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Roll No-75

Exp.No-

07(client+server)

```
import socket

PORT = 5050
#SERVER = ''
SERVER = socket.gethostname (socket.gethostname ()) ADDR =
(SERVER, PORT)
FORMAT = 'utf-8'
HEADER = 64
DISCONNECT_MESSAGE = '!DISCONNECT'

client = socket.socket (socket.AF_INET, socket.SOCK_STREAM)
client.connect (ADDR)

def send (messages):
    message = messages.encode (FORMAT)
    messageLength = len (message)
    sendLength = str (messageLength).encode (FORMAT)
    sendLength += b' ' * (HEADER - len (sendLength))    client.send
(sendLength)
    client.send (message)
    print (client.recv (2045).decode (FORMAT))

if __name__ == '__main__':
    send ('Hello World')
    send (DISCONNECT_MESSAGE)
```

Message Recieved

Message Recieved

```
import socket, threading

PORT = 5050
SERVER = socket.gethostname (socket.gethostname ()) ADDR =
(SERVER, PORT)
FORMAT = 'utf-8'
HEADER = 64
DISCONNECT_MESSAGE = '!DISCONNECT'

server = socket.socket (socket.AF_INET, socket.SOCK_STREAM) server.bind
(ADDR)

def clientHandling (connection, address):
    print (f'[NEW CONNECTION] {address} connected')
    isConnected = True
```

```

while isConnected:
    messageLength = connection.recv (HEADER).decode (FORMAT)
    messageLength:
        messageLength = int (messageLength)
        message = connection.recv (messageLength).decode (FORMAT)
        if message == DISCONNECT_MESSAGE:
            isConnected = False
            print (f'[{address}] {message}')
            connection.send ('Message Recieved'.encode (FORMAT))
connection.close ()

def start ():
    server.listen ()
    print (f'[LISTENING] Server is listening on {SERVER}')
    while True:
        connection, address = server.accept ()
        thread = threading.Thread (target=clientHandling,
args=(connection, address))
        thread.start ()
        print (f'[ACTIVE CONNECTION] {threading.active_count () - 1}')

print ('[SERVER STARTING] server has been started') start ()

[SERVER STARTING] server has been started
[LISTENING] Server is listening on 192.168.75.1
[NEW CONNECTION] ('192.168.75.1', 54293) connected[ACTIVE CONNECTION]
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[('192.168.75.1', 54293)] Hello World
[('192.168.75.1', 54293)] !DISCONNECT

```