

```
// Bài tập 1 – Chương 5
```

```
using System;
```

```
using System.Net;
```

```
using System.Net.Sockets;
```

```
using System.Collections.Generic;
```

```
using System.ComponentModel;
```

```
using System.Data;
```

```
using System.Drawing;
```

```
using System.Linq;
```

```
using System.Text;
```

```
using System.Windows.Forms;
```

```
namespace AcSyncTcpSrv
```

```
{
```

```
    public partial class Form1 : Form
```

```
    {
```

```
        private byte[] data = new byte[1024];
```

```
        private int size = 1024;
```

```
        private Socket server;
```

```
        public Form1()
```

```
        {
```

```
            InitializeComponent();
```

```
            server = new Socket(AddressFamily.InterNetwork,
```

```
SocketType.Stream, ProtocolType.Tcp);
```

```
            IPEndPoint iep = new IPEndPoint(IPAddress.Any, 9050);
```

```

server.Bind(iep);
server.Listen(5);
server.BeginAccept(new AsyncCallback(AcceptConn), server);

}

private void btnStop_Click(object sender, EventArgs e)
{
    Close();
}

void AcceptConn(IAsyncResult iar)
{
    Socket oldserver = (Socket)iar.AsyncState;
    Socket client = oldserver.EndAccept(iar);
    conStatus.Text = "Connected to: " + client.RemoteEndPoint.ToString();
    string stringData = "Welcome to my server";
    byte[] message1 = Encoding.ASCII.GetBytes(stringData);
    client.BeginSend(message1, 0, message1.Length, SocketFlags.None,
        new AsyncCallback(SendData), client);
}

void SendData(IAsyncResult iar)
{
    Socket client = (Socket)iar.AsyncState;
    int sent = client.EndSend(iar);
    client.BeginReceive(data, 0, size, SocketFlags.None,
        new AsyncCallback(ReceiveData), client);
}

```

```

    }
    void ReceiveData(IAsyncResult iar)
    {
        Socket client = (Socket)iar.AsyncState;
        int recv = client.EndReceive(iar);
        if (recv == 0)
        {
            client.Close();
            conStatus.Text = "Waiting for client...";
            server.BeginAccept(new AsyncCallback(AcceptConn), server);
            return;
        }
        string receivedData = Encoding.ASCII.GetString(data, 0, recv);
        results.Items.Add(receivedData);
        byte[] message2 = Encoding.ASCII.GetBytes(receivedData);
        client.BeginSend(message2, 0, message2.Length, SocketFlags.None,
            new AsyncCallback(SendData), client);
    }

}
}

```

Form1

Text received from Client:

Stop Server

Connection Status:

Client:

```
using System;  
using System.Collections.Generic;  
using System.ComponentModel;  
using System.Data;  
using System.Drawing;  
using System.Linq;  
using System.Text;  
using System.Windows.Forms;
```

```
using System.Net.Sockets;
```

```
using System.Net;
```

```
namespace AcsyncTcpClients
```

```
{
```

```
    public partial class Form1 : Form
```

```
    {
```

```
        private Socket client;
```

```
        private byte[] data = new byte[1024];
```

```
        private int size = 1024;
```

```
        public Form1()
```

```
        {
```

```
            InitializeComponent();
```

```
        }
```

```
        private void btnConnect_Click(object sender, EventArgs e)
```

```
        {
```

```
            conStatus.Text = "Connecting...";
```

```
            Socket newsock = new Socket(AddressFamily.InterNetwork,
```

```
                SocketType.Stream, ProtocolType.Tcp);
```

```
            IPEndPoint iep = new IPEndPoint(IPAddress.Parse("127.0.0.1"), 9050);
```

```
            newsock.BeginConnect(iep, new AsyncCallback(Connected), newsock);
```

```
        }
```

```
        private void btnSend_Click(object sender, EventArgs e)
```

```
{  
    byte[] message = Encoding.ASCII.GetBytes(newText.Text);  
    newText.Clear();  
    client.BeginSend(message, 0, message.Length, SocketFlags.None,  
        new AsyncCallback(SendData), client);  
}
```

```
private void btnDisconnect_Click(object sender, EventArgs e)  
{  
    client.Close();  
    conStatus.Text = "Disconnected";  
}
```

```
void Connected(IAsyncResult iar)  
{  
    client = (Socket)iar.AsyncState;  
    try  
    {  
        client.EndConnect(iar);  
        conStatus.Text = "Connected to: " + client.RemoteEndPoint.ToString();  
        client.BeginReceive(data, 0, size, SocketFlags.None,  
            new AsyncCallback(ReceiveData), client);  
    }  
    catch (SocketException)
```

```

    {
        MessageBox.Show("Không thể kết nối đến Server");
        conStatus.Text = "Error connecting";

    }
}

void ReceiveData(IAsyncResult iar)
{
    Socket remote = (Socket)iar.AsyncState;
    int recv = remote.EndReceive(iar);
    string stringData = Encoding.ASCII.GetString(data, 0, recv);
    results.Items.Add(stringData);
}

void SendData(IAsyncResult iar)
{
    Socket remote = (Socket)iar.AsyncState;
    int sent = remote.EndSend(iar);
    remote.BeginReceive(data, 0, size, SocketFlags.None,
        new AsyncCallback(ReceiveData), remote);
}

}

}

```

Form1

Nhập vào 1 chuỗi:

Status: