Cycle II

LAB 15:

Aim : Using TCP/IP sockets, write a client-server program to make client sending the file name and the server to send back the contents of the requested file if present.

3. Using TCP/IP sockets, write a client-server program to make client sending the file name and the server to send back the contents of the requested file if present.

ServerTCP.py

```
from socket import *
serverName = "127.0.0.1" → loopback address
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('\nFrom Server: \n')
print(fileContents)
clinetSocket.close()
```

Procedure:

- Create 2 IDLE instances and write client and server files.
- Run server first and then the client.

Output:-

Server Instance :-

The server is ready to receive

Client Instance :-

Enter file name : ServerTCP.py

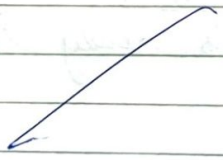
From Server :

The contents of ServerTCP.py is displayed here

Server Instance:-

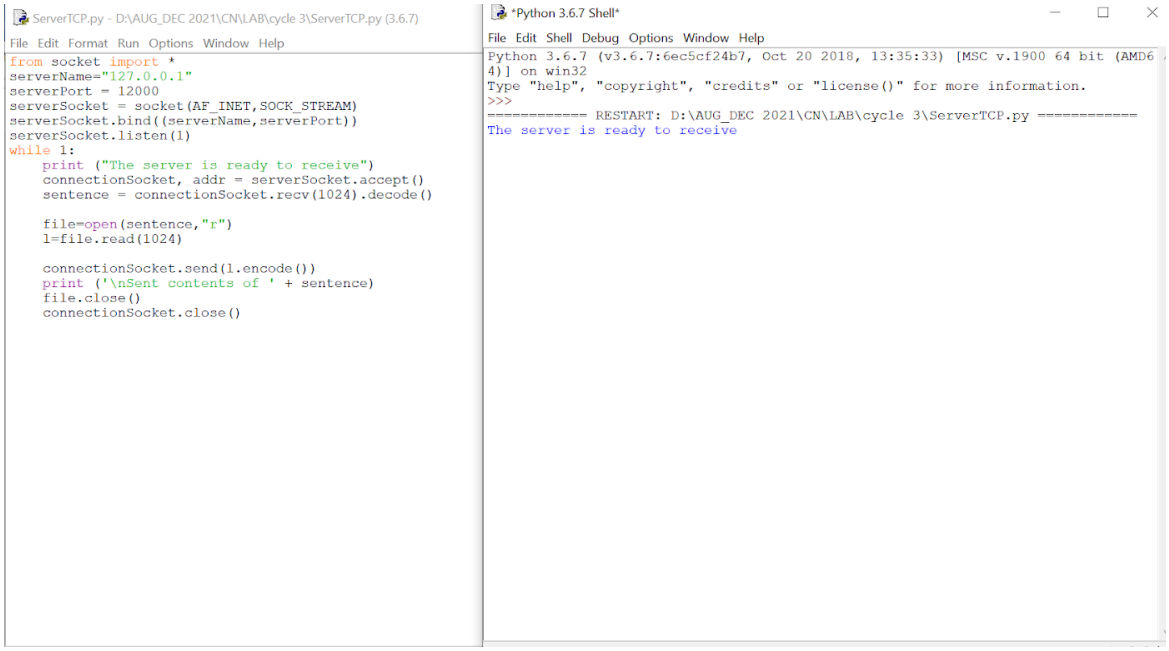
The server is ready to receive

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



Output :

Server instance:



ServerTCP.py - D:\AUG_DEC 2021\CN\LAB\cycle 3\ServerTCP.py (3.6.7)

File Edit Format Run Options Window Help

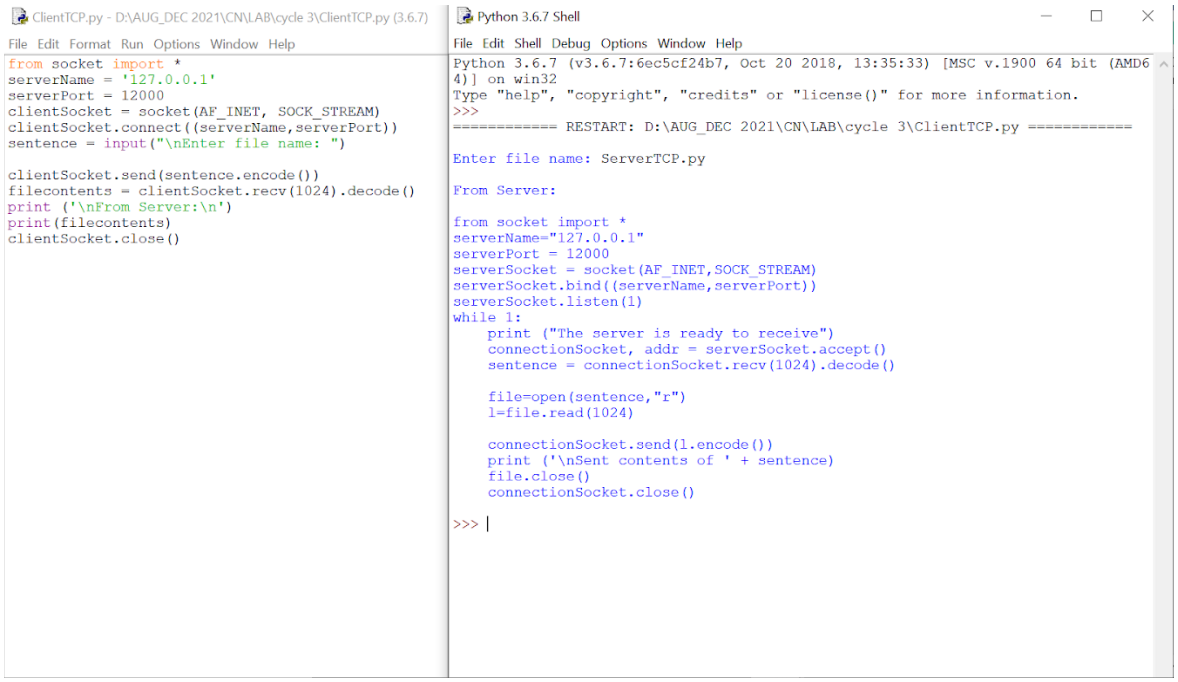
```
from socket import *
serverName="127.0.0.1"
serverPort = 12000
serverSocket = socket(AF_INET,SOCK_STREAM)
serverSocket.bind((serverName,serverPort))
serverSocket.listen(1)
while 1:
    print ("The server is ready to receive")
    connectionSocket, addr = serverSocket.accept()
    sentence = connectionSocket.recv(1024).decode()

    file=open(sentence,"r")
    l=file.read(1024)

    connectionSocket.send(l.encode())
    print ('\nSent contents of ' + sentence)
    file.close()
    connectionSocket.close()
```

Python 3.6.7 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.7 (v3.6.7:6ec5cf24b7, Oct 20 2018, 13:35:33) [MSC v.1900 64 bit (AMD6
4)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: D:\AUG_DEC 2021\CN\LAB\cycle 3\ServerTCP.py ==========
The server is ready to receive
```

Client instance:



ClientTCP.py - D:\AUG_DEC 2021\CN\LAB\cycle 3\ClientTCP.py (3.6.7)

File Edit Format Run Options Window Help

```
from socket import *
serverName = '127.0.0.1'
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_STREAM)
clientSocket.connect((serverName,serverPort))
sentence = input("\nEnter file name: ")

clientSocket.send(sentence.encode())
filecontents = clientSocket.recv(1024).decode()
print ('\nFrom Server:\n')
print(filecontents)
clientSocket.close()
```

Python 3.6.7 Shell

File Edit Shell Debug Options Window Help

```
Python 3.6.7 (v3.6.7:6ec5cf24b7, Oct 20 2018, 13:35:33) [MSC v.1900 64 bit (AMD6
4)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: D:\AUG_DEC 2021\CN\LAB\cycle 3\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 ('\nSent contents of ' + sentence)
    file.close()
    connectionSocket.close()

>>>
```

Server instance: