

Expt. 15 – 21/12/2024

21/12

Expt. 15:

Aim: using TCP/IP sockets, create a client-server program to make client sending the file name to the server to send back the contents of requested file.

Client TCP.py

```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_STREAM)
clientSocket.connect((serverName, serverPort))
sentence = input("Enter file name")
clientSocket.send(sentence.encode())
fileContents = clientSocket.recv(1024).decode()
print("File from server: " + fileContents)
clientSocket.close()
```

Server TCP.py

```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_STREAM)
serverSocket.bind((serverName, serverPort))
serverSocket.listen(1)
while 1:
    print("The server is ready to receive")
    connectionSocket, addr = serverSocket.accept()
```

connectionSocket.recv(1024).decode()

~~file = open(sentence, "r")~~

file = open(sentence, "r")

l = file.read(1024)

connectionSocket.send(l.encode())

print("Send contents of sentence")

file.close()

connectionSocket.close()

Output:

The server is ready to receive
sent contents of server TCP.py
The server is ready to receive

Enter file name: Server TCP.py
Reply from server

04.01.25

UNANA SWEKAR

UNANA SWEKAR

Code:

ServerTCP.py

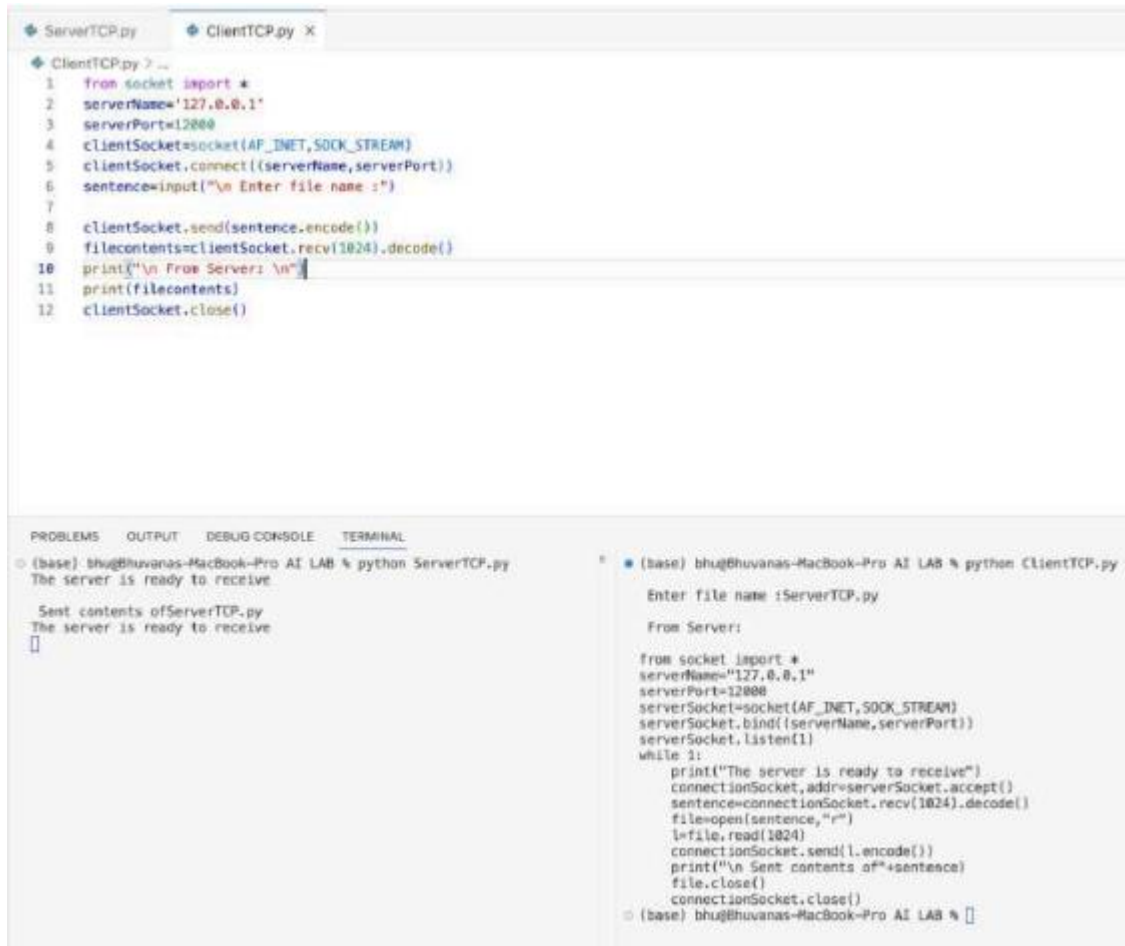
```
from socket import *
serverName="127.0.0.1"
serverPort=12000
serverSocket=socket(AF_INET,SOCK_STREAM)
serverSocket.bind((serverName,serverPort))
serverSocket.listen(1)
while 1:
    print("The server is ready to receive")
    connectionSocket,addr=serverSocket.accept()
    sentence=connectionSocket.recv(1024).decode()
    file=open(sentence,"r")
    l=file.read(1024)
    connectionSocket.send(l.encode())
    print("\n Sent contents of"+sentence)
    file.close()
    connectionSocket.close()
```

ClientTCP.py

```
from socket import *
serverName='127.0.0.1'
serverPort=12000
clientSocket=socket(AF_INET,SOCK_STREAM)
clientSocket.connect((serverName,serverPort))
sentence=input("\n Enter file name :")
clientSocket.send(sentence.encode())
filecontents=clientSocket.recv(1024).decode()
print("\n From Server: \n")
```

```
print(filecontents)
clientSocket.close()
```

Output:



```
ServerTCP.py
ClientTCP.py X

ClientTCP.py > ...
1  from socket import *
2  serverName='127.0.0.1'
3  serverPort=12800
4  clientSocket=socket(AF_INET,SOCK_STREAM)
5  clientSocket.connect((serverName,serverPort))
6  sentence=input("\n Enter file name :")
7
8  clientSocket.send(sentence.encode())
9  filecontents=clientSocket.recv(1024).decode()
10 print("\n From Server: \n")
11 print(filecontents)
12 clientSocket.close()

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
○ (base) bhu@Bhuvanas-MacBook-Pro AI LAB % python ServerTCP.py
The server is ready to receive

Sent contents of ServerTCP.py
The server is ready to receive
[]

● (base) bhu@Bhuvanas-MacBook-Pro AI LAB % python ClientTCP.py

Enter file name :ServerTCP.py

From Server:

from socket import *
serverName="127.0.0.1"
serverPort=12800
serverSocket=socket(AF_INET,SOCK_STREAM)
serverSocket.bind((serverName,serverPort))
serverSocket.listen(1)
while 1:
    print("The server is ready to receive")
    connectionSocket,addr=serverSocket.accept()
    sentence=connectionSocket.recv(1024).decode()
    file=open(sentence,"r")
    l=file.read(1024)
    connectionSocket.send(l.encode())
    print("\n Sent contents of"+sentence)
    file.close()
    connectionSocket.close()
○ (base) bhu@Bhuvanas-MacBook-Pro AI LAB % []
```

ServerTCP.py X ClientTCP.py

ServerTCP.py > ...

```
1 from socket import *
2 serverName="127.0.0.1"
3
4 (variable) serverSocket: socket (STREAM)
5 serverSocket.bind((serverName,serverPort))
6 serverSocket.listen(1)
7 while 1:
8     print("The server is ready to receive")
9     connectionSocket,addr=serverSocket.accept()
10    sentence=connectionSocket.recv(1024).decode()
11    file=open(sentence,"r")
12    l=file.read(1024)
13    connectionSocket.send(l.encode())
14    print("\n Sent contents of"+sentence)
15    file.close()
16    connectionSocket.close()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

o (base) bhu@Bhuvanas-MacBook-Pro AI LAB % python ServerTCP.py

The server is ready to receive

Sent contents ofServerTCP.py

The server is ready to receive

o (base) bhu@Bhuvanas-MacBook-Pro AI LAB % python ClientTCP.py

Enter file name :ServerTCP.py

From Server:

from socket import *
serverName="127.0.0.1"
serverPort=12000
serverSocket=socket(AF_INET,SOCK_STREAM)
serverSocket.bind((serverName,serverPort))
serverSocket.listen(1)
while 1:
 print("The server is ready to receive")
 connectionSocket,addr=serverSocket.accept()
 sentence=connectionSocket.recv(1024).decode()
 file=open(sentence,"r")
 l=file.read(1024)
 connectionSocket.send(l.encode())
 print("\n Sent contents of"+sentence)
 file.close()
 connectionSocket.close()

o (base) bhu@Bhuvanas-MacBook-Pro AI LAB %