Nick name test1 display

-> create a new room called second

```
kjs@kjs:~/iot/prob2$ ./chat_client 192.168.0.8 20000 test1
-------------------------------------------
Follow this guide line
1.input [q or Q] if you want to quit program
2.input [create] if you want to create new room
3.input [existed only room Id not room Name] if you want to enter alread existed room
3.ex) [1] not [hello]
0(roomId) ->    first(roomName)
create
enter room name : second
Selectd room :second
```

```
-------------------------------
Welcome to second room!!!
1.Input [q or Q] if you want to leave this room.
2.Input [#file] if you want to send file.
3.when you receive msg about file transfer request from server.
3.Input [#y] or [#Y] if you want to receive file. Otherwise, input [#n] or [#N]
test1 has joined
There is no member in this room.
test2 has joined
test3 has joined
```

Nick name test2, test3 display

->When test1 creates new room in a situation where only the first room existed, the newly updated room list is sent to test2 and test3 again. Both clients select and enter the second room just created. Information about users participating in the room and new user are all received from the server.

```
-----------------------------------------------        ----
Follow this guide line                                 Follow this guide line
1.input [q or Q] if you want to quit program           1.input [q or Q] if you want to quit progr
2.input [create] if you want to create new room        am
3.input [existed only room Id not room Name] if yo      2.input [create] if you want to create new
u want to enter alread existed room                      room
3.ex) [1] not [hello]                                  3.input [existed only room Id not room Nam
0(roomId) ->    first(roomName)                        e] if you want to enter alread existed roo
Follow this guide line                                 m
1.input [q or Q] if you want to quit program           3.ex) [1] not [hello]
2.input [create] if you want to create new room        0(roomId) ->    first(roomName)
3.input [existed only room Id not room Name] if yo      Follow this guide line
u want to enter alread existed room                    1.input [q or Q] if you want to quit progr
3.ex) [1] not [hello]                                  am
0(roomId) ->    first(roomName)                        2.input [create] if you want to create new
1(roomId) ->    second(roomName)                         room
1                                                      3.input [existed only room Id not room Nam
selectd room :second                                   e] if you want to enter alread existed roo
-----------------------------                          m
Welcome to second room!!!                              3.ex) [1] not [hello]
1.Input [q or Q] if you want to leave this room.       0(roomId) ->    first(roomName)
2.Input [#file] if you want to send file.              1(roomId) ->    second(roomName)
3.when you receive msg about file transfer request     1
  from server.                                         selectd room :second
```

```
selectd room :second
------------------------------
Welcome to second room!!!
1.Input [q or Q] if you want to leave this
 room.
2.Input [#file] if you want to send file.
3.when you receive msg about file transfer
 request from server.
3.Input [#y] or [#Y] if you want to receiv
e file. Otherwise, input [#n] or [#N]
test1 has joined
test2 has joined
'test1' welcome you!!
test3 has joined
```

```
------------------------------
Welcome to second room!!!
1.Input [q or Q] if you want to leave th
is room.
2.Input [#file] if you want to send file
.
3.when you receive msg about file transf
er request from server.
3.Input [#y] or [#Y] if you want to rece
ive file. Otherwise, input [#n] or [#N]
test1 has joined
test2 has joined
test3 has joined
'test1' 'test2' welcome you!!
```

Nick name test1 display

-.>have a conversation

```
Welcome to second room!!!
1.Input [q or Q] if you want to leave this room.
2.Input [#file] if you want to send file.
3.when you receive msg about file transfer request from server.
3.Input [#y] or [#Y] if you want to receive file. Otherwise, input [#n] or [#N]
test1 has joined
There is no member in this room.
test2 has joined
test3 has joined
hello
[test1] : hello
[test2] : hi
[test3] : nice to meet us
```

Nick name test2, test3 display

-> have a conversation

```
selectd room :second                              -------------------------------
-----------------------------                     Welcome to second room!!!
Welcome to second room!!!                          1.Input [q or Q] if you want to leave th
1.Input [q or Q] if you want to leave this         is room.
 room.                                             2.Input [#file] if you want to send file
2.Input [#file] if you want to send file.          .
3.when you receive msg about file transfer         3.when you receive msg about file transf
 request from server.                              er request from server.
3.Input [#y] or [#Y] if you want to receiv         3.Input [#y] or [#Y] if you want to rece
e file. Otherwise, input [#n] or [#N]              ive file. Otherwise, input [#n] or [#N]
test1 has joined                                   test1 has joined
test2 has joined                                   test2 has joined
'test1' welcome you!!                              test3 has joined
test3 has joined                                   'test1' 'test2' welcome you!!
[test1] : hello                                    [test1] : hello
hi                                                 [test2] : hi
[test2] : hi                                       nice to meet us
[test3] : nice to meet us                          [test3] : nice to meet us
```

Nick name test1 display

->Upload the file to the server

```
hello
[test1] : hello
[test2] : hi
[test3] : nice to meet us
#file
enter file name : lake.jpg
port:84upload shutdown:  read_some: End of file [asio.misc:2]
file upload done
```

Nick name test2 test3 display

->After the file is uploaded, the server asks all clients participating in the room to download the file uploaded by test1 from the server.

```
3.when you receive msg about file transfer         er request from server.
 request from server.                              3.Input [#y] or [#Y] if you want to rece
3.Input [#y] or [#Y] if you want to receiv         ive file. Otherwise, input [#n] or [#N]
e file. Otherwise, input [#n] or [#N]              test1 has joined
test1 has joined                                   test2 has joined
test2 has joined                                   test3 has joined
'test1' welcome you!!                              'test1' 'test2' welcome you!!
test3 has joined                                   [test1] : hello
[test1] : hello                                    [test2] : hi
hi                                                 nice to meet us
[test2] : hi                                       [test3] : nice to meet us
[test3] : nice to meet us                          !!!'test1' want to transfer file 'lake.j
!!!'test1' want to transfer file 'lake.jpg         pg' to you.
' to you.                                          !!!If you want to receive this file, ple
!!!If you want to receive this file, pleas         ase input #y(#Y) or otherwise, input #n(
e input #y(#Y) or otherwise, input #n(#N)          #N)
```

Nick name test1 display

-> It is possible to exchange conversations concurrently in the process of uploading and downloading files.

```
#file
enter file name : lake.jpg
port:84upload shutdown:  read_some: End of file [asio.misc:2]
file upload done
hello
[test1] : hello
[test2] : hihihi
```

Nick name test2 test3 display

-> It is possible to exchange conversations concurrently in the process of uploading and downloading files

```
test1 has joined
test2 has joined
'test1' welcome you!!
test3 has joined
[test1] : hello
hi
[test2] : hi
[test3] : nice to meet us
!!!'test1' want to transfer file 'lake.jpg
' to you.
!!!If you want to receive this file, pleas
e input #y(#Y) or otherwise, input #n(#N)
#y
[test1] : hello
hihihi
[test2] : hihihi
```

```
test1 has joined
test2 has joined
test3 has joined
'test1' 'test2' welcome you!!
[test1] : hello
[test2] : hi
nice to meet us
[test3] : nice to meet us
!!!'test1' want to transfer file 'lake.j
pg' to you.
!!!If you want to receive this file, ple
ase input #y(#Y) or otherwise, input #n(
#N)
[test1] : hello
[test2] : hihihi
#y
```

Nick name test1 display

➔ leave the room

```
file upload done
hello
[test1] : hello
[test2] : hihihi
q
-------------------------------------------
Follow this guide line
1.input [q or Q] if you want to quit program
2.input [create] if you want to create new room
3.input [existed only room Id not room Name] if you want to enter alread existed room
3.ex) [1] not [hello]
0(roomId) ->    first(roomName)
1(roomId) ->    second(roomName)
```

Nick name test2 test3 display

➔ Server announces that test1 has left the room

```
test2 has joined                                test2 has joined
'test1' welcome you!!                           test3 has joined
test3 has joined                                'test1' 'test2' welcome you!!
[test1] : hello                                 [test1] : hello
hi                                              [test2] : hi
[test2] : hi                                    nice to meet us
[test3] : nice to meet us                       [test3] : nice to meet us
!!!'test1' want to transfer file 'lake.jpg      !!!'test1' want to transfer file 'lake.j
' to you.                                       pg' to you.
!!!If you want to receive this file, pleas      !!!If you want to receive this file, ple
e input #y(#Y) or otherwise, input #n(#N)       ase input #y(#Y) or otherwise, input #n(
#y                                              #N)
[test1] : hello                                 [test1] : hello
hihihi                                          [test2] : hihihi
[test2] : hihihi                                #y
test1 has left this room.                       test1 has left this room.
```

File uploaded in server and file downloaded in client 's side

```
    chat_client
C++ chat_client.cpp
C++ chat_room_serve..
C++ chat_server.cpp
C++ chat_session_ser...
h++ chat_session_ser..
C++ chat_session.cpp
h++ chat_session.hpp
    lake.jpg
    Makefile
> test
    chat_server
    lake.jpg
```