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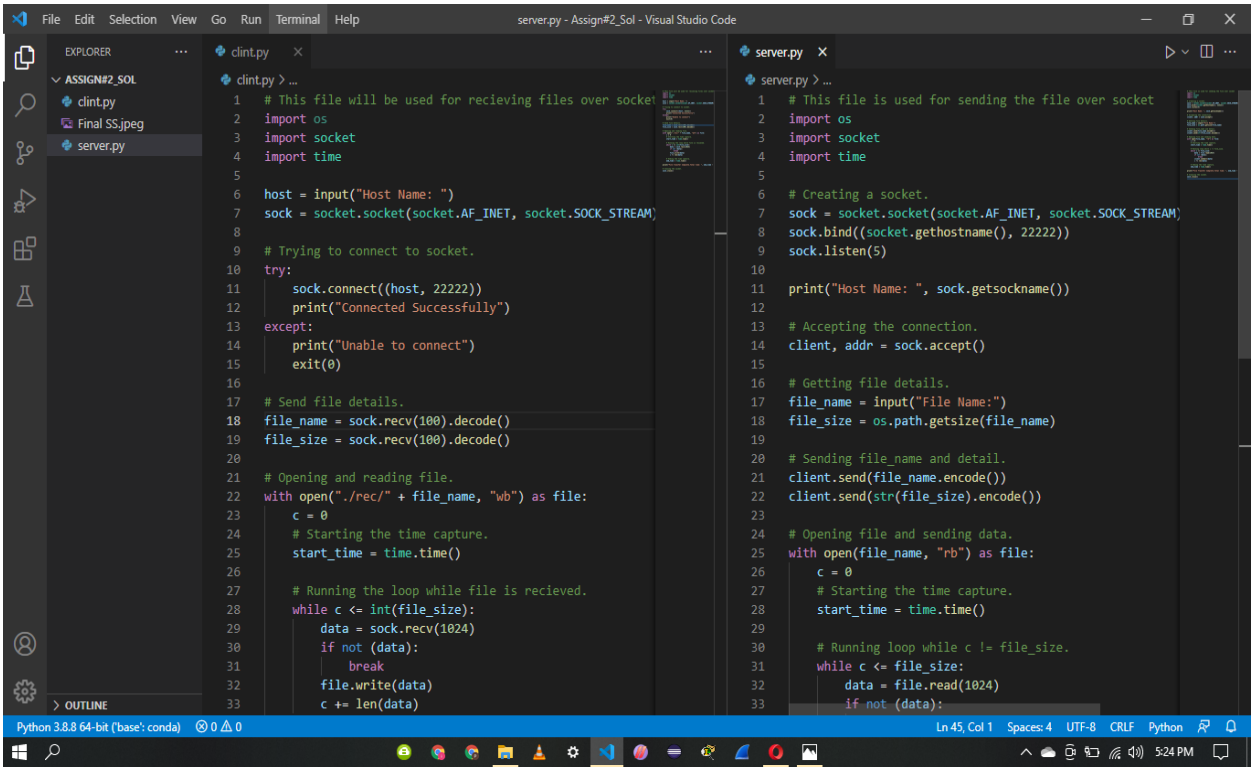
ROLL NO. :: 19P-0104

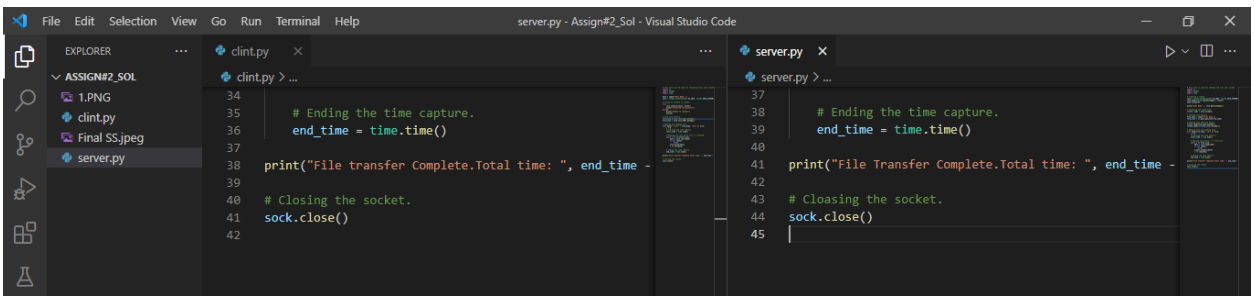
COMPUTER NETWORK

LAB # 7

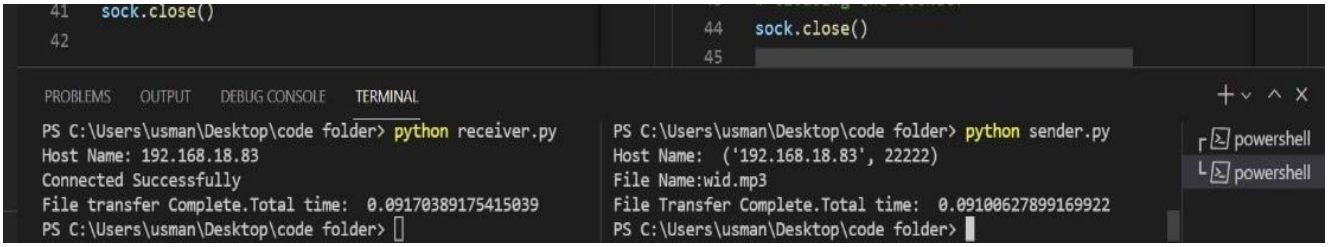
CLINT & SERVER COMMUNICATION

Socket Programming





OUTPUT



Clint.py

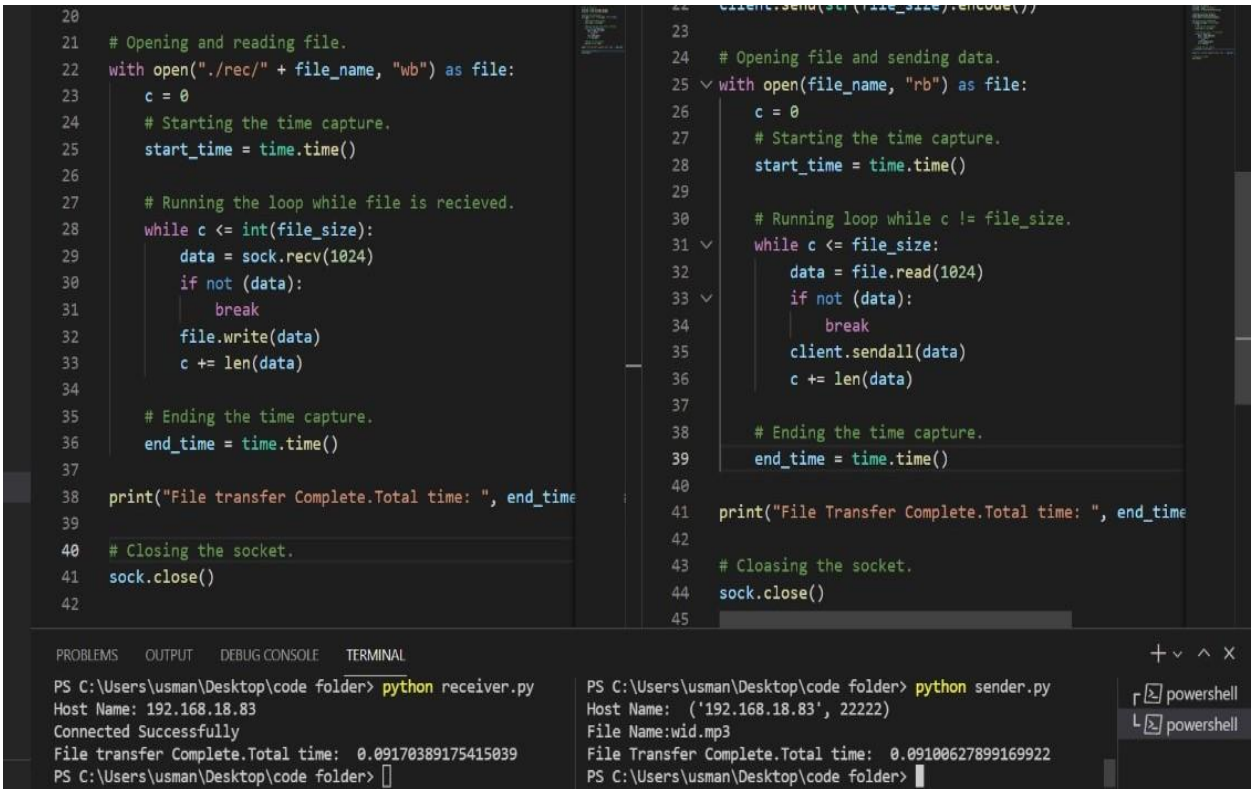
```
import os
import socket
import time


host = input("Host Name: ")
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)


# Trying to connect to socket.
try:
    sock.connect((host, 22222))
    print("Connected Successfully")
except:
    print("Unable to connect")
    exit(0)


# Send file details.
file_name = sock.recv(100).decode()
file_size = sock.recv(100).decode()
```

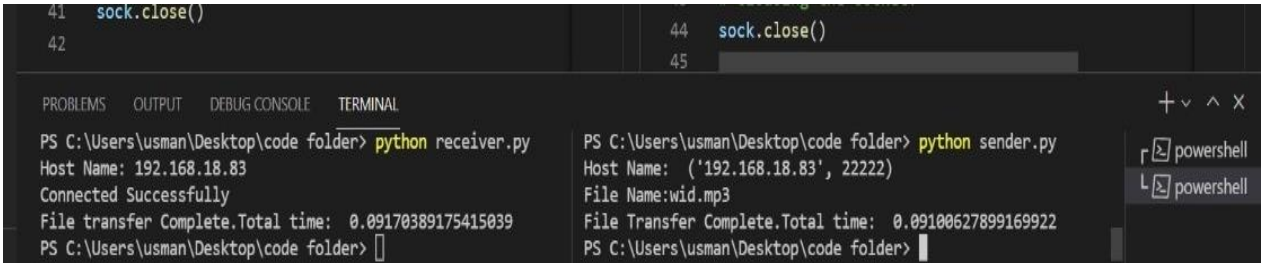
```
# Opening and reading file.
with open("./rec/" + file_name, "wb") as file:
    c = 0
    # Starting the time capture.
    start_time = time.time()

    # Running the loop while file is recieved.
    while c <= int(file_size):
        data = sock.recv(1024)
        if not (data):
            break
        file.write(data)
        c += len(data)

    # Ending the time capture.
    end_time = time.time()

print("File transfer Complete.Total time: ", end_time - start_time)

# Closing the socket.
sock.close()
```

Server.py

```
# This file is used for sending the file over socket
import os
import socket
import time

# Creating a socket.
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
sock.bind((socket.gethostname(), 22222))
sock.listen(5)

print("Host Name: ", sock.getsockname())

# Accepting the connection.
client, addr = sock.accept()

# Getting file details.
file_name = input("File Name:")
file_size = os.path.getsize(file_name)

# Sending file_name and detail.
client.send(file_name.encode())
client.send(str(file_size).encode())

# Opening file and sending data.
with open(file_name, "rb") as file:
    c = 0
    # Starting the time capture.
```

```
    start_time = time.time()

    # Running loop while c != file_size.
    while c <= file_size:
        data = file.read(1024)
        if not (data):
            break
        client.sendall(data)
        c += len(data)

    # Ending the time capture.
    end_time = time.time()

print("File Transfer Complete.Total time: ", end_time - start_time)

# Cloasing the socket.
sock.close()
```





[NOTE]

There are two files, one is for clint and other for server.

I use python Language for clint and server communication.

I use mp3 file to send across **server** to clint and from **clint** to server.

I just use 1 code for both server & Clint communication and for sending file between them.

If you wanted run the code, simply download the attachment files and then open it on VisualStudioCode or whatever python compiler that suits you. And finally type **python server.py** in Server.py terminal & type python clint.py in clint.py terminal. And see the output.

In case of sending file. Please have a look to the attached screenshots.