MDS Assignment 03 :-

Horizontal Fragmentation :-

#from http import server

'''import socket

import threading

ip=socket.gethostbyname(socket.gethostname())

port=5566

adr=(ip,port)

def handle\_client(clt,addr):

    print(f"connection to {adr} established and id is {clt}")

    connected=True

    while connected:

        clt.send("executed or connected sucessfully ","utf-8")

        clt.close()

def main():

    print("server is starting ")

    server=socket.socket(socket.AF\_INET,socket.SOCK\_STREAM)

    server.bind(adr)

    server.listen()

    print("server is listening on "+str(ip)+str(port))

    while True:

        clt,addr=server.accept()

        thread=threading.start\_new\_thread(target=handle\_client,args=(clt,addr))

        #thread.start()

        #print("active connections"+threading.activeCount()-1)

if \_\_name\_\_=="\_\_main\_\_":

    main()'''

from re import X

import socket

from \_thread import \*

import mysql.connector

host = '127.0.0.1'

port = 1233

ThreadCount = 0

conn=mysql.connector.connect(host='localhost',username='root',password='Aishwarya@123',database='college')

my\_curr=conn.cursor()

try:

    my\_curr.execute("select \* from student")

    result=my\_curr.fetchall()

    m=len(result)//2

    j=0

except:

    conn.rollback()

def client\_handler(connection):

    connection.send(str.encode('You are now connected to the replay server... Type BYE to stop'))

    str1=''

    global j

    global m

    for k in range(j,j+m):

        for i in result[k]:

            str1+=str(i)+' '

        str1+='\n'

    j=m

    while True:

        data = connection.recv(2048)

        message = data.decode('utf-8')

        if message == 'BYE':

            break

        reply = f'Server: {message}'

        connection.send(str.encode(str1))

    connection.close()

def accept\_connections(ServerSocket):

    Client, address = ServerSocket.accept()

    print('Connected to: ' + address[0] + ':' + str(address[1]))

    start\_new\_thread(client\_handler, (Client,))

def start\_server(host, port):

    ServerSocket = socket.socket()

    try:

        ServerSocket.bind((host, port))

    except socket.error as e:

        print(str(e))

    print(f'Server is listing on the port {port}...')

    ServerSocket.listen()

    while True:

        accept\_connections(ServerSocket)

start\_server(host, port)

Client :-

#from http import server

'''from http import server

import socket

ip=socket.gethostbyname(socket.gethostname())

port=5566

adr=(ip,port)

def main():

    client=socket.socket(socket.AF\_INET,socket.SOCK\_STREAM)

    client.connect(adr)

    connected =True

    while connected:

        msg=client.recv(1024)

        if (len(msg)==0):

            break

        print()

if \_\_name\_\_=="\_\_main\_\_":

    main()'''

import socket

host = '127.0.0.1'

port = 1233

ClientSocket = socket.socket()

print('Waiting for connection')

try:

    ClientSocket.connect((host, port))

except socket.error as e:

    print(str(e))

Response = ClientSocket.recv(2048)

while True:

    Input = input('Your message: ')

    ClientSocket.send(str.encode(Input))

    Response = ClientSocket.recv(2048)

    print(Response.decode('utf-8'))

ClientSocket.close()

Output:-

Server

PS E:\Dynamix\MDS-3> python server1.py

Server is listing on the port 1233...

Connected to: 127.0.0.1:51477

Connected to: 127.0.0.1:51494

Client1:-

PS E:\Dynamix\MDS-3> python client1.py

Waiting for connection

Your message: hi

1 Solpaur 7839207832 2 2

2 Solpaur 8490328328 5 1

Client2:-

PS E:\Dynamix\MDS-3> python client1.py

Waiting for connection

Your message: hi

3 Kolhapur 9990328328 4 3

4 Solapur 9583757284 3 2

Vertical Fragmentation :-

Server:

from re import X

import socket

from \_thread import \*

import mysql.connector

host = '127.0.0.1'

port = 1233

ThreadCount = 0

conn=mysql.connector.connect(host='localhost',username='root',password='Aishwarya@123',database='college')

my\_curr=conn.cursor()

try:

    my\_curr.execute("select \* from student")

    result=my\_curr.fetchall()

    m=len(result[0])//2

    j=0

except:

    conn.rollback()

def client\_handler(connection):

    connection.send(str.encode('You are now connected to the replay server... Type BYE to stop'))

    str1=''

    global j

    global m

    for k in range(len(result)):

        str1+=str(result[k][0])+" "

        for i in result[k][j+1:j+m+1]:

            str1+=str(i)+' '

        str1+='\n'

    j=m

    while True:

        data = connection.recv(2048)

        message = data.decode('utf-8')

        if message == 'BYE':

            break

        reply = f'Server: {message}'

        connection.send(str.encode(str1))

    connection.close()

def accept\_connections(ServerSocket):

    Client, address = ServerSocket.accept()

    print('Connected to: ' + address[0] + ':' + str(address[1]))

    start\_new\_thread(client\_handler, (Client,))

def start\_server(host, port):

    ServerSocket = socket.socket()

    try:

        ServerSocket.bind((host, port))

    except socket.error as e:

        print(str(e))

    print(f'Server is listing on the port {port}...')

    ServerSocket.listen()

    while True:

        accept\_connections(ServerSocket)

start\_server(host, port)

Client:

import socket

host = '127.0.0.1'

port = 1233

ClientSocket = socket.socket()

print('Waiting for connection')

try:

    ClientSocket.connect((host, port))

except socket.error as e:

    print(str(e))

Response = ClientSocket.recv(2048)

while True:

    Input = input('Your message: ')

    ClientSocket.send(str.encode(Input))

    Response = ClientSocket.recv(2048)

    print(Response.decode('utf-8'))

ClientSocket.close()

Output-

PS E:\Dynamix\MDS-3> python server2.py

Server is listing on the port 1233...

Connected to: 127.0.0.1:51701

Connected to: 127.0.0.1:51730

Client1:-

PS E:\Dynamix\MDS-3> python client2.py

Waiting for connection

Your message: hi

1 Solpaur 7839207832

2 Solpaur 8490328328

3 Kolhapur 9990328328

4 Solapur 9583757284

5 Kashmir 7429579322

Client2:-

PS E:\Dynamix\MDS-3> python client2.py

Waiting for connection

Your message: hi

1 2 2

2 5 1

3 4 3

4 3 2

5 3 1