

Code SS:

Server:

The screenshot displays the Visual Studio IDE with the 'Server-Quiz3' project selected in the Solution Explorer. The code editor shows the 'Form1.cs' file, which is part of the 'Server_Quiz3' namespace. The code defines a 'Form1' class that inherits from 'Form'. It includes an 'InitializeComponent()' method and three event handlers: 'Form1_Load', 'button1_Click', and 'button2_Click'. The 'Form1_Load' method initializes a 'Server' object and shows it. The 'button1_Click' method initializes a 'SmtpSer' object and shows it. The 'button2_Click' method calls 'Application.Exit()'. The Solution Explorer on the right shows the project structure, including 'Form1.cs', 'Form1.Designer.cs', 'Form1.resx', 'Program.cs', 'Server.cs', 'Server.Designer.cs', 'Server.resx', 'SmtpSer.cs', 'SmtpSer.Designer.cs', and 'SmtpSer.resx'.

```
9 using System.Windows.Forms;
10
11 namespace Server_Quiz3 // Multiple Forms Connections
12 {
13     public partial class Form1 : Form
14     {
15         public Form1()
16         {
17             InitializeComponent();
18         }
19
20         private void Form1_Load(object sender, EventArgs e)
21         {
22             Server aSr = new Server();
23             aSr.Show();
24             this.Hide();
25         }
26
27         private void button1_Click(object sender, EventArgs e)
28         {
29             SmtpSer sSr = new SmtpSer();
30             sSr.Show();
31             this.Hide();
32         }
33
34         private void button2_Click(object sender, EventArgs e)
35         {
36             Application.Exit();
37         }
38     }
39 }
40
41
42
43
44
```

Client

The screenshot displays the Visual Studio IDE with the 'Client-Quiz3' project selected in the Solution Explorer. The code editor shows the 'Form1.cs' file, which is part of the 'Client_Quiz3' namespace. The code defines a 'Form1' class that inherits from 'Form'. It includes an 'InitializeComponent()' method and three event handlers: 'Form1_Load', 'button1_Click', and 'button2_Click'. The 'Form1_Load' method initializes a 'Client' object and shows it. The 'button1_Click' method initializes a 'SmtpCl' object and shows it. The 'button2_Click' method calls 'Application.Exit()'. The Solution Explorer on the right shows the project structure, including 'Form1.cs', 'Form1.Designer.cs', 'Form1.resx', 'Program.cs', 'Client.cs', 'Client.Designer.cs', 'Client.resx', 'SmtpCl.cs', 'SmtpCl.Designer.cs', and 'SmtpCl.resx'.

```
10 using System.Net;
11 using System.Net.Sockets;
12 using System.Net.Mail;
13
14 namespace Client_Quiz3 // Multiple Forms Connection
15 {
16     public partial class Form1 : Form
17     {
18         public Form1()
19         {
20             InitializeComponent();
21         }
22
23         private void Form1_Load(object sender, EventArgs e)
24         {
25             Client aCl = new Client();
26             aCl.Show();
27             this.Hide();
28         }
29
30         private void button1_Click(object sender, EventArgs e)
31         {
32             SmtpCl sCl = new SmtpCl();
33             sCl.Show();
34             this.Hide();
35         }
36
37         private void button2_Click(object sender, EventArgs e)
38         {
39             Application.Exit();
40         }
41     }
42 }
43
44
45
46
```

Server Async:

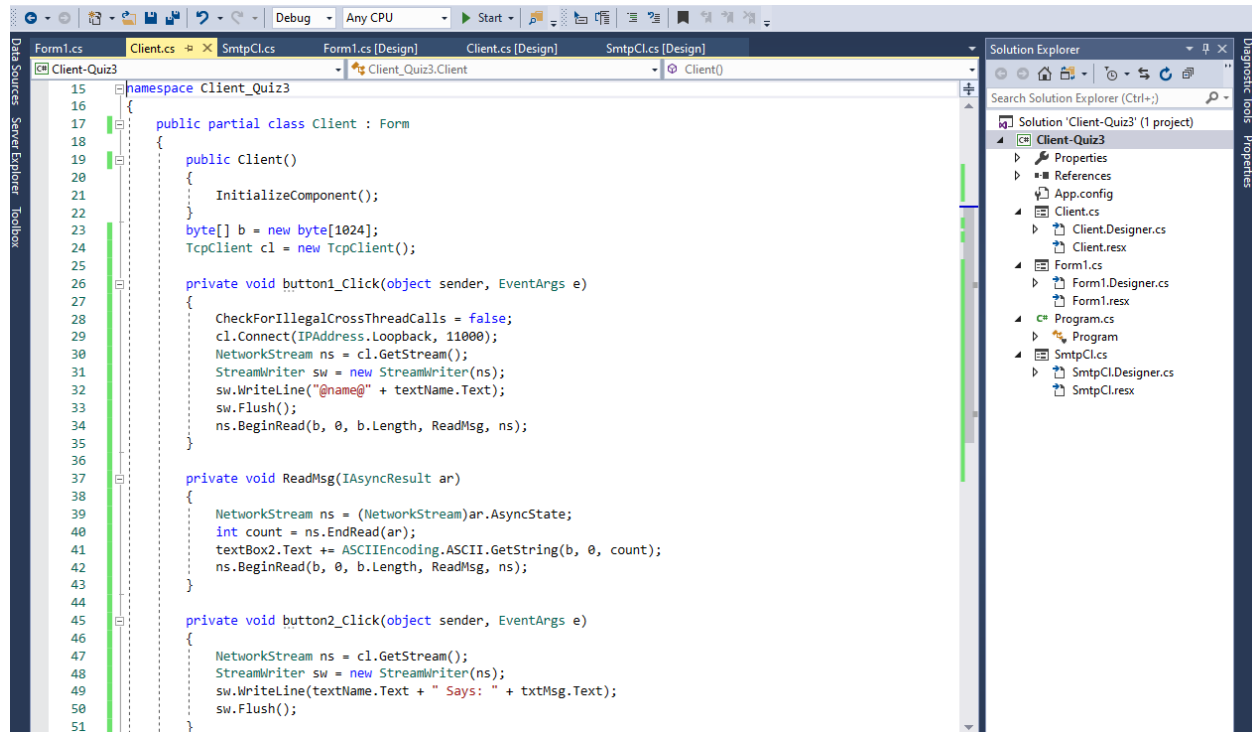
The screenshot displays the Visual Studio IDE with a C# project named 'Server_Quiz3'. The code is organized into two sections, with the first section showing the main server logic and the second section showing event handlers for UI buttons.

```
14 namespace Server_Quiz3
15 {
16     public partial class Server : Form
17     {
18         public Server()
19         {
20             InitializeComponent();
21         }
22
23         Dictionary<string, TcpClient> ListClient = new Dictionary<string, TcpClient>();
24         byte[] b = new byte[1024];
25
26         private void ClientConnect(IAsyncResult ar)
27         {
28             TcpListener lis = (TcpListener)ar.AsyncState;
29             TcpClient c1 = lis.EndAcceptTcpClient(ar);
30             NetworkStream ns = c1.GetStream();
31             object[] a = new object[2];
32             a[0] = ns;
33             a[1] = c1;
34             ns.BeginRead(b, 0, b.Length, new AsyncCallback(ReadMsg), a);
35             lis.BeginAcceptTcpClient(new AsyncCallback(ClientConnect), lis);
36         }
37
38         private void ReadMsg(IAsyncResult ar)
39         {
40             object[] a = (object[])ar.AsyncState;
41             NetworkStream ns = (NetworkStream)a[0];
42             TcpClient c1 = (TcpClient)a[1];
43             int count = ns.EndRead(ar);
44             string msg = ASCIIEncoding.ASCII.GetString(b, 0, count);
45             if (msg.Contains("@name@"))
46             {
47                 string name = msg.Replace("@name@", "");
48                 ListClient.Add(name, c1);
49                 lstbxclient.Items.Add(name);
50             }
51             else
52             {
53                 txtDisplay.Text += msg + Environment.NewLine;
54             }
55             ns.BeginRead(b, 0, b.Length, new AsyncCallback(ReadMsg), a);
56         }
57
58         private void button1_Click(object sender, EventArgs e)
59         {
60             foreach (var item in ListClient.Values)
61             {
62                 NetworkStream ns = item.GetStream();
63                 StreamWriter sw = new StreamWriter(ns);
64                 string textToSend = "Server Says to all: " + txtMsg.Text;
65                 txtDisplay.Text = textToSend + Environment.NewLine;
66                 sw.WriteLine(textToSend);
67                 sw.Flush();
68             }
69         }
70
71         private void button2_Click_1(object sender, EventArgs e)
72         {
73             TcpClient c1 = (TcpClient)ListClient[lstbxclient.SelectedItem.ToString()];
74             NetworkStream ns = c1.GetStream();
75             StreamWriter sw = new StreamWriter(ns);
76             string textToSend = "Server Says: " + txtMsg.Text;
77             sw.WriteLine(textToSend);
78             txtDisplay.Text += textToSend + Environment.NewLine;
79             sw.Flush();
80         }
81     }
82 }
```

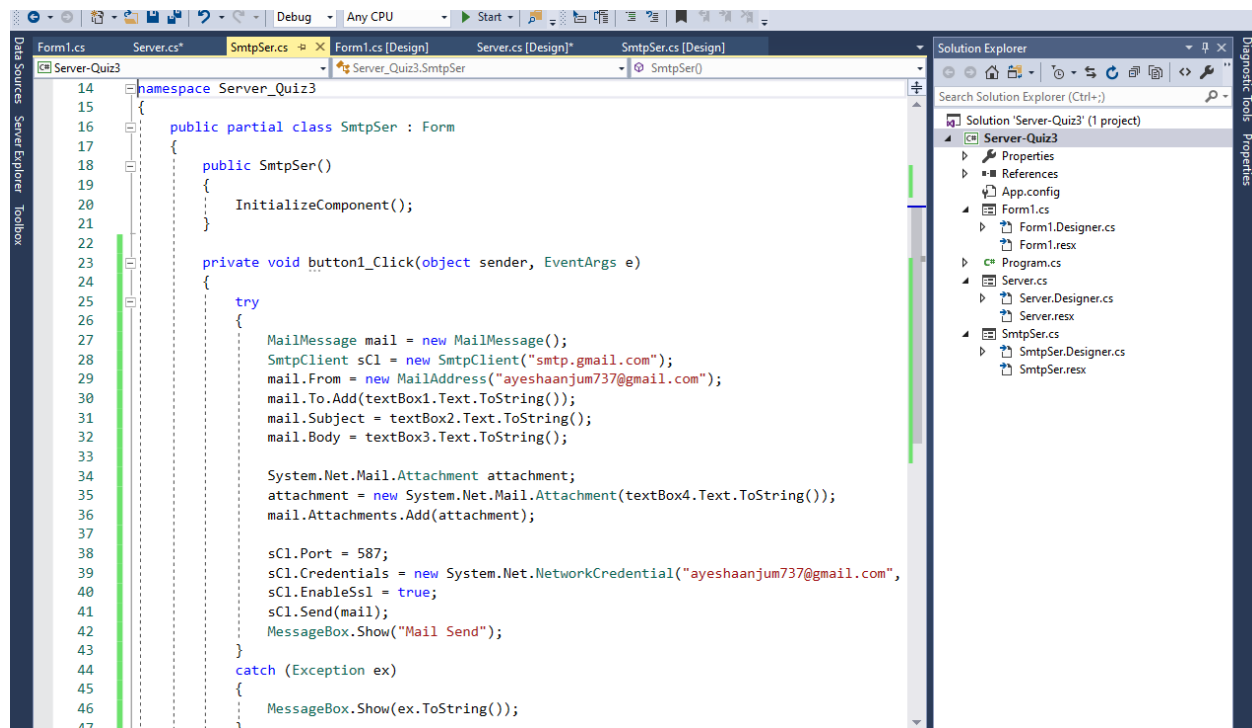
The Solution Explorer on the right shows the project structure for 'Server_Quiz3' (1 project):

- Properties
- References
- App.config
- Form1.cs
- Form1.Designer.cs
- Form1.resx
- Program.cs
- Server.cs
- Server.Designer.cs
- Server.resx
- SmtprSer.cs
- SmtprSer.Designer.cs
- SmtprSer.resx

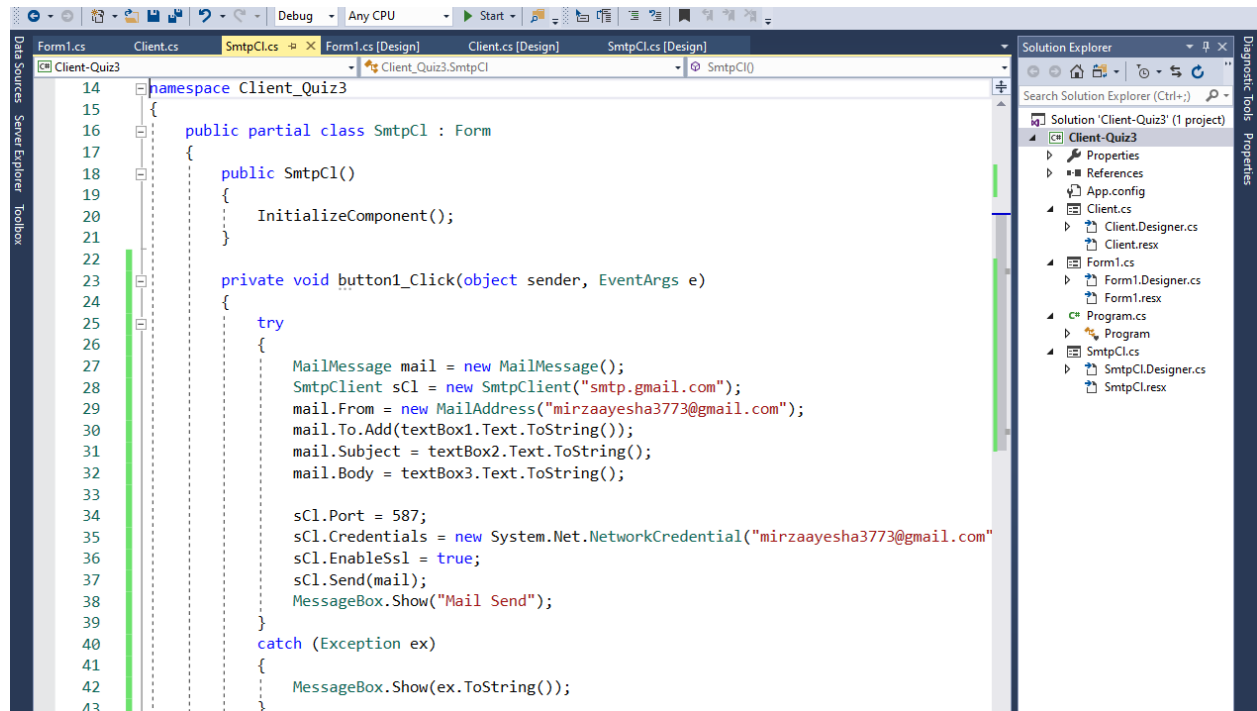
Client Async:



Server SMTP:



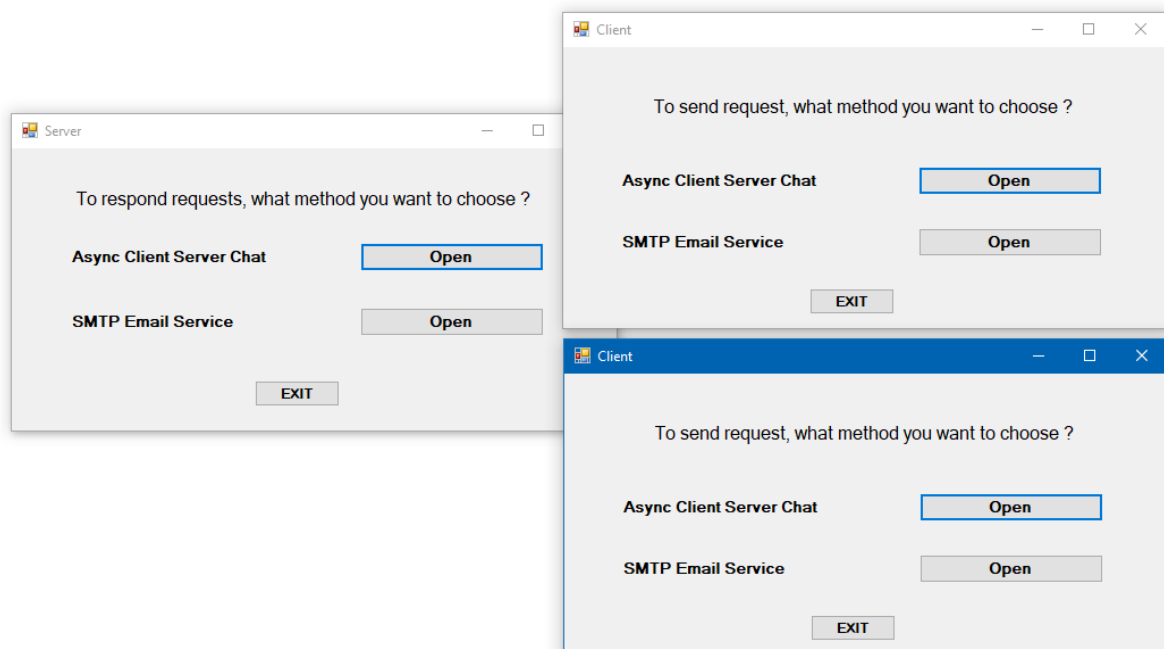
Client SMTP:



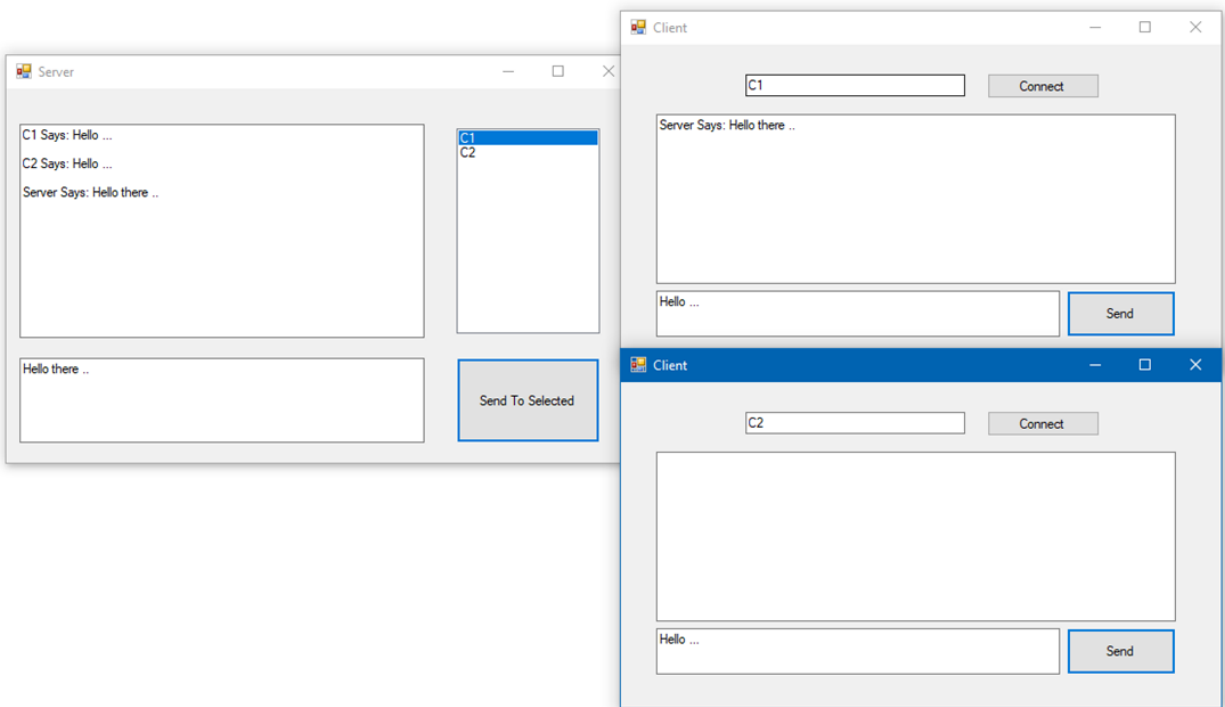
```
14 namespace Client_Quiz3
15 {
16     public partial class SmtpCl : Form
17     {
18         public SmtpCl()
19         {
20             InitializeComponent();
21         }
22
23         private void button1_Click(object sender, EventArgs e)
24         {
25             try
26             {
27                 MailMessage mail = new MailMessage();
28                 SmtpClient sCl = new SmtpClient("smtp.gmail.com");
29                 mail.From = new MailAddress("mirzaayesha3773@gmail.com");
30                 mail.To.Add(textBox1.Text.ToString());
31                 mail.Subject = textBox2.Text.ToString();
32                 mail.Body = textBox3.Text.ToString();
33
34                 sCl.Port = 587;
35                 sCl.Credentials = new System.Net.NetworkCredential("mirzaayesha3773@gmail.com");
36                 sCl.EnableSsl = true;
37                 sCl.Send(mail);
38                 MessageBox.Show("Mail Send");
39             }
40             catch (Exception ex)
41             {
42                 MessageBox.Show(ex.ToString());
43             }
44         }
45     }
46 }
```

Outputs:

Select Client Server Communication Type



Async Client Server Chat



SMTP Client Server Email Sending

