# 简易聊天程序

import socket

import threading

# 服务器端代码

def server():

# 创建socket对象

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

# 获取本地主机名

host = socket.gethostname()

port = 9999

# 绑定端口号

server\_socket.bind((host, port))

# 设置最大连接数，超过后排队

server\_socket.listen(5)

print("服务器启动，等待客户端连接...")

# 接收客户端连接

client\_socket, addr = server\_socket.accept()

print(f"连接地址: {addr}")

def receive():

while True:

try:

# 接收客户端消息

message = client\_socket.recv(1024).decode()

if message:

print(f"客户端: {message}")

else:

# 客户端断开连接

print("客户端已断开连接")

break

except:

print("客户端已断开连接")

break

def send():

while True:

try:

# 发送消息给客户端

message = input("服务器: ")

client\_socket.send(message.encode())

except:

print("无法发送消息")

break

# 创建接收和发送消息的线程

receive\_thread = threading.Thread(target=receive)

send\_thread = threading.Thread(target=send)

receive\_thread.start()

send\_thread.start()

receive\_thread.join()

send\_thread.join()

# 关闭连接

client\_socket.close()

server\_socket.close()

# 客户端代码

def client():

# 创建socket对象

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

# 获取本地主机名

host = socket.gethostname()

port = 9999

# 连接到服务器

client\_socket.connect((host, port))

def receive():

while True:

try:

# 接收服务器消息

message = client\_socket.recv(1024).decode()

if message:

print(f"服务器: {message}")

else:

# 服务器断开连接

print("服务器已断开连接")

break

except:

print("服务器已断开连接")

break

def send():

while True:

try:

# 发送消息给服务器

message = input("客户端: ")

client\_socket.send(message.encode())

except:

print("无法发送消息")

break

# 创建接收和发送消息的线程

receive\_thread = threading.Thread(target=receive)

send\_thread = threading.Thread(target=send)

receive\_thread.start()

send\_thread.start()

receive\_thread.join()

send\_thread.join()

# 关闭连接

client\_socket.close()

# 主程序

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

print("请选择运行模式：")

print("1. 服务器端")

print("2. 客户端")

choice = input("请输入您的选择（1或2）：")

if choice == '1':

server()

elif choice == '2':

client()

else:

print("无效的选择")