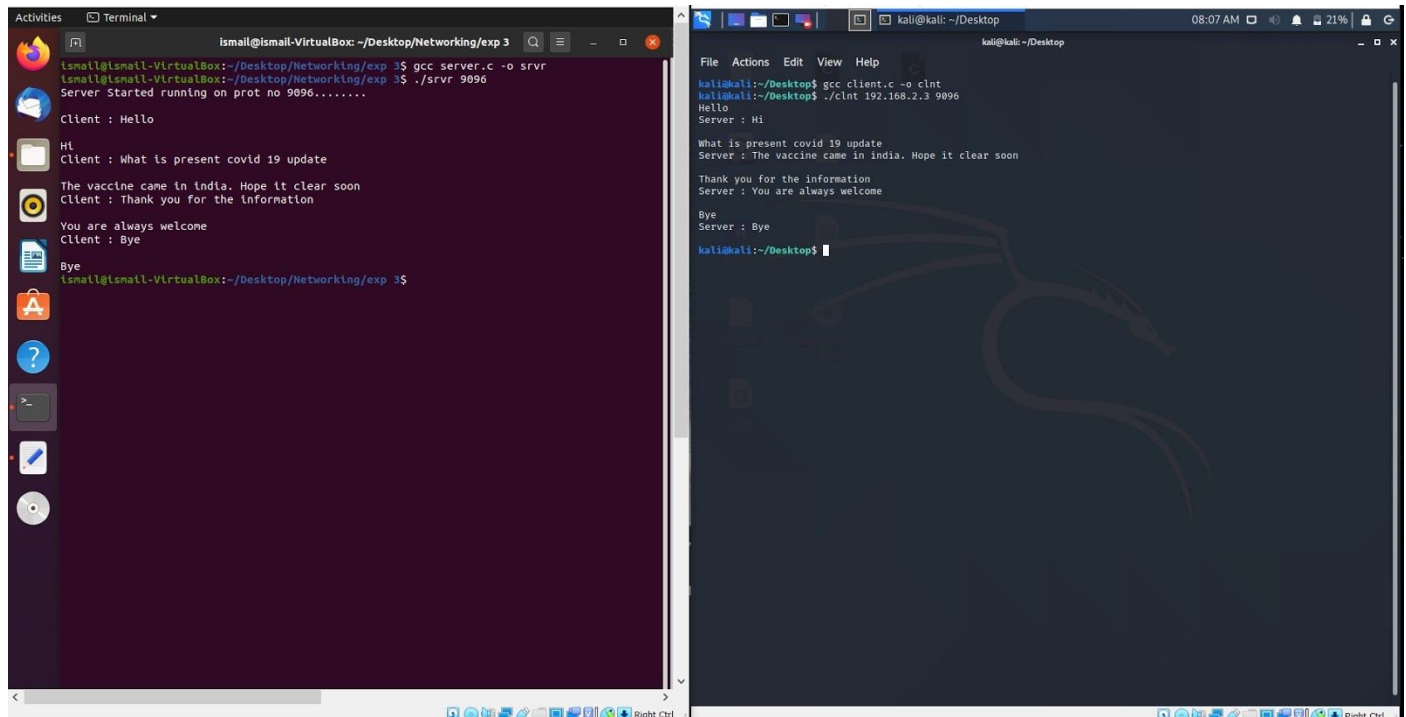


TCP Client Server Program



```
ismail@ismail-VirtualBox: ~/Desktop/Networking/exp 3
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3$ gcc server.c -o srvr
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3$ ./srvr 9096
Server Started running on port no 9096.....

Client : Hello

Hi
Client : What is present covid 19 update
The vaccine came in India. Hope it clear soon
Client : Thank you for the information
You are always welcome
Client : Bye
Bye
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3$
```

```
kali@kali: ~/Desktop
File Actions Edit View Help
kali@kali:~/Desktop$ gcc client.c -o clnt
kali@kali:~/Desktop$ ./clnt 192.168.2.3 9096
Hello
Server : Hi

What is present covid 19 update
Server : The vaccine came in India. Hope it clear soon

Thank you for the information
Server : You are always welcome

Bye
Server : Bye
kali@kali:~/Desktop$
```

For compiling server program:

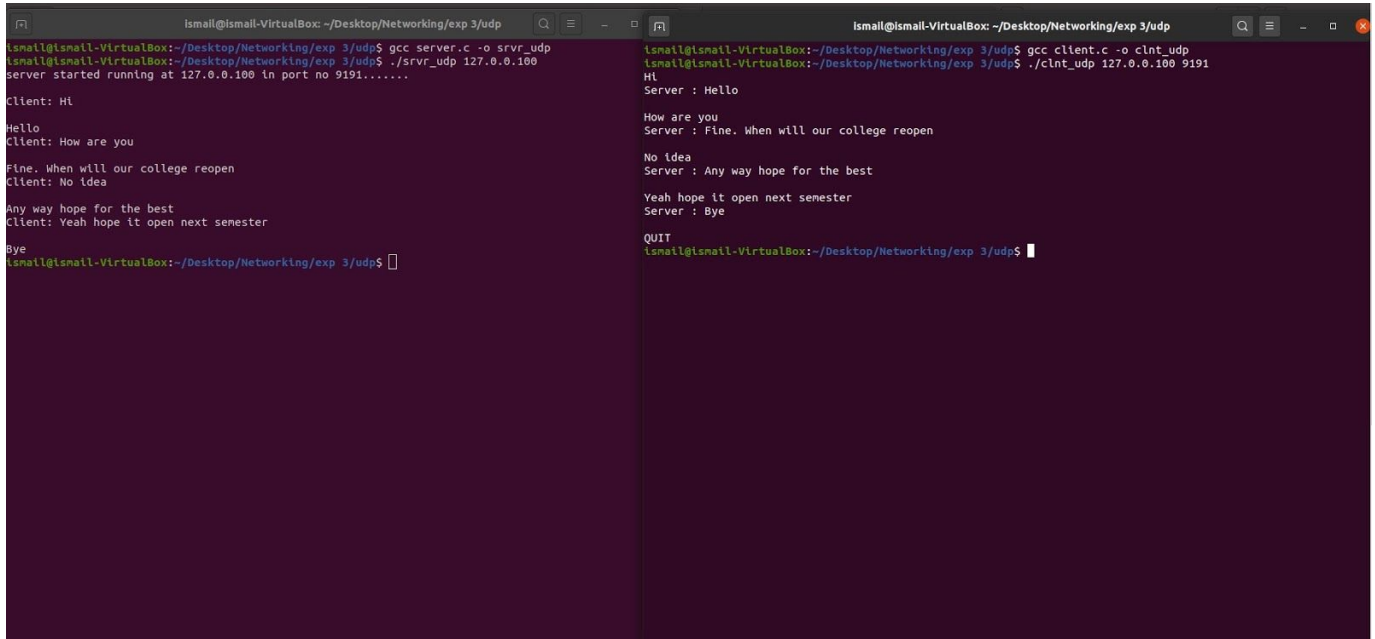
```
gcc server.c -o srvr
./srvr port_no
```

For compiling client program:

```
gcc client.c -o clnt
./clnt server_ip_address server_port_no
```

I have given the server IP address as INADDR_ANY, so that the socket will bind with all the available interfaces. Server is running on an Ubuntu Virtual Machine. It is internally network connected with kali linux VM. ubuntu VM IP Address is statically allocated to 192.168.2.3 and kali is also in the same network. Now kali runs the client program by giving the server ip address and port no as the arguments in the terminal. The program is basically using the TCP socket for communicating for a chat application where client can send some text and server can reply for that. The connection is closed when anyone says "Bye".

UDP Client Server Program



```
ismail@ismail-VirtualBox: ~/Desktop/Networking/exp 3/udp
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3/udp$ gcc server.c -o srvr_udp
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3/udp$ ./srvr_udp 127.0.0.100
server started running at 127.0.0.100 in port no 9191.....

Client: Hi
Hello
Client: How are you
Fine. When will our college reopen
Client: No idea
Any way hope for the best
Client: Yeah hope it open next semester
Bye
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3/udp$
```

```
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3/udp$ gcc client.c -o clnt_udp
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3/udp$ ./clnt_udp 127.0.0.100 9191
Hi
Server : Hello

How are you
Server : Fine. When will our college reopen

No idea
Server : Any way hope for the best

Yeah hope it open next semester
Server : Bye

QUIT
ismail@ismail-VirtualBox:~/Desktop/Networking/exp 3/udp$
```

For compiling server program:

```
gcc server.c -o srvr_udp
./srvr_udp ip_address
```

For compiling client program:

```
gcc client.c -o clnt_udp
./clnt server_ip_address server_port_no
```

Here I have hardcoded the port no 9191 for the server. Here the client and server are on the same device. So I have used the local host ip address for the server. For client, the command line argument should have the ip address and port no of the server. This application is also a chat application as discussed before which uses the UDP socket for communication and the connection closes when someone says “QUIT”.