

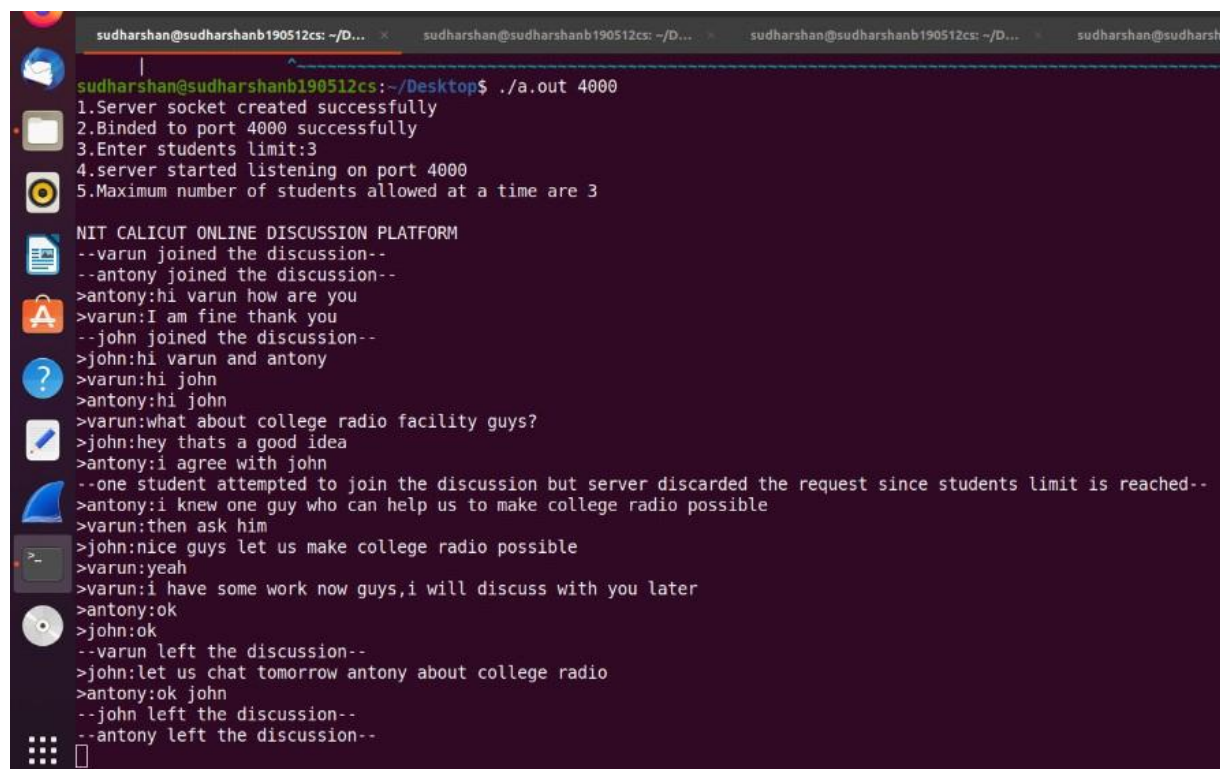
1)This chat system resembles a simple WhatsApp group in terms of functionality.You can understand how the chat system works by seeing a sample run of the chat system below which shows all functionalities facilitated by the programs.

2)Even though these programs are run in same host here, they can also be run in different hosts from different places provided they are connected to internet and everything works as given below. You have to just change the network related data items in both programs that's it simple.

3)This chat system uses internet to send/receive messages from clients etc using socket programming facility in C,multi threading facility in C.

4)Main aim of this application is to facilitate the students of NIT CALICUT with a platform where they can share their ideas for the development of college,academics etc

#### a)SERVER



```
sudharshan@sudharshanb190512cs: ~/Desktop$ ./a.out 4000
1.Server socket created successfully
2.Binded to port 4000 successfully
3.Enter students limit:3
4.server started listening on port 4000
5.Maximum number of students allowed at a time are 3

NIT CALICUT ONLINE DISCUSSION PLATFORM
--varun joined the discussion--
--antony joined the discussion--
>antony:hi varun how are you
>varun:I am fine thank you
--john joined the discussion--
>john:hi varun and antony
>varun:hi john
>antony:hi john
>varun:what about college radio facility guys?
>john:hey thats a good idea
>antony:i agree with john
--one student attempted to join the discussion but server discarded the request since students limit is reached--
>antony:i knew one guy who can help us to make college radio possible
>varun:then ask him
>john:nice guys let us make college radio possible
>varun:yeah
>varun:i have some work now guys,i will discuss with you later
>antony:ok
>john:ok
--varun left the discussion--
>john:let us chat tomorrow antony about college radio
>antony:ok john
--john left the discussion--
--antony left the discussion--
```

### b)1<sup>ST</sup> CLIENT(varun)

```
sudharshan@sudharshanb190512cs:~/Desktop$ gcc -pthread client.c && ./a.out 4000
----WELCOME TO NIT CALICUT ONLINE DISCUSSION PLATFORM FOR SHARING NEW IDEAS----
a.Socket created successfully
b.Connected to server successfully
Your name: varun

>Rules of the online discussion platform:
1.You joined the discussion with varun as your name.
2.If entered exit you will leave the discussion and all students connected at that time will get informed.
3.If entered any other msg it will be sent to all students connected at that time by you.
4.This platform is developed by cse student of NIT CALICUT.Feel free to suggest any updates to this platform.
5.No students present currently.

Discussion:
--antony joined the discussion--
>antony:hi varun how are you
I am fine thank you
--john joined the discussion--
>john:hi varun and antony
hi john
>antony:hi john
what about college radio facility guys?
>john:hey thats a good idea
>antony:i agree with john
--one student attempted to join the discussion but server discarded the request since students limit is reached--
>antony:i knew one guy who can help us to make college radio possible
then ask him
>john:nice guys let us make college radio possible
yeah
i have some work now guys,i will discuss with you later
>antony:ok
>john:ok
exit
--You left the discussion--
sudharshan@sudharshanb190512cs:~/Desktop$
```

### c)2<sup>ND</sup> CLIENT(antony)

```
sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharsh
>Rules of the online discussion platform:
1.You joined the discussion with antony as your name.
2.If entered exit you will leave the discussion and all students connected at that time will get informed.
3.If entered any other msg it will be sent to all students connected at that time by you.
4.This platform is developed by cse student of NIT CALICUT.Feel free to suggest any updates to this platform.
5.Current members of the discussion are:
1.varun

Discussion:
hi varun how are you
>varun:I am fine thank you
--john joined the discussion--
>john:hi varun and antony
>varun:hi john
hi john
>varun:what about college radio facility guys?
>john:hey thats a good idea
i agree with john
--one student attempted to join the discussion but server discarded the request since students limit is reached--
i knew one guy who can help us to make college radio possible
>varun:then ask him
>john:nice guys let us make college radio possible
>varun:yeah
>varun:i have some work now guys,i will discuss with you later
ok
>john:ok
--varun left the discussion--
>john:let us chat tomorrow antony about college radio
ok john
--john left the discussion--
exit
--You left the discussion--
sudharshan@sudharshanb190512cs:~/Desktop$
```

#### d)3<sup>RD</sup> CLIENT(john)

```
sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...
b.Connected to server successfully
Your name: john

>Rules of the online discussion platform:
1.You joined the discussion with john as your name.
2.If entered exit you will leave the discussion and all students connected at that time will get informed.
3.If entered any other msg it will be sent to all students connected at that time by you.
4.This platform is developed by cse student of NIT CALICUT.Feel free to suggest any updates to this platform.
5.Current members of the discussion are:
1.varun
2.antony

Discussion:
hi varun and antony
>varun:hi john
>antony:hi john
>varun:what about college radio facility guys?
hey thats a good idea
>antony:i agree with john
--one student attempted to join the discussion but server discarded the request since students limit is reached--
>antony:i knew one guy who can help us to make college radio possible
>varun:then ask him
nice guys let us make college radio possible
>varun:yeah
>varun:i have some work now guys,i will discuss with you later
>antony:ok

ok
--varun left the discussion--
let us chat tomorrow antony about college radio
>antony:ok john
exit
--You left the discussion--
sudharshan@sudharshanb190512cs:~/Desktop$
```

#### e)4<sup>TH</sup> CLIENT(ram)

```
sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...  sudharshan@sudharshanb190512cs: ~/D...
sudharshan@sudharshanb190512cs:~/Desktop$ gcc -pthread client.c && ./a.out 4000
----WELCOME TO NIT CALICUT ONLINE DISCUSSION PLATFORM FOR SHARING NEW IDEAS----
a.Socket created successfully
b.Connected to server successfully
Your name: ram

>Rules of the online discussion platform:
1.You joined the discussion with ram as your name.
2.If entered exit you will leave the discussion and all students connected at that time will get informed.
3.If entered any other msg it will be sent to all students connected at that time by you.
4.This platform is developed by cse student of NIT CALICUT.Feel free to suggest any updates to this platform.
server sent a msg saying that maxlimit of students are reached just before we connected to server
it closed our socket on it's side,so closing created socket and terminating the client process
please try again after some time
sudharshan@sudharshanb190512cs:~/Desktop$
```