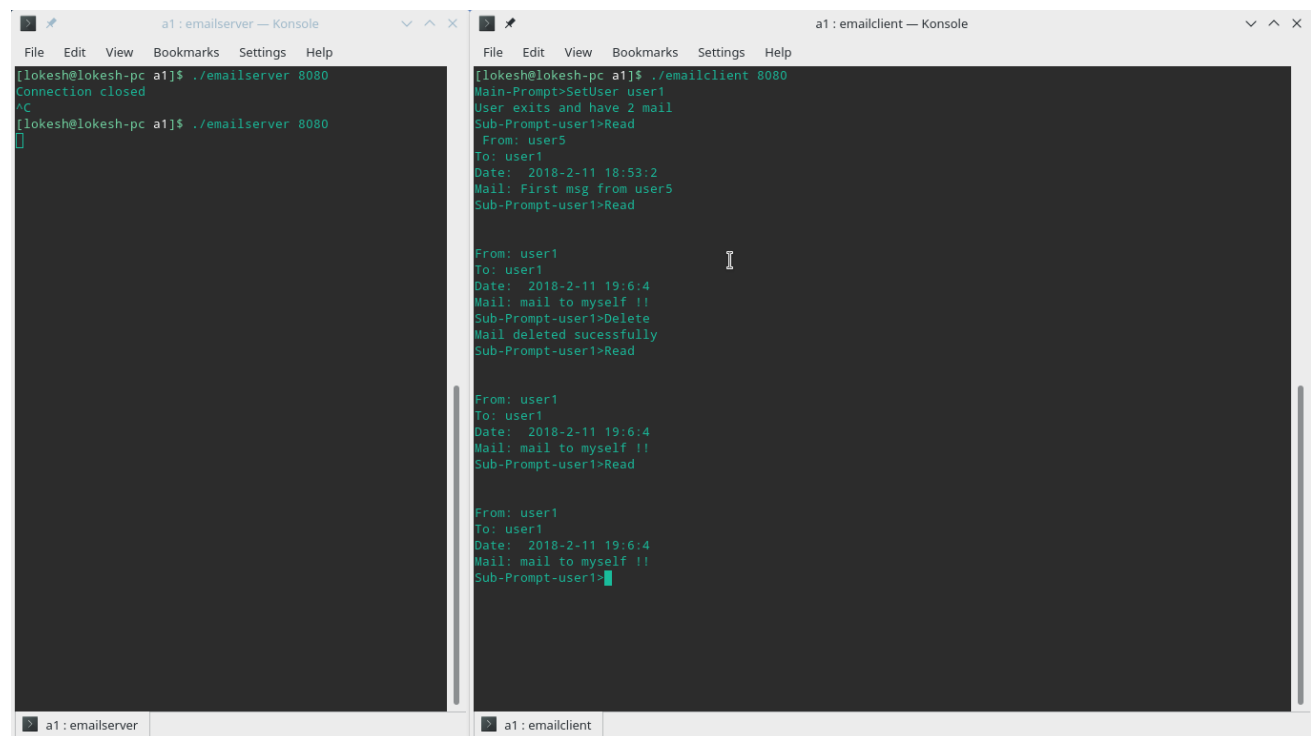also shows the error raised by server on incomplete or invalid commands

2. Delete mail command

3. below snapshot shows that port 0 is system port and the client and serve both should have same port number when running on same system


```
                a1 : emailserver — Konsole           v ^ x
File   Edit   View   Bookmarks   Settings   Help
[lokesh@lokesh-pc a1]$ ./emailserver 0
^C
[lokesh@lokesh-pc a1]$ ./emailserver 1025
^C
[lokesh@lokesh-pc a1]$ ./emailserver 1025
```

```
                a1 : bash — Konsole
File   Edit   View   Bookmarks   Settings   Help
[lokesh@lokesh-pc a1]$ ./emailclient 0
ERROR : error in connection :: Connection refused
[lokesh@lokesh-pc a1]$ ./emailclient 1025
Main-Prompt>Listusers
user1   user2   user3   user4   user5
Main-Prompt>Quit
[lokesh@lokesh-pc a1]$ ./emailclient 8080
ERROR : error in connection :: Connection refused
[lokesh@lokesh-pc a1]$
```

4. Sending self Mails(from user1 to user1 below)


```
                a1 : emailserver — Konsole       v ^ X
File   Edit   View   Bookmarks   Settings   Help
[lokesh@lokesh-pc a1]$ ./emailserver 8080
```

```
                a1 : emai
File   Edit   View   Bookmarks   Settings   Help
[lokesh@lokesh-pc a1]$ ./emailclient 8080
Main-Prompt>SetUser user1
User exits and have 1 mail
Sub-Prompt-user1>Read


From: user1
To: user1
Date:  2018-2-11 19:6:4
Mail: mail to myself !!
Sub-Prompt-user1>Delete
Mail deleted sucessfully
Sub-Prompt-user1>Read
Invalid NO MAILS to read !!
Sub-Prompt-user1>Send user1
Type Message:user1 to user1 ###
Message sent
Sub-Prompt-user1>Done
done
Main-Prompt>SetUser user1
User exits and have 1 mail
Sub-Prompt-user1>Read


From: user1
To: user1
Date:  2018-2-11 22:18:43
Mail: user1 to user1
Sub-Prompt-user1>
```
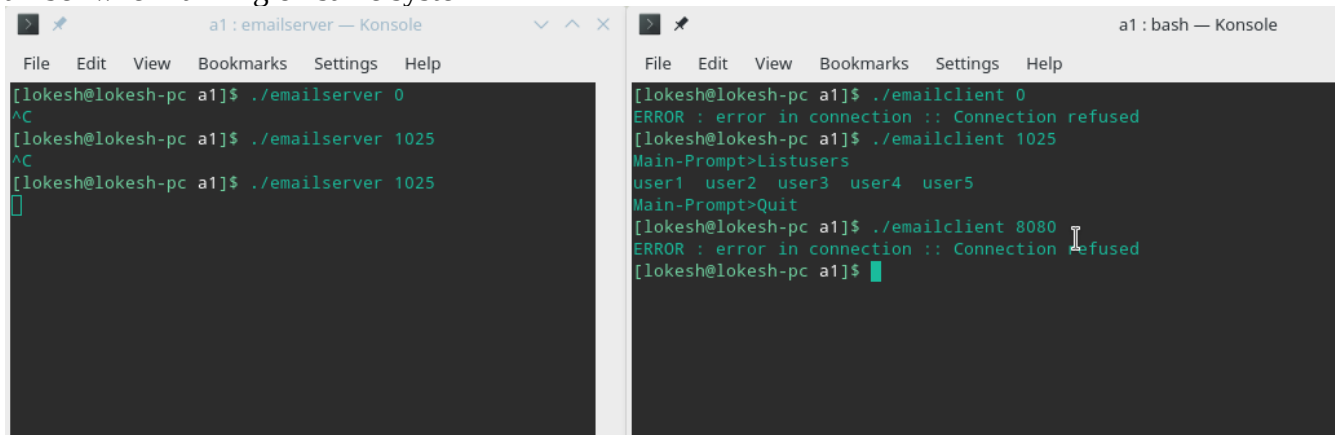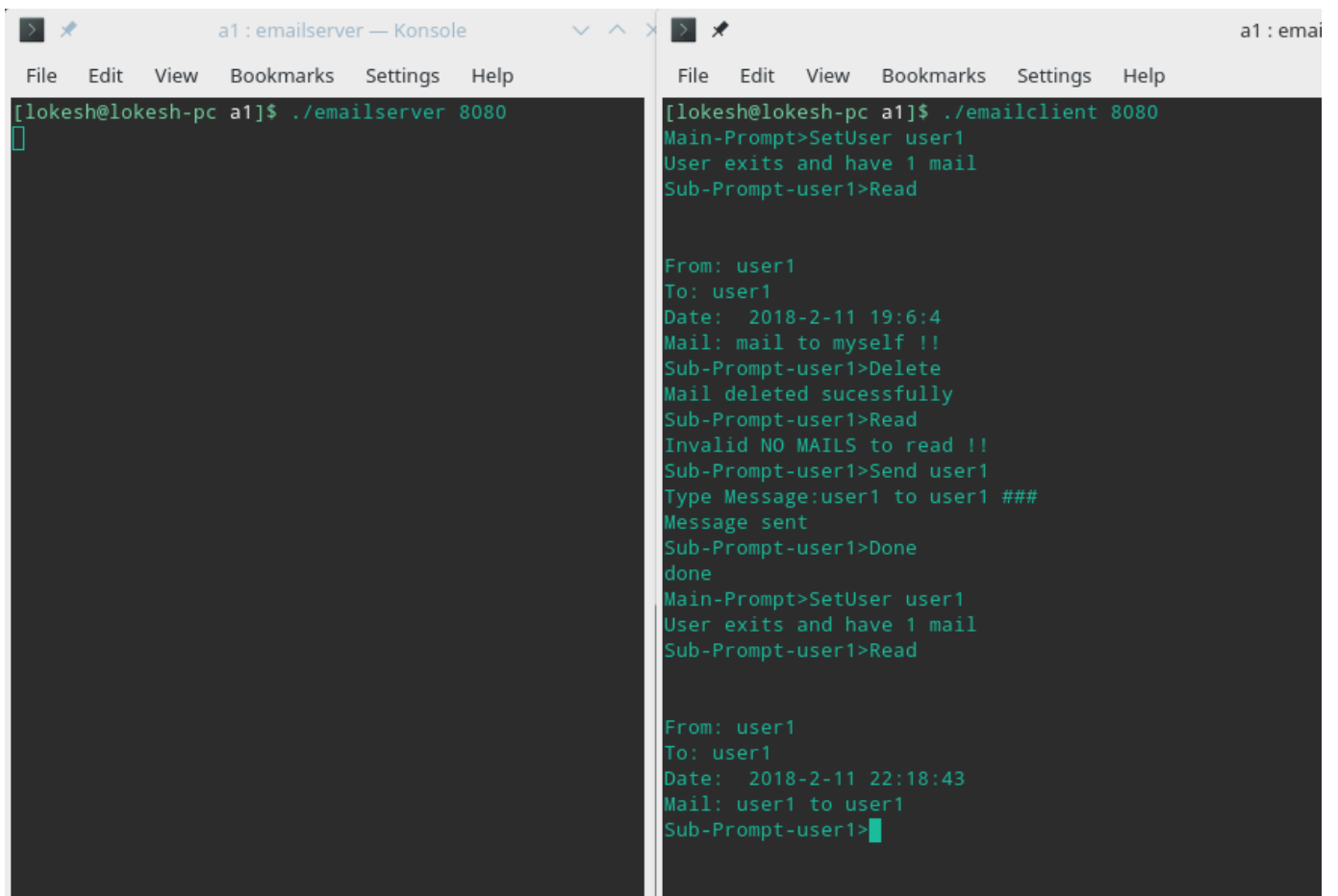
Summary :

lessons learnt:
1. how to create TCP sockets , listen to sockets and send , receive messages through them.
2. what are ports ?how and why they are used in networking systems.
3. Ports can be any integer from 1025 to 65535 (0-1024 are system reserved) but mostly port number from 8000 are for html connection.
4. port binding with specific sockets and exceptions raised by system.
5. various step involved while communicating through network systems.
6. revision of system programming in C.

i feel the assignment was pretty helpful for me to totally understand the theory behind sockets and client user interface.