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1. Using TCP/IP sockets, write a client-server program to make client sending the file name & the server.

Sol^n:

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("\n Enter file Name: ");

clientSocket.send(sentence.encode())
file contents = clientSocket.recv(1024).decode()
print(fine contents)
client socket.close()
```

Server TCP.py

```
from socket import*
serverName = "127.0.0.1"
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_STREA)
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())
```

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```
Print ("In sent contents of " + sentence)
file.close()
connectionSocket.close()
```

Output

```
= Restart : C:/Users/Admin/AppData/Local/Programs/
        Python/Python310/server-tcp.py

The server is ready to receive.
sent contents of server-tcp.py
The server is ready to receive.

= Restart : C:/Users/Admin/AppData/Local/
        Programs/Python/Python310/
            client-tcp.py

Enter file name: server-tcp.py
from socket import *
serverName = '127.0.0.1'
serverPort = 12000
serverSocket = Socket(AF_INET, SOCK_STREAM)
```

⇒ Contents sent by the server displayed here.

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2. Using UDP sockets. Write a client-server programs to make client sending the file name & server to send back contents of requested file if present.

Client UDP.py

```
from socket import*
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)
Sentence = input("\n Enter file name")
clientSocket.sendto(bytes(sentence, "utf-8"),
    (serverName, serverPort))
file contents, serverAddress = clientSocket.recv
                                    from(2048)
print("\n Reply from server: \n")
Print(file contents.decode("utf-8"))
# for i in file contents
# print(str(i), end="")
clientSocket.close()
clientSocket.close()
```

Server UDP.py

```
from socket import*
serverPort = 12000
serverSocket = Socket(AF_INET, SOCK_DGRAM)
serverSocket.bind(("127.0.0.1", serverPort))
Print("The server is ready to receive")
while 1:
    sentence, clientAddress = serverSocket.recvfrom(2048)
    sentence = sentence.decode("utf-8")
    file = open(sentence, "r")
```

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```
con = file.read(2048)
serverSocket.sendto(bytes(con, "utf-8",
    clientAddress)
Print("\n Sent contens of ", end = "")
      print(sentence)
# for i in sentence
# print (str(i), end = "")
  file.close()
```

Output

Server

The server is ready to receive

Client

The contents requested by server is displayed

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