A -2

2pc protocol

Server.py

from http import client

from re import X

import socket

from \_thread import \*

import mysql.connector

import time

host = '127.0.0.1'

port = 1233

cnt=0

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

my\_curr=conn.cursor()

def databaseupdate():

    try:

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

        '''result=my\_curr.fetchall()

        for i in range(len(result)):

            result[i][2]+=500'''

        conn.commit()

        sql="update cust set amount = `amount+500`  where c\_id=1 "

        my\_curr.execute(sql)

        conn.commit()

    except:

        conn.rollback()

buffer=[]

buffer2=[]

def call():

    if(len(buffer)==len(buffer2)):

        if(all(buffer2)):

            for j in range(len(buffer)):

                databaseupdate()

                buffer[j].send(str.encode("commit"))

        else:

            for j in range(len(buffer)):

                buffer[j].send(str.encode("Abort"))

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()'''

    while True:

        reply=connection.recv(2048)

        reply=reply.decode('utf-8')

        if(reply=='Ready'):

            buffer2.append(1)

        else:

            buffer2.append(0)

        time.sleep(5)

        call()

    connection.close()

def accept\_connections(ServerSocket):

    Client, address = ServerSocket.accept()

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

    buffer.append(Client)

    Client.send(str.encode("Prepare"))

    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.py

import socket

import time

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))

while True:

    Response = ClientSocket.recv(2048)

    print(Response.decode('utf-8'))

    Input = input('Your message: ')

    ClientSocket.send(str.encode(Input))

    time.sleep(10)

ClientSocket.close()

Output:-

Sever Side

PS E:\Dynamix\MDS-4> python server.py

Server is listing on the port 1233...

Connected to: 127.0.0.1:51212

Connected to: 127.0.0.1:51214

Clinet 1:-

PS E:\Dynamix\MDS-4> python client.py

Waiting for connection

Prepare

Your message: Ready

commit

Your message:

Client 2:-

PS E:\Dynamix\MDS-4> python client.py

Waiting for connection

Prepare

Your message: Ready

commit

Your message:

Example2:

Client1:-

PS E:\Dynamix\MDS-4> python client.py

Waiting for connection

Prepare

Your message: no

Abort

Your message:

Client2:-

PS E:\Dynamix\MDS-4> python client.py

Waiting for connection

Prepare

Your message: Ready

Abort

Your message: