# Distributed and Parallel Computing Lab

## CS461 Lab1

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**TASK: Create and execute basic client-server in distributed environment.**

Creating Server Side:

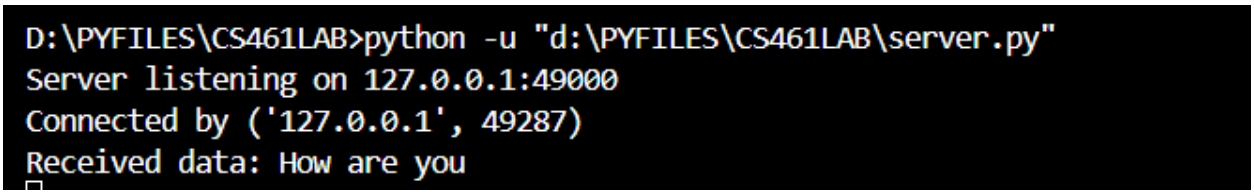
```
import socket

HOST = '127.0.0.1'
PORT = 49000

server_socket=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
server_socket.bind((HOST, PORT))
server_socket.listen()
print(f"Server listening on {HOST}:{PORT}")
while True:
    connection, address = server_socket.accept()
    print(f"Connected by {address}")
    data = connection.recv(1024)
    if not data:
        break
    print(f"Received data: {data.decode()}")
    connection.sendall(b'Data received Successfully')
    connection.close()
server_socket.close()
```

Creating Client Side:

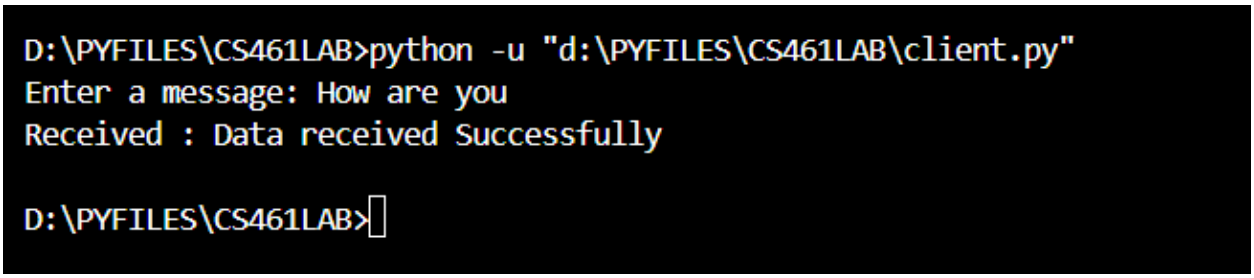
```
import socket

HOST = '127.0.0.1'
PORT = 49000

client_socket= socket.socket(socket.AF_INET, socket.SOCK_STREAM)
client_socket.connect((HOST, PORT))  # Connect to the server
message=input('Enter a message: ')
client_socket.sendall(message.encode())  # Send data to the server
data = client_socket.recv(1024)         # Receive data from the server
print(f"Received : {data.decode()}")
client_socket.close()
```

OUTPUT:

Server side:




Client side:




First server has been activated/initiated at it starts listening. Then connection establishes with client.

Client sends a message and that message is received by server and displayed. As the message is received by server, server sends 'Data received succesfully' confirmation message to client proving a successful connection has been made.