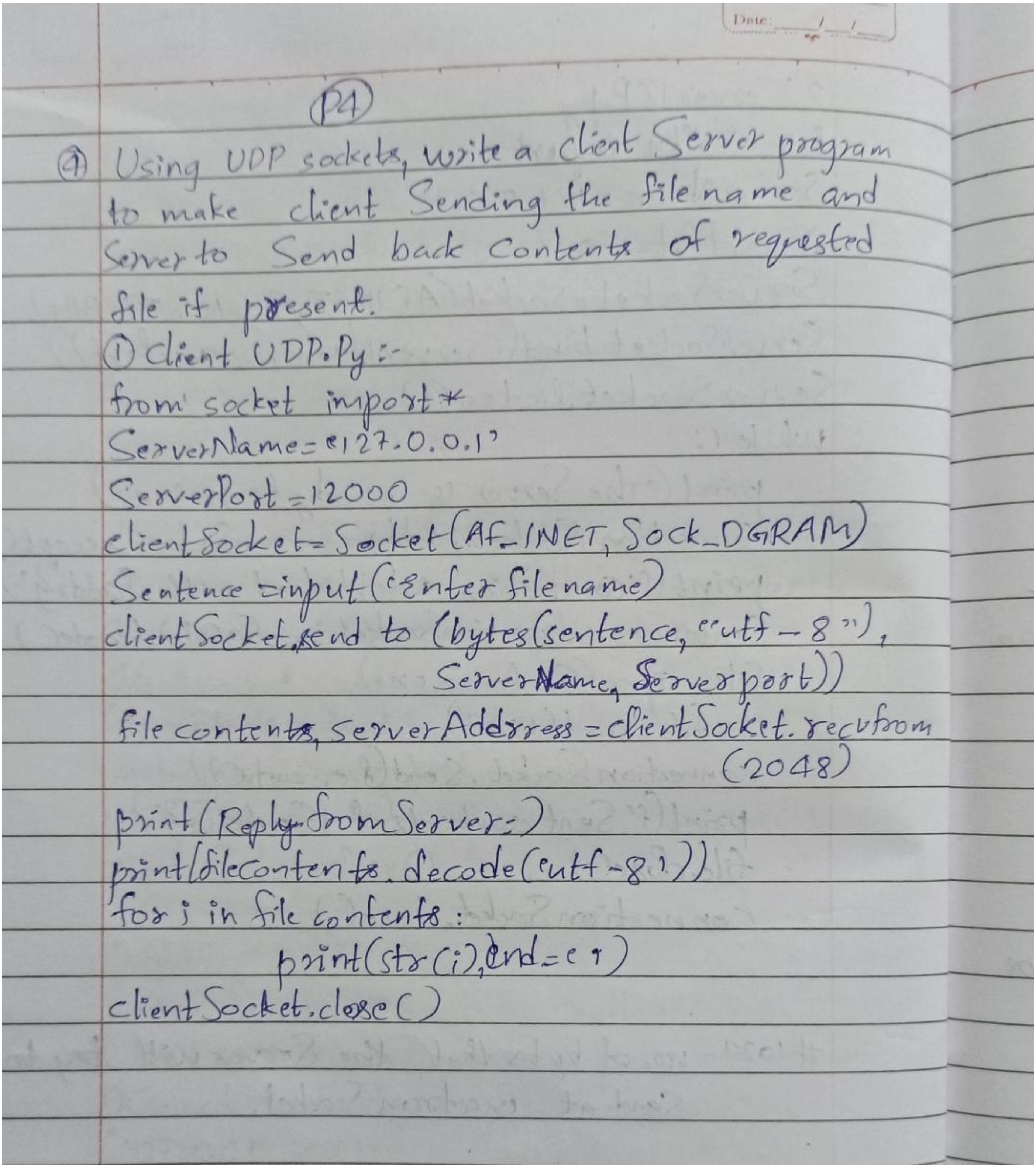
LABORATORY PROGRAM – 4

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 file if present.



Date: __/__/__

(P4)

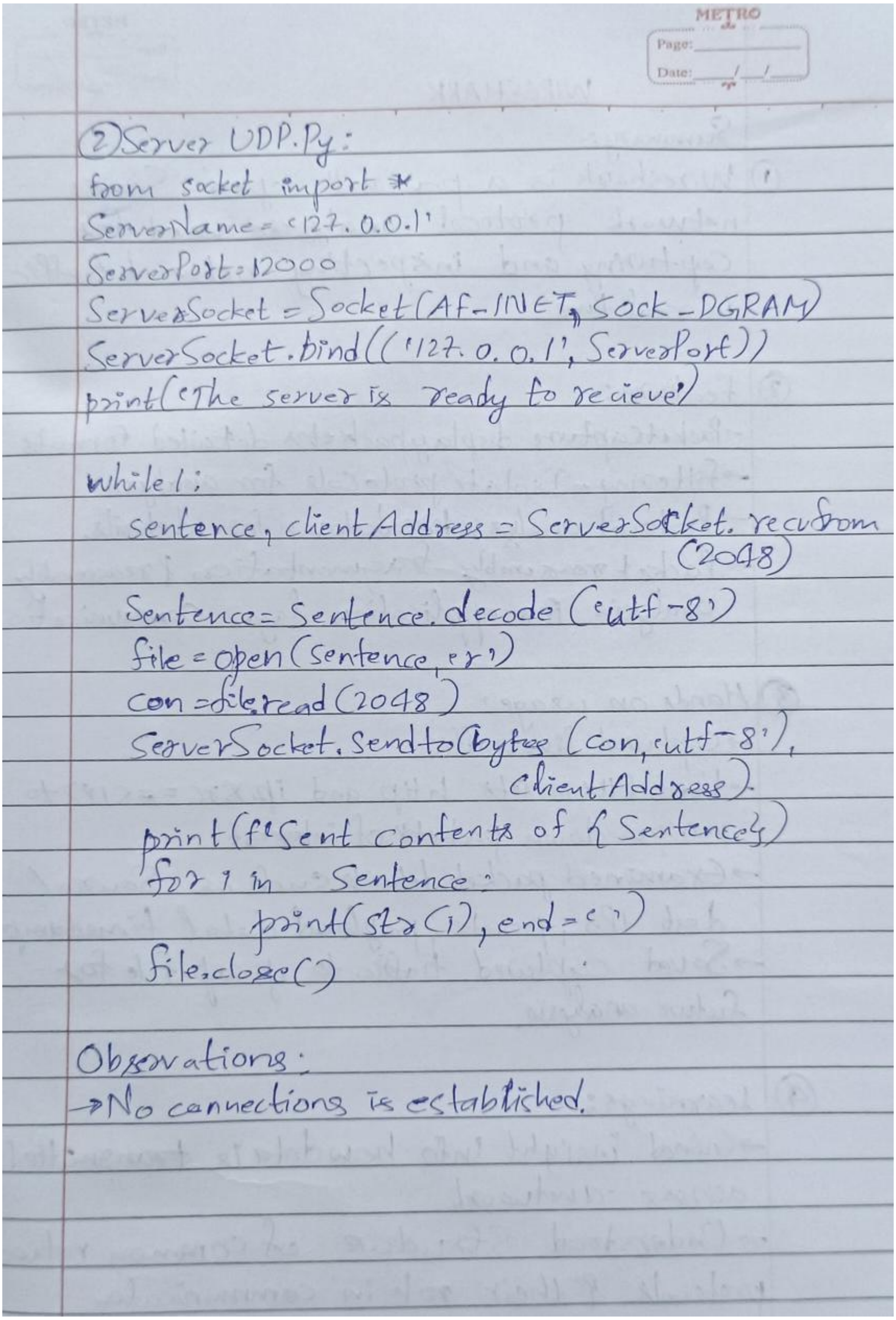
(4) Using UDP sockets, write a client Server program to make client Sending the file name and Server to Send back Contents of requested file if present.

(1) client UDP.Py :-

```
from socket import*
ServerName="127.0.0.1'
ServerPort=12000
clientSocket=Socket(AF_INET,SOCK_DGRAM)
Sentence =input('Enter filename)
clientSocket.send to (bytes(sentence, "utf-8"),
                       ServerName, Serverport))
file contents, serverAddress =clientSocket.recvfrom
                                              (2048)
print(Reply from Server:)
print(filecontents.decode('utf-8'))
for i in file contents:
          print(str(i),end='')
clientSocket.close()
```

Code: ClientUDP.py

```
from socket import *
serverName = "127.0.0.1"  # Server address (localhost)
serverPort = 12000  # Port number where the server listens

# Create UDP socket
clientSocket = socket(AF_INET, SOCK_DGRAM)

# Ask user for file name to request
sentence = input("Enter file name: ")

# Send the file name to the server using UDP
clientSocket.sendto(sentence.encode("utf-8"), (serverName, serverPort))

# Receive file contents from the server
fileContents, serverAddress = clientSocket.recvfrom(2048)

# Print the file contents received from the server
print("From Server:", fileContents.decode())

# Close the UDP socket
clientSocket.close()
```



(2) Server UDP.Py:

```
from socket import *
ServerName= '127.0.0.1'
ServerPort=12000
ServerSocket =Socket(AF-INET, SOCK-DGRAM)
ServerSocket.bind(('127.0.0.1', ServerPort))
print('The server is ready to recieve')

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(f'Sent contents of {Sentence})
  for i in Sentence:
        print(str(i), end='')
  file.close()
```

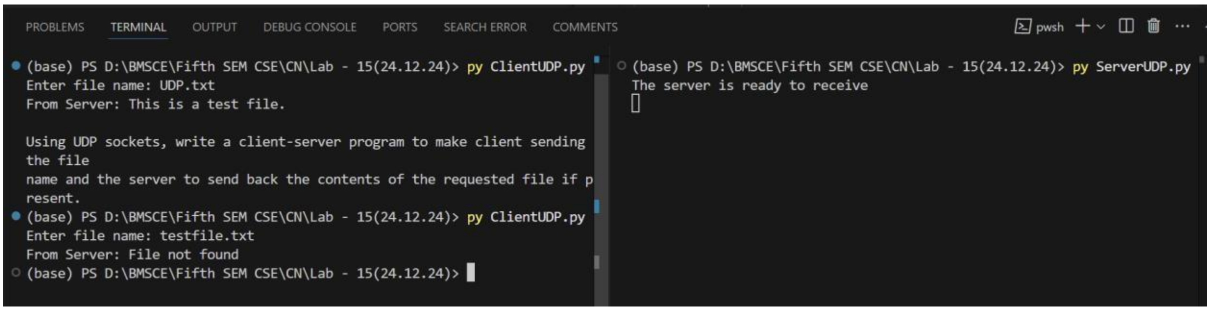
Observations:

→No connections is established.

Code: ServerUDP.py

```
from socket import *
serverPort = 12000  # Port number to listen on

# Create UDP socket
serverSocket = socket(AF_INET, SOCK_DGRAM)
serverSocket.bind(("127.0.0.1", serverPort))  # Bind the socket to the server address and port

print("The server is ready to receive")

while True:
    # Receive file name from the client
    sentence, clientAddress = serverSocket.recvfrom(2048)

    # Try opening the file
    try:
        file = open(sentence.decode(), "r")  # Open file in read mode
        fileContents = file.read(2048)  # Read file content (up to 2048 bytes)
        serverSocket.sendto(fileContents.encode("utf-8"), clientAddress)  # Send file contents to
client
        file.close()
    except FileNotFoundError:
        # Send error message if file not found
        serverSocket.sendto("File not found".encode("utf-8"), clientAddress)
```

Output



```
● (base) PS D:\BMSCE\Fifth SEM CSE\CN\Lab - 15(24.12.24)> py ClientUDP.py
  Enter file name: UDP.txt
  From Server: This is a test file.

  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 file if p
  resent.
● (base) PS D:\BMSCE\Fifth SEM CSE\CN\Lab - 15(24.12.24)> py ClientUDP.py
  Enter file name: testfile.txt
  From Server: File not found
○ (base) PS D:\BMSCE\Fifth SEM CSE\CN\Lab - 15(24.12.24)> █
```

```
○ (base) PS D:\BMSCE\Fifth SEM CSE\CN\Lab - 15(24.12.24)> py ServerUDP.py
  The server is ready to receive
  ▯
```