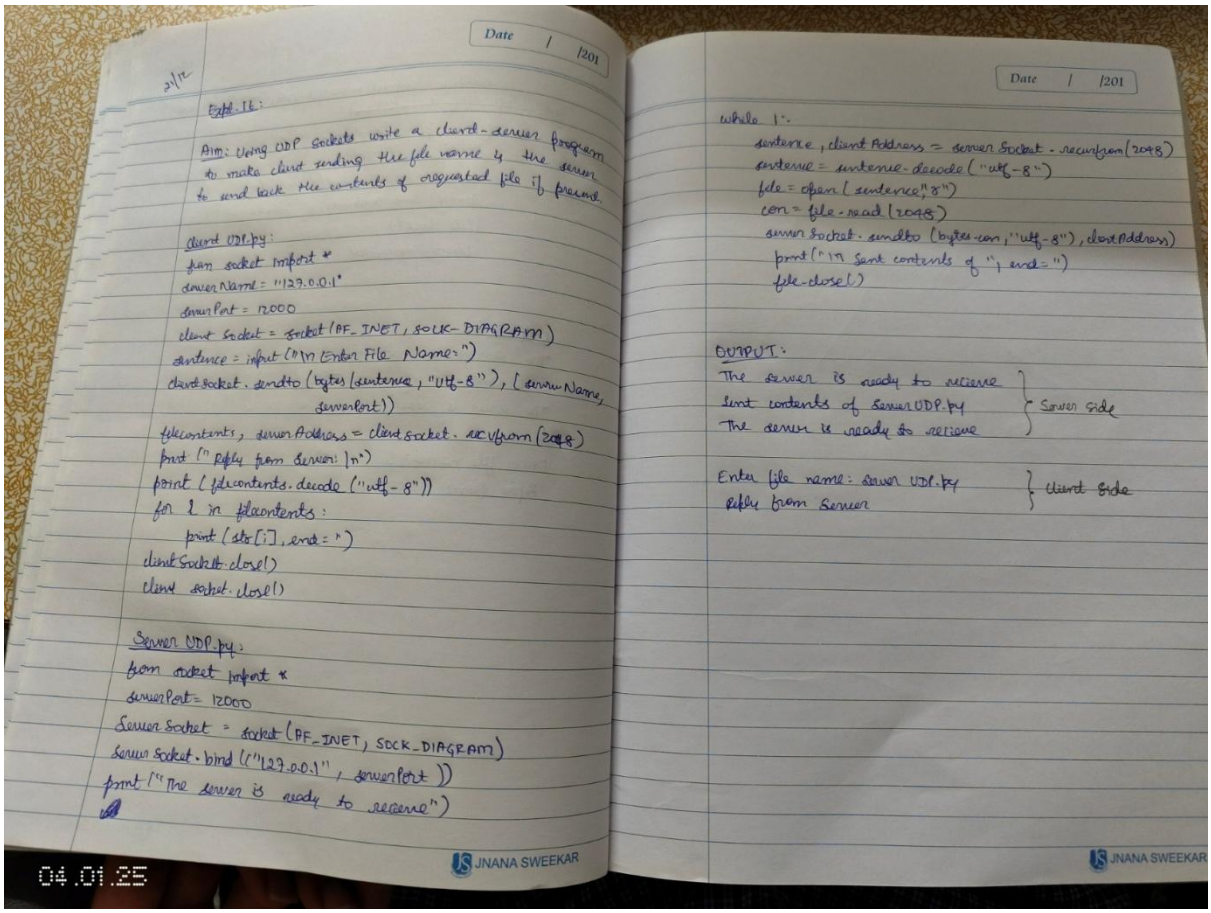
Expt. 16 – 21/12/2024



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Expt. 16:

Aim: Using UDP sockets write a client-server program to make client sending the file name & the server to send back the contents of requested file if present.

client UDP.py:

```
from socket import *
serverName = "127.0.0.1"
serverPort = 12000
clientSocket = socket(PF_INET, SOCK_DIAGRAM)
sentence = input("\n Enter File Name:")
clientSocket.sendto(bytes(sentence, "utf-8"), (serverName, serverPort))
filecontents, serverAddress = clientSocket.recvfrom(2048)
print("\n Reply from Server: \n")
print(filecontents.decode("utf-8"))
for i in filecontents:
    print(str[i], end="")
clientSocket.close()
clientSocket.close()
```

Server UDP.py:

```
from socket import *
serverPort = 12000
serverSocket = socket(PF_INET, SOCK_DIAGRAM)
serverSocket.bind(("127.0.0.1", serverPort))
print("The server is ready to receive")
```

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```
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("\n Sent contents of ", end="")
    file.close()
```

OUTPUT:

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

} Server Side

Enter file name: ServerUDP.py
Reply from Server

} Client Side

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Code:

ServerUDP.py

```
from socket import *
serverPort=12000
serverSocket=socket(AF_INET,SOCK_DGRAM)
serverSocket.bind(("127.0.0.1",serverPort))
while 1:
print("The server is ready to receive")
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("\n Sent contents of "+sentence)
file.close()
```

ClientUDP.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))
filecontents,serverAddress=clientSocket.recvfrom(2048)
print("\n Reply from server: \n")
print(filecontents.decode("utf-8"))
clientSocket.close()
```

Output:

ClientUDP.py ServerUDP.py

ServerUDP.py > ...

```
serverPort=12000
serverSocket=socket(AF_INET,SOCK_DGRAM)
serverSocket.bind(("127.0.0.1",serverPort))
while 1:
    print("The server is ready to receive")
    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("\n Sent contents of "+sentence)
    file.close()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL zsh

```
(base) bhu@Bhuvanas-MacBook-Pro AI LAB % python ServerUDP.py
The server is ready to receive

 Sent contents of ServerUDP.py
The server is ready to receive
```

```
(base) bhu@Bhuvanas-MacBook-Pro AI LAB % python 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))
while 1:
    print("The server is ready to receive")
    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("\n Sent contents of "+sentence)
    file.close()
(base) bhu@Bhuvanas-MacBook-Pro AI LAB %
```

ClientUDP.py ServerUDP.py

ClientUDP.py > serverAddress

```
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))

filecontents,serverAddress=clientSocket.recvfrom(2048)
print("\n Reply from server: \n")
print(filecontents.decode("utf-8"))
clientSocket.close()
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL zsh

```
(base) bhu@Bhuvanas-MacBook-Pro AI LAB % python ServerUDP.py
The server is ready to receive

 Sent contents of ServerUDP.py
The server is ready to receive
```

```
(base) bhu@Bhuvanas-MacBook-Pro AI LAB % python 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))
while 1:
    print("The server is ready to receive")
    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("\n Sent contents of "+sentence)
    file.close()
(base) bhu@Bhuvanas-MacBook-Pro AI LAB %
```