Program 4

Aim of the program: Using UDP sockets, write a client-server program to make client sending the file name and the server to send back the contents of the requested

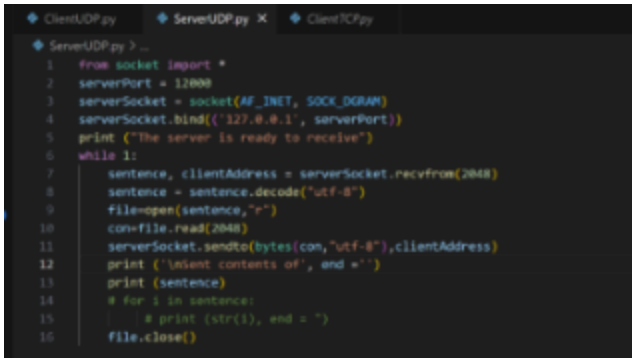
Code:

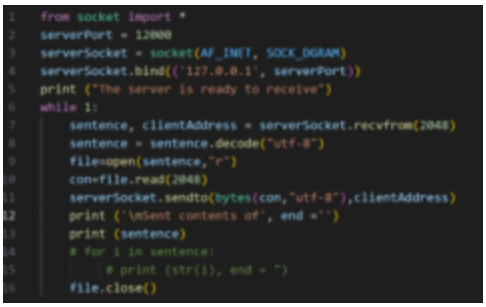
ClientUDP.py

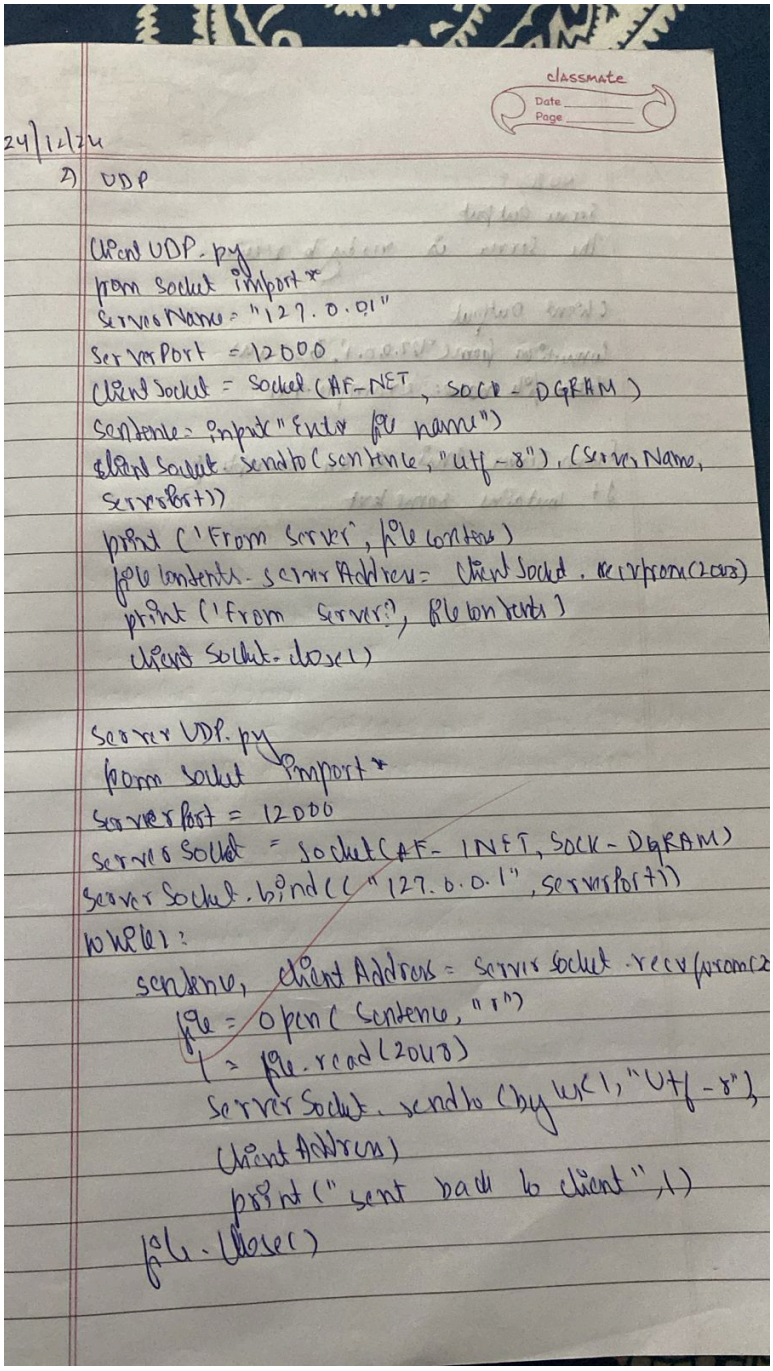
```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)

sentence = input("Enter file name: ")
clientSocket.sendto(bytes(sentence, "utf-8"), (serverName, serverPort))
filecontents, serverAddress = clientSocket.recvfrom(2048)
print('From Server:', filecontents.decode("utf-8"))
clientSocket.close()
```

ServerUDP.py

```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)
sentence = input("Enter file name: ")
clientSocket.sendto(bytes(sentence, "utf-8"), (serverName, serverPort))
filecontents, serverAddress = clientSocket.recvfrom(2048)
print('From Server:', filecontents.decode("utf-8"))
clientSocket.close()
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)
    file = open(sentence.decode("utf-8"), "r")
    l = file.read(2048)
    serverSocket.sendto(bytes(l, "utf-8"), clientAddress)
    print("Sent back to client:", l)
    file.close()
```


ClientUDP.py
ServerUDP.py
ClientTCP.py
ServerUDP.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")
con=file.read(2048)
serverSocket.sendto(bytes(con,"utf-8"),clientAddress)
print ('\nSent contents of', end =' ')
print (sentence)
# for i in sentence:
# print (str(i), end = ")
file.close()


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")
con=file.read(2048)
serverSocket.sendto(bytes(con,"utf-8"),clientAddress)
print ('\nSent contents of', end =' ')
print (sentence)
# for i in sentence:
# print (str(i), end = ")
file.close()



24/12/24

2) UDP

UDPClient.py

```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(AF_INET, SOCK_DGRAM)
sentence = input("Enter file name")
clientSocket.sendto(sentence.encode("utf-8"), (serverName, serverPort))
print('From Server', fileContents)
fileContents, serverAddress = clientSocket.recvfrom(2048)
print('From Server:', fileContents)
clientSocket.close()
```

UDPServer.py

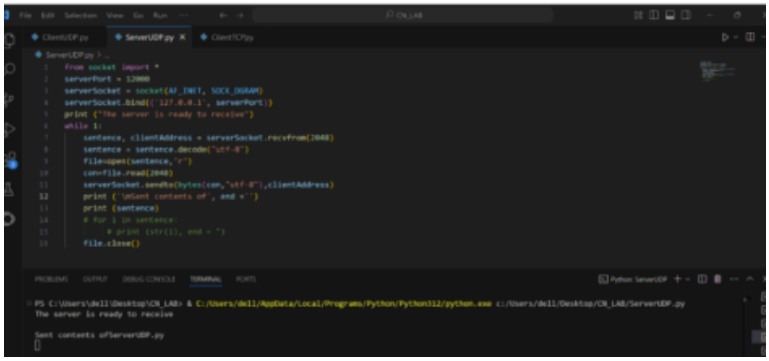
```
from socket import *
serverPort = 12000
serverSocket = socket(AF_INET, SOCK_DGRAM)
serverSocket.bind(("127.0.0.1", serverPort))
while 1:
    sentence, clientAddress = serverSocket.recvfrom(2
    file = open(sentence, "r")
    l = file.read(2048)
    serverSocket.sendto(bytes(l, "utf-8"),
    clientAddress)
    print("sent back to client",l)
file.close()
```

Output:

```
ServerUDP.py 7 ...
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")
    con=file.read(2048)
    serverSocket.sendto(bytes(con,"utf-8"),clientAddress)
    print ('\nSent contents of', end =' ')
    print (sentence)
    # for i in sentence:
        # print (str(i), end = '')
    file.close()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python: ClientUDP

```
PS C:\Users\dell\Desktop\CN_LAB> & C:/Users/dell/AppData/Local/Programs/Python/Python312/python.exe c:/Users/dell/Desktop/CN_LAB/ClientUDP.py

Enter file name:ServerUDP.py

Reply from Server:

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")
```



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ClientUDP.py ServerUDP.py ClientTCP.py

```
ServerUDP.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")
    con=file.read(2048)
    serverSocket.sendto(bytes(con,"utf-8"),clientAddress)
    print ('\nSent contents of', end =' ')
    print (sentence)
    # for i in sentence:
        # print (str(i), end = '')
    file.close()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python: ServerUDP

```
PS C:\Users\dell\Desktop\CN_LAB> & C:/Users/dell/AppData/Local/Programs/Python/Python312/python.exe c:/Users/dell/Desktop/CN_LAB/ServerUDP.py
The server is ready to receive

Sent contents ofServerUDP.py
```

OUTPUT

Server Output

The Server is ready to receive

Client Output

Connection from ('127.0.0.1', 6388)

Enter file name: example.txt

From Server: This is an example file

It contains some text

16/2/24 12 PM