

EXP7:

client.py

```
import socket

PORT = 5050
SERVER = socket.gethostbyname (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)
    message_length = len(message)
    send_length = str(message_length).encode(FORMAT)
    send_length += b' ' * (HEADER - len(send_length))
    client.send(send_length)
    client.send(message)
    print(client.recv(2048).decode(FORMAT)) # This prints the server
response

if __name__ == '__main__':
    send("Hello World") # Sends Hello World
    send(DISCONNECT_MESSAGE) # Disconnects
```

Output:

```
[('192.168.21.214', 50889)] Hello World
[('192.168.21.214', 50889)] !DISCONNECT
```

server.py

```
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)
        if 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 ()
```

Output:

```
PS C:\Users\admin\Desktop\divya> & C:/Users/admin/anaconda3/python.exe c:/Users/admin/Desktop/divya/server.py
[SERVER STARTING] server has been started
[LISTENING] Server is listening on 192.168.21.214
[NEW CONNECTION] ('192.168.21.214', 50889) connected
[ACTIVE CONNECTION] 1
```