TCPEchoServer

```java
import java.net.*;
import java.io.*;

public class TCPEchoServer
{

 public static void main(String args[])
 {
 int port = 8910;
 ServerSocket serverSocket = null;
 DataInputStream dataInputStream = null;
 DataOutputStream dataOutputStream = null;

 try
 {
      // open a server socket
      serverSocket = new ServerSocket(port);
      System.out.println("Server created on port "+port);
      System.out.println("Awaiting client connection...");
      // await for a client connection
      Socket clientSocket = serverSocket.accept();
      System.out.println("Client connected from "+clientSocket.getInetAddress());
      dataInputStream = new DataInputStream(clientSocket.getInputStream());
      dataOutputStream = new DataOutputStream(clientSocket.getOutputStream());
 }
      catch(IOException e)
 {
      System.out.println("Problems initializing server: "+e);
      System.exit(1);
 }

 // communicate with the client
 try
 {
      dataOutputStream.writeUTF("Welcome to the TCP Echo Server!");
      String input;
      while(true)
      {
              // read data in from client
              input = dataInputStream.readUTF();
              System.out.println("You typed: "+input);

              // write data back to client
              dataOutputStream.writeUTF(input);
      }
 }
 catch(IOException e)
 {
      System.out.println("Client disconnected from server");
 }

 try
 {
      serverSocket.close();
 }
 catch(Exception e) { }
 }

}
```

TCPEchoClient

```java
import java.net.*;
import java.io.*;

class TCPEchoReader extends Thread {

    public TCPEchoReader(DataInputStream input){
        dataInputStream = input;
        active = true;
    }

  public void run(){
        while(active)
        {
                try {
                        String message = dataInputStream.readUTF();
                        System.out.println("Received from server: "+message);
                }
                catch(IOException e)
                {
                        System.out.println(e);
                        active = false;
                }
        }
  }


  public boolean active;
  public DataInputStream dataInputStream;
 }


public class TCPEchoClient {

 public static void main(String[] args) {
        String address = "192.168.2.231";
        int port = 8910;
        Socket socket = null;
        DataInputStream dataInputStream = null;
        DataOutputStream dataOutputStream = null;
        BufferedReader keyboardReader = null;

        // Connect to the server...
        try{
                socket = new Socket(address, port);
                // Obtain the streams...
                dataInputStream = new DataInputStream(socket.getInputStream());
                dataOutputStream = new DataOutputStream(socket.getOutputStream());
                keyboardReader = new BufferedReader(new InputStreamReader(System.in));
        }
        catch(IOException e)
        {
                System.out.println("Problems initialising: "+e);
                System.exit(1);
        }

        try {
                // Start the listening thread...
                TCPEchoReader reader = new TCPEchoReader(dataInputStream);
                reader.setDaemon(true);
                reader.start();
                String input;
```

```java
            while(true)
            {
                    // read data in from the keyboard
                    input = keyboardReader.readLine();
                    // send data to server
                    dataOutputStream.writeUTF(input);
            }
        }
        catch(IOException e) { }

        try {
                socket.close();
        }
        catch(IOException e) { }
    }
}
```