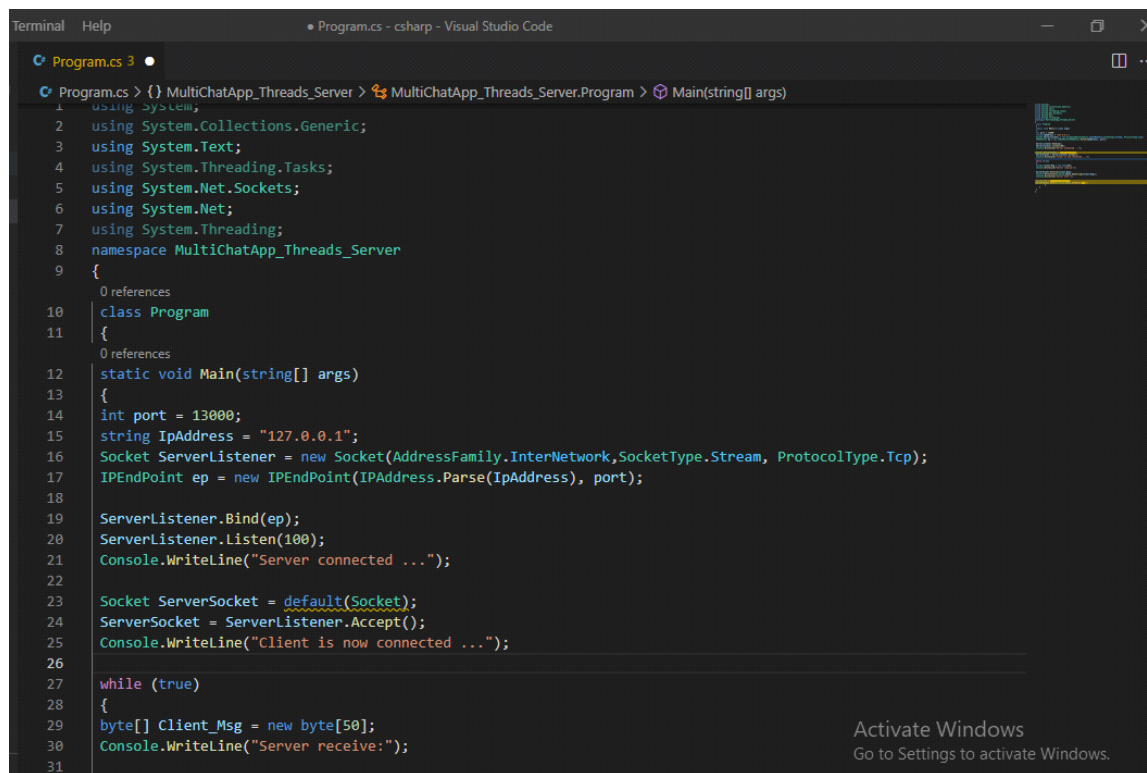


## Server Code



The image shows a Visual Studio Code editor window with a C# file named Program.cs. The code is for a multi-threaded chat server. It includes using statements for System, System.Collections.Generic, System.Text, System.Threading.Tasks, System.Net.Sockets, System.Net, and System.Threading. The namespace is MultiChatApp\_Threads\_Server. Inside the namespace, there is a class Program with a static void Main method. The Main method sets up a TCP listener on port 13000 at IP 127.0.0.1. It binds the listener, starts listening, and prints a message when a client connects. It then enters a while loop that accepts a new socket, creates a default socket object, and prints a message when a client is connected. The loop body is partially visible, showing the creation of a Client\_Msg array and a console write line for 'Server receive:'.

```
1  using System;
2  using System.Collections.Generic;
3  using System.Text;
4  using System.Threading.Tasks;
5  using System.Net.Sockets;
6  using System.Net;
7  using System.Threading;
8  namespace MultiChatApp_Threads_Server
9  {
10     0 references
11     class Program
12     {
13         0 references
14         static void Main(string[] args)
15         {
16             int port = 13000;
17             string IPAddress = "127.0.0.1";
18             Socket ServerListener = new Socket(AddressFamily.InterNetwork, SocketType.Stream, ProtocolType.Tcp);
19             IPEndPoint ep = new IPEndPoint(IPAddress.Parse(IPAddress), port);
20
21             ServerListener.Bind(ep);
22             ServerListener.Listen(100);
23             Console.WriteLine("Server connected ...");
24
25             Socket ServerSocket = default(Socket);
26             ServerSocket = ServerListener.Accept();
27             Console.WriteLine("Client is now connected ...");
28
29             while (true)
30             {
31                 byte[] Client_Msg = new byte[50];
32                 Console.WriteLine("Server receive:");
```

```
Program.cs > {} MultiChatApp_Threads_Server > MultiChatApp_Threads_Server.Program > Main(string[] args)
26 |
27 | while (true)
28 | {
29 |     byte[] Client_Msg = new byte[50];
30 |     Console.WriteLine("Server receive:");
31 |
32 |     ServerSocket.Receive(Client_Msg);
33 |     Console.WriteLine(Encoding.ASCII.GetString(Client_Msg));
34 |     Console.WriteLine("Server sent:");
35 |
36 |     string str = Console.ReadLine();
37 |     ServerSocket.Send(Encoding.ASCII.GetBytes(str));
38 |     }
39 | }
40 |
41 | }
```

Activate Windows  
Go to Settings to activate Windows

csharp Ln 26, Col 2 Spaces: 4 UTF-8 with BOM C

**client code**

```
client.cs
C: > Users > Pc world > client.cs
1  using System;
2  using System.Collections.Generic;
3  using System.Text;
4  using System.Threading;
5  using System.Threading.Tasks;
6  using System.Net;
7  using System.Net.Sockets;
8  namespace MultiChatApp_Threads_Client
9  {
10     class Program
11     {
12         static void Main(string[] args) {
13
14             Socket ClientSocket = new Socket(AddressFamily.InterNetwork,
15             SocketType.Stream, ProtocolType.Tcp);
16             IPEndPoint ep = new IPEndPoint(IPAddress.Parse(IPAddress), port);
17
18             ClientSocket.Connect(ep);
19             Program p = new Program();
20             Console.WriteLine("Connection successful ...");
21
22             Thread client_thread = new Thread(new ThreadStart(() =>
23             p.client(ClientSocket)));
24             client_thread.Start();
25         }
26
27         public void client(Socket ClientSocket)
28         {
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```

```
connection successful ...
```

```
client sent:
```

```
hi server
```

```
client receive:
```

```
hello client
```

```
client sent:
```

```
hi server 2
```

```
client receive:
```

```
hello client 2
```

```
client sent:
```

```
Server connected ...
```

```
Client is now connected ...
```

```
Server receive:
```

```
hi server
```

```
Server sent:
```

```
hello client
```

```
Server receive:
```

```
hi server 2
```

```
Server sent:
```

```
hello client 2
```

```
Server receive:
```