

### CHƯƠNG 3: BÀI TẬP 6

```
using System;
using System.Net;
using System.Net.Sockets;
using System.Text;
class RetryUdpClient
{
    private byte[] data = new byte[1024];
    private static IPEndPoint sender = new IPEndPoint(IPAddress.Any, 0);
    private static EndPoint Remote = (EndPoint)sender;
    private int SndRcvData(Socket s, byte[] message, EndPoint rmtdevice)
    {
        int recv;
        int retry = 0;
        while (true)
        {
            Console.WriteLine("Attempt #{0}", retry);
            try
            {
                s.SendTo(message, message.Length, SocketFlags.None, rmtdevice);
                data = new byte[1024];
                recv = s.ReceiveFrom(data, ref Remote);
            } catch (SocketException)
            {
                recv = 0;
            }
            if (recv > 0)
            {
                return recv;
            } else
            {
                retry++;
                if (retry > 4)
                {
                    return 0;
                }
            }
        }
    }
}

public RetryUdpClient()
{
    string input, stringData;
    int recv;
    IPEndPoint ipep = new IPEndPoint(
        IPAddress.Parse("127.0.0.1"), 9050);
    Socket server = new Socket(AddressFamily.InterNetwork,
        SocketType.Dgram, ProtocolType.Udp);
    int sockopt = (int)server.GetSocketOption(SocketOptionLevel.Socket,
        SocketOptionName.ReceiveTimeout);
    Console.WriteLine("Default timeout: {0}", sockopt);
    server.SetSocketOption(SocketOptionLevel.Socket,
        SocketOptionName.ReceiveTimeout, 3000);
    sockopt = (int)server.GetSocketOption(SocketOptionLevel.Socket,
        SocketOptionName.ReceiveTimeout);
```

```

Console.WriteLine("New timeout: {0}", sockopt);
string welcome = "Hello, are you there?";
data = Encoding.ASCII.GetBytes(welcome);
recv = SndRcvData(server, data, ipep);
if (recv > 0)
{
    stringData = Encoding.ASCII.GetString(data, 0, recv);
    Console.WriteLine(stringData);
} else
{
    Console.WriteLine("Unable to communicate with remote host");
    return;
}
while(true)
{
    input = Console.ReadLine();
    if (input == "exit")
        break;
    recv = SndRcvData(server, Encoding.ASCII.GetBytes(input), ipep);
    if (recv > 0)
    {
        stringData = Encoding.ASCII.GetString(data, 0, recv);
        Console.WriteLine(stringData);
    } else
        Console.WriteLine("Did not receive an answer");
    }
    Console.WriteLine("Stopping client");
    server.Close();
}
public static void Main()
{
    RetryUdpClient ruc = new RetryUdpClient();
}
}

```