用戶端一對多通訊ex321

**ClientOneToMany\_ClientFrame**

**package com.zzk;**

**import java.awt.BorderLayout;**

**import java.awt.Dimension;**

**import java.awt.EventQueue;**

**import java.awt.event.ActionEvent;**

**import java.awt.event.ActionListener;**

**import java.io.BufferedReader;**

**import java.io.IOException;**

**import java.io.InputStreamReader;**

**import java.io.PrintWriter;**

**import java.net.Socket;**

**import java.net.UnknownHostException;**

**import javax.swing.JButton;**

**import javax.swing.JFrame;**

**import javax.swing.JLabel;**

**import javax.swing.JPanel;**

**import javax.swing.JScrollPane;**

**import javax.swing.JTextArea;**

**import javax.swing.JTextField;**

**public class ClientOneToMany\_ClientFrame extends JFrame {**

**private JTextArea ta\_info;**

**private JTextField tf\_send;**

**PrintWriter out;// 宣告輸出流對像**

**/\*\***

**\* Launch the application**

**\***

**\* @param args**

**\*/**

**public static void main(String args[]) {**

**EventQueue.invokeLater(new Runnable() {**

**public void run() {**

**try {**

**ClientOneToMany\_ClientFrame frame = new ClientOneToMany\_ClientFrame();**

**frame.setVisible(true);**

**frame.createClientSocket();**

**} catch (Exception e) {**

**e.printStackTrace();**

**}**

**}**

**});**

**}**

**public void createClientSocket() {**

**try {**

**Socket socket = new Socket("localhost", 1978);// 建立套接字對像**

**out = new PrintWriter(socket.getOutputStream(), true);// 建立輸出流對像**

**new ClientThread(socket).start();// 建立並啟動線程對像**

**} catch (UnknownHostException e) {**

**e.printStackTrace();**

**} catch (IOException e) {**

**e.printStackTrace();**

**}**

**}**

**class ClientThread extends Thread {**

**Socket socket;**

**public ClientThread(Socket socket) {**

**this.socket = socket;**

**}**

**public void run() {**

**try {**

**BufferedReader in = new BufferedReader(new InputStreamReader(**

**socket.getInputStream()));// 建立輸入流對像**

**while (true) {**

**String info = in.readLine();// 讀取資訊**

**ta\_info.append(info + "\n");// 在純文字域中顯示資訊**

**if (info.equals("88")) {**

**break;// 結束線程**

**}**

**}**

**} catch (IOException e) {**

**e.printStackTrace();**

**}**

**}**

**}**

**private void send() {**

**String info = tf\_send.getText();// 獲得輸入的資訊**

**if (info.equals("")) {**

**return;// 如果沒輸入資訊則傳回，即不發送**

**}**

**if (info.equals("88")) {**

**System.exit(0);// 如果沒輸入資訊是88，則退出**

**}**

**out.println(info);// 發送資訊**

**out.flush();// 更新輸出緩衝區**

**tf\_send.setText(null);// 清空純文字框**

**}**

**/\*\***

**\* Create the frame**

**\*/**

**public ClientOneToMany\_ClientFrame() {**

**super();**

**setTitle("客戶端一對多通訊——客戶端程式");**

**setBounds(100, 100, 385, 266);**

**setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);**

**final JPanel panel = new JPanel();**

**getContentPane().add(panel, BorderLayout.SOUTH);**

**final JLabel label = new JLabel();**

**label.setText("輸入聊天內容：");**

**panel.add(label);**

**tf\_send = new JTextField();**

**tf\_send.addActionListener(new ActionListener() {**

**public void actionPerformed(final ActionEvent e) {**

**send();// 呼叫方法發送資訊**

**}**

**});**

**tf\_send.setPreferredSize(new Dimension(180, 25));**

**panel.add(tf\_send);**

**final JButton button = new JButton();**

**button.addActionListener(new ActionListener() {**

**public void actionPerformed(final ActionEvent e) {**

**send();// 呼叫方法發送資訊**

**}**

**});**

**button.setText("發 送");**

**panel.add(button);**

**final JScrollPane scrollPane = new JScrollPane();**

**getContentPane().add(scrollPane, BorderLayout.CENTER);**

**ta\_info = new JTextArea();**

**scrollPane.setViewportView(ta\_info);**

**//**

**}**

**}**

**ClientOneToMany\_ServerFrame**

**package com.zzk;**

**import java.awt.BorderLayout;**

**import java.io.BufferedReader;**

**import java.io.IOException;**

**import java.io.InputStreamReader;**

**import java.io.PrintWriter;**

**import java.net.ServerSocket;**

**import java.net.Socket;**

**import java.util.Vector;**

**import javax.swing.JFrame;**

**import javax.swing.JScrollPane;**

**import javax.swing.JTextArea;**

**public class ClientOneToMany\_ServerFrame extends JFrame {**

**private JTextArea ta\_info;**

**private ServerSocket server; // 宣告ServerSocket對像**

**private Socket socket; // 宣告Socket對像socket**

**private Vector<Socket> vector = new Vector<Socket>();// 用於儲存連接到服務器的客戶端套接字對像**

**public void createSocket() {**

**try {**

**server = new ServerSocket(1978);**

**while (true) {**

**ta\_info.append("等待新客戶連接......\n");**

**socket = server.accept();// 建立套接字對像**

**vector.add(socket);// 將套接字對像增加到向量對像中**

**ta\_info.append("客戶端連接成功。" + socket + "\n");**

**new ServerThread(socket).start();// 建立並啟動線程對像**

**}**

**} catch (IOException e) {**

**e.printStackTrace();**

**}**

**}**

**class ServerThread extends Thread {**

**Socket socket;**

**public ServerThread(Socket socket) {**

**this.socket = socket;**

**}**

**public void run() {**

**try {**

**BufferedReader in = new BufferedReader(new InputStreamReader(**

**socket.getInputStream()));// 建立輸入流對像**

**while (true) {**

**String info = in.readLine();// 讀取資訊**

**for (Socket s : vector) {// 檢查所有客戶端套接字對像**

**if (s != socket) {// 如果不是發送資訊的套接字對像**

**PrintWriter out = new PrintWriter(s**

**.getOutputStream(), true);// 建立輸出流對像**

**out.println(info);// 發送資訊**

**out.flush();// 更新輸出緩衝區**

**}**

**}**

**}**

**} catch (IOException e) {**

**ta\_info.append(socket + "已經退出。\n");**

**vector.remove(socket);// 移除退出的客戶端套接字**

**}**

**}**

**}**

**/\*\***

**\* Launch the application**

**\***

**\* @param args**

**\*/**

**public static void main(String args[]) {**

**ClientOneToMany\_ServerFrame frame = new ClientOneToMany\_ServerFrame();**

**frame.setVisible(true);**

**frame.createSocket();**

**}**

**/\*\***

**\* Create the frame**

**\*/**

**public ClientOneToMany\_ServerFrame() {**

**super();**

**setTitle("客戶端一對多通訊——服務器端程式");**

**setBounds(100, 100, 385, 266);**

**setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);**

**final JScrollPane scrollPane = new JScrollPane();**

**getContentPane().add(scrollPane, BorderLayout.CENTER);**

**ta\_info = new JTextArea();**

**scrollPane.setViewportView(ta\_info);**

**}**

**}**