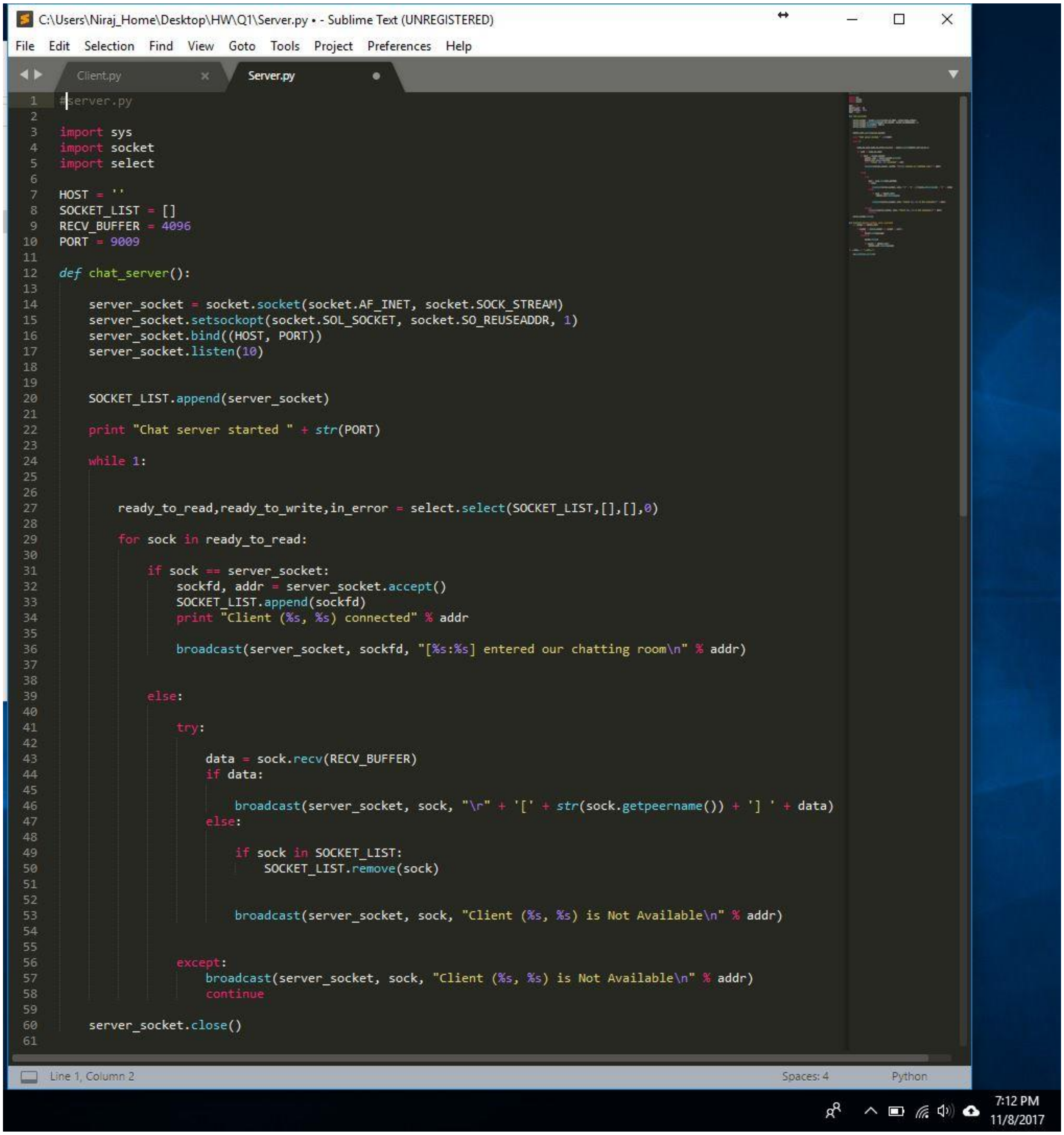
NAME: NIRAJ THANKI SID: 19376 CLASS: CS531

SERVER.py


C:\Users\Niraj_Home\Desktop\HW\Q1\Server.py • - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
Client.py
Server.py
Line 1, Column 2
Spaces: 4
Python
7:12 PM
11/8/2017

```
#server.py

import sys
import socket
import select

HOST = ''
SOCKET_LIST = []
RECV_BUFFER = 4096
PORT = 9009

def chat_server():

    server_socket = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
    server_socket.setsockopt(socket.SOL_SOCKET, socket.SO_REUSEADDR, 1)
    server_socket.bind((HOST, PORT))
    server_socket.listen(10)


    SOCKET_LIST.append(server_socket)

    print "Chat server started " + str(PORT)

    while 1:


        ready_to_read,ready_to_write,in_error = select.select(SOCKET_LIST,[],[],0)

        for sock in ready_to_read:

            if sock == server_socket:
                sockfd, addr = server_socket.accept()
                SOCKET_LIST.append(sockfd)
                print "Client (%s, %s) connected" % addr

                broadcast(server_socket, sockfd, "[%s:%s] entered our chatting room\n" % addr)


            else:

                try:

                    data = sock.recv(RECV_BUFFER)
                    if data:

                        broadcast(server_socket, sock, "\r" + '[' + str(sock.getpeername()) + '] ' + data)
                    else:

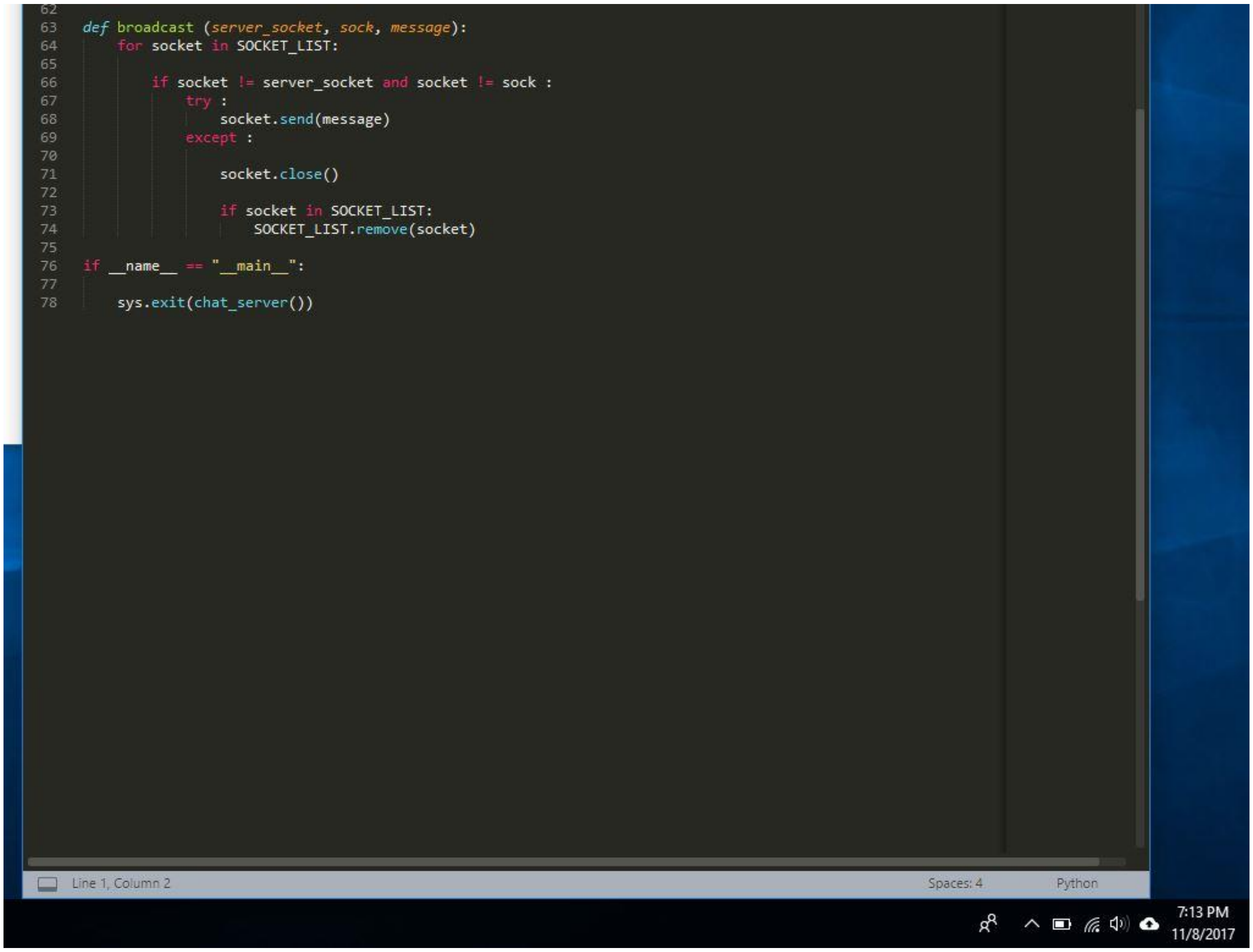
                        if sock in SOCKET_LIST:
                            SOCKET_LIST.remove(sock)


                        broadcast(server_socket, sock, "Client (%s, %s) is Not Available\n" % addr)


                except:
                    broadcast(server_socket, sock, "Client (%s, %s) is Not Available\n" % addr)
                    continue

    server_socket.close()

```



```
def broadcast (server_socket, sock, message):
    for socket in SOCKET_LIST:

        if socket != server_socket and socket != sock :
            try :
                socket.send(message)
            except :

                socket.close()

                if socket in SOCKET_LIST:
                    SOCKET_LIST.remove(socket)

if __name__ == "__main__":

    sys.exit(chat_server())
```

Source Code:

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import socket

import select


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SOCKET_LIST = []

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    server_socket.listen(10)


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        for sock in ready_to_read:

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                sockfd, addr = server_socket.accept()
                SOCKET_LIST.append(sockfd)
                print "Client (%s, %s) connected" % addr

                broadcast(server_socket, sockfd, "[%s:%s] entered our chatting room\n" % addr)


            else:
                try:

                    data = sock.recv(RECV_BUFFER)
                    if data:

                        broadcast(server_socket, sock, "\r" + '[' + str(sock.getpeername()) + '] ' + data)
                    else:

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                        broadcast(server_socket, sock, "Client (%s, %s) is Not Available\n" % addr)


                except:
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    server_socket.close()


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if __name__ == "__main__":


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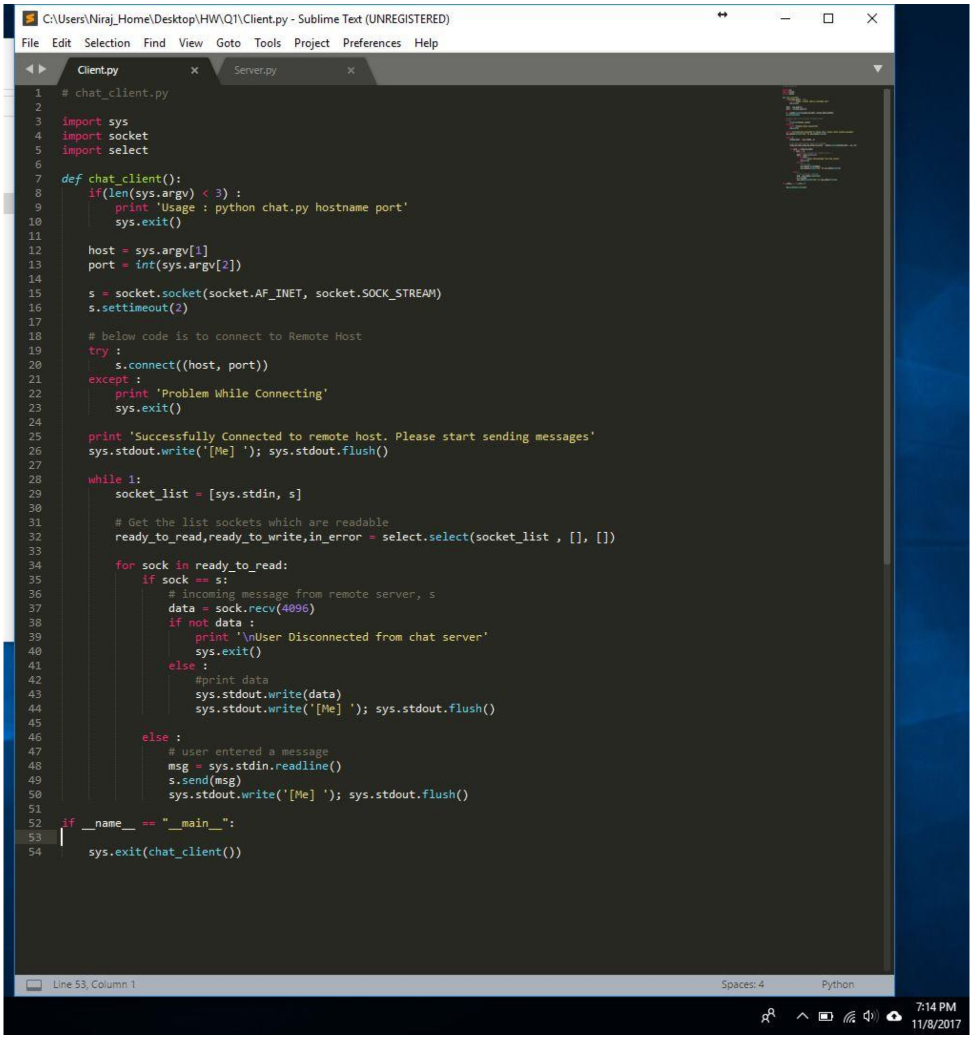
```

CLIENT.py


C:\Users\Niraj_Home\Desktop\HW\Q1\Client.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
Client.py
Server.py
Line 53, Column 1
Spaces: 4
Python
7:14 PM
11/8/2017

```python
# chat_client.py

import sys
import socket
import select

def chat_client():
    if(len(sys.argv) < 3) :
        print 'Usage : python chat.py hostname port'
        sys.exit()

    host = sys.argv[1]
    port = int(sys.argv[2])

    s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
    s.settimeout(2)

    # below code is to connect to Remote Host
    try :
        s.connect((host, port))
    except :
        print 'Problem While Connecting'
        sys.exit()

    print 'Successfully Connected to remote host. Please start sending messages'
    sys.stdout.write('[Me] '); sys.stdout.flush()

    while 1:
        socket_list = [sys.stdin, s]

        # Get the list sockets which are readable
        ready_to_read,ready_to_write,in_error = select.select(socket_list , [], [])

        for sock in ready_to_read:
            if sock == s:
                # incoming message from remote server, s
                data = sock.recv(4096)
                if not data :
                    print '\nUser Disconnected from chat server'
                    sys.exit()
                else :
                    #print data
                    sys.stdout.write(data)
                    sys.stdout.write('[Me] '); sys.stdout.flush()

            else :
                # user entered a message
                msg = sys.stdin.readline()
                s.send(msg)
                sys.stdout.write('[Me] '); sys.stdout.flush()

if __name__ == "__main__":

    sys.exit(chat_client())
```

Source Code:

```
# chat_client.py


import sys

import socket

import select


def chat_client():
    if(len(sys.argv) < 3) :
        print 'Usage : python chat.py hostname port'
        sys.exit()


    host = sys.argv[1]
    port = int(sys.argv[2])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    sys.stdout.write('[Me] '); sys.stdout.flush()


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                else :
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                    sys.stdout.write(data)
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if __name__ == "__main__":

    sys.exit(chat_client())
```
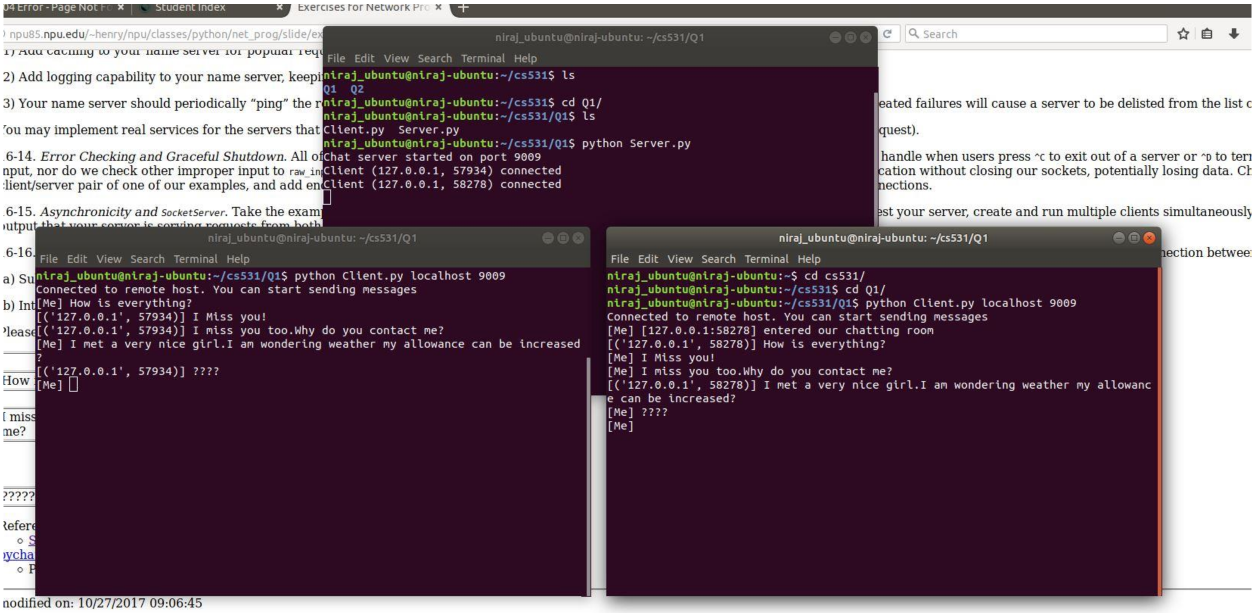

Output:



niraj_ubuntu@niraj-ubuntu: ~/cs531/Q1
File Edit View Search Terminal Help

```
niraj_ubuntu@niraj-ubuntu:~/cs531$ ls
Q1  Q2
niraj_ubuntu@niraj-ubuntu:~/cs531$ cd Q1/
niraj_ubuntu@niraj-ubuntu:~/cs531/Q1$ ls
Client.py  Server.py
niraj_ubuntu@niraj-ubuntu:~/cs531/Q1$ python Server.py
Chat server started on port 9009
Client (127.0.0.1, 57934) connected
Client (127.0.0.1, 58278) connected
```

```
niraj_ubuntu@niraj-ubuntu:~/cs531/Q1$ python Client.py localhost 9009
Connected to remote host. You can start sending messages
[Me] How is everything?
[('127.0.0.1', 57934)] I Miss you!
[('127.0.0.1', 57934)] I miss you too.Why do you contact me?
[Me] I met a very nice girl.I am wondering weather my allowance can be increased
?
[('127.0.0.1', 57934)] ????
[Me]
```

```
niraj_ubuntu@niraj-ubuntu:~$ cd cs531/
niraj_ubuntu@niraj-ubuntu:~/cs531$ cd Q1/
niraj_ubuntu@niraj-ubuntu:~/cs531/Q1$ python Client.py localhost 9009
Connected to remote host. You can start sending messages
[Me] [127.0.0.1:58278] entered our chatting room
[('127.0.0.1', 58278)] How is everything?
[Me] I Miss you!
[Me] I miss you too.Why do you contact me?
[('127.0.0.1', 58278)] I met a very nice girl.I am wondering weather my allowanc
e can be increased?
[Me] ????
[Me]
```