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# ASSIGNMENT 6

Develop chat room application using  
multithreading

## Source Code

### FILE 1: Server.py

```
import socket
import sys
import time

new_socket = socket.socket()
host_name = socket.gethostname()
s_ip = socket.gethostbyname(host_name)
port = 8080

new_socket.bind((host_name, port))
print('Binding successfull')
print("This is your IP: ", s_ip)

name = input('Enter name:')
new_socket.listen(1) #NO OF CLIENTS TO BE CONNECTED

conn, add= new_socket.accept()
print("Received connection from ", add[0])
print('Connection Established. Connected From: ',add[0])

client = (conn.recv(1024)).decode()
print(client + ' has connected.')
```

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```
conn.send(name.encode())
```

```
while True:
    message = input('Me : ')
    conn.send(message.encode())
    message = conn.recv(1024)
    message = message.decode()
    print(client, ':', message)
```

## FILE 2: Client.py

```
import socket
import sys
import time

socket_server = socket.socket()
server_host = socket.gethostname()
ip = socket.gethostbyname(server_host)
sport = 8080

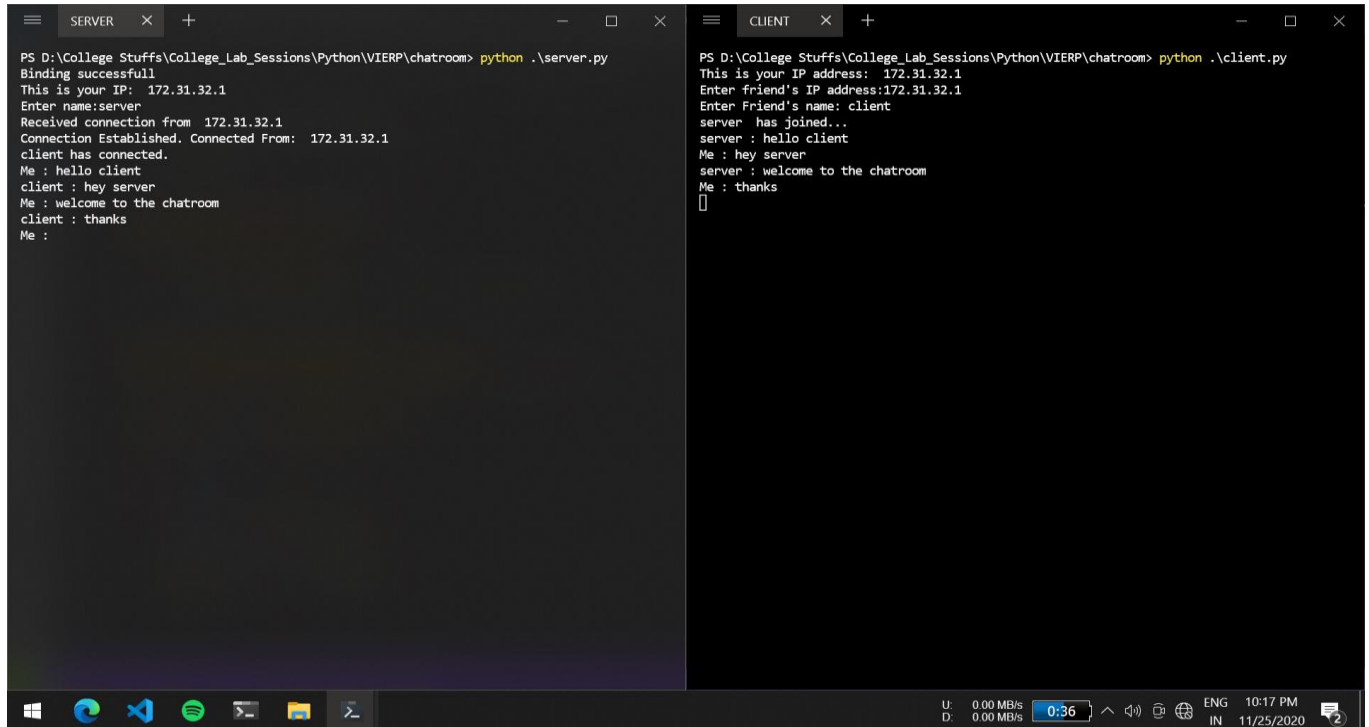
print('This is your IP address: ', ip)
server_host = input('Enter friend\'s IP address:')
name = input('Enter Friend\'s name: ')

socket_server.connect((server_host, sport))

socket_server.send(name.encode())
server_name = socket_server.recv(1024)
server_name = server_name.decode()

print(server_name, ' has joined...')
while True:
    message = (socket_server.recv(1024)).decode()
    print(server_name, ":", message)
    message = input("Me : ")
    socket_server.send(message.encode())
```

## Output <Screenshot>



```
PS D:\College Stuff\College_Lab_Sessions\Python\VIERP\chatroom> python .\server.py
Binding successful
This is your IP: 172.31.32.1
Enter name:server
Received connection from 172.31.32.1
Connection Established. Connected From: 172.31.32.1
client has connected.
Me : hello client
client : hey server
Me : welcome to the chatroom
client : thanks
Me :
```

```
PS D:\College Stuff\College_Lab_Sessions\Python\VIERP\chatroom> python .\client.py
This is your IP address: 172.31.32.1
Enter friend's IP address:172.31.32.1
Enter Friend's name: client
server has joined...
server : hello client
Me : hey server
server : welcome to the chatroom
Me : thanks
[]
```

The screenshot shows two terminal windows side-by-side. The left window, titled 'SERVER', displays the output of a Python script that binds to an IP, receives a connection from 172.31.32.1, and exchanges messages. The right window, titled 'CLIENT', shows the output of a Python script that connects to the same IP, receives a message from the server, and exchanges messages. The Windows taskbar is visible at the bottom, showing the time as 10:17 PM on 11/25/2020.