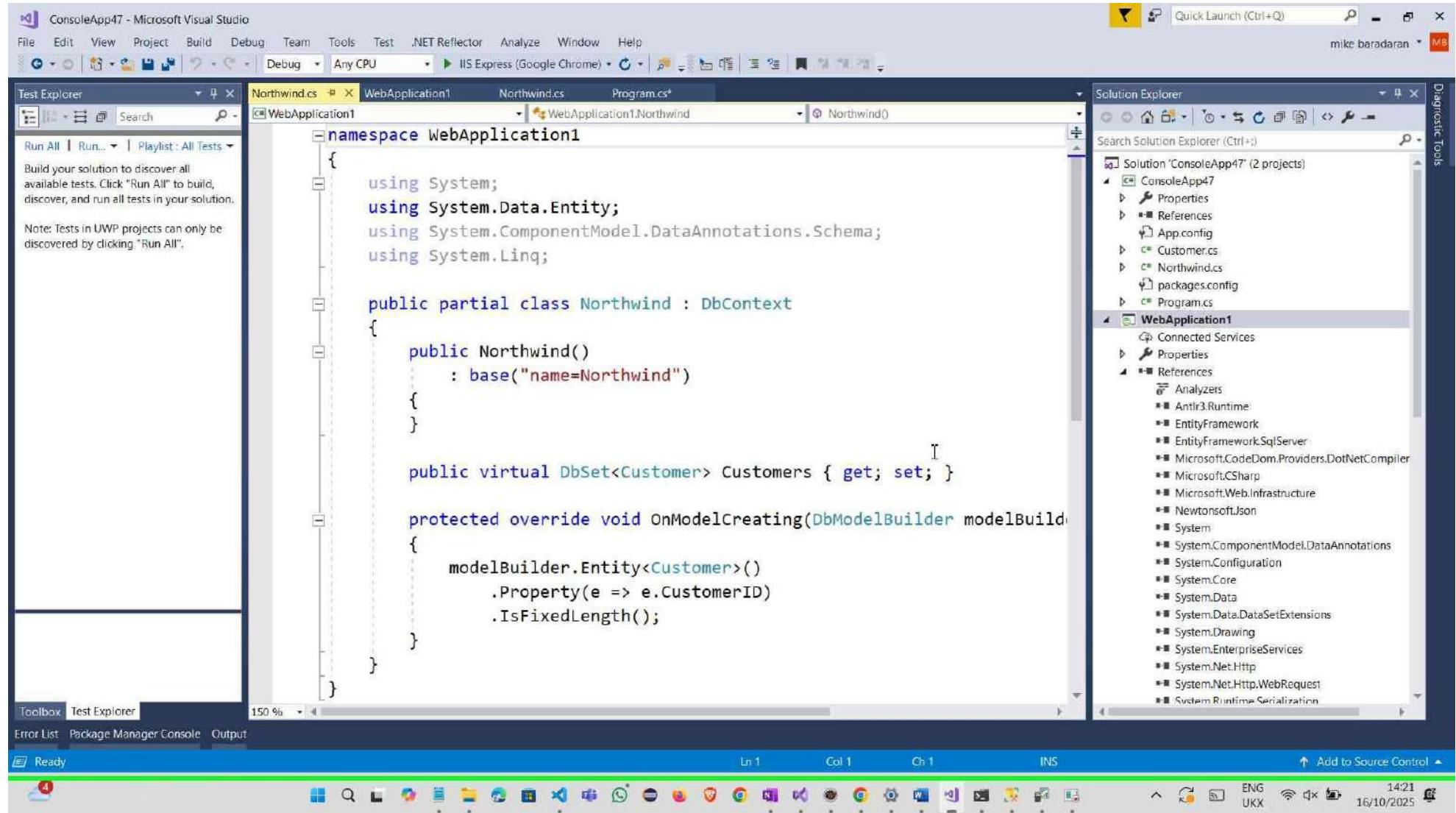


## Recorded Steps for Data Entity Framework Using Visual Studio 2017



screenshot.

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ConsoleApp47 - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test .NET Reflector Analyze Window Help

Debug Any CPU IIS Express (Google Chrome)

Test Explorer Northwind.cs WebApplication1 Northwind.cs Program.cs

WebApplication1 Northwind.cs Northwind()

```
namespace WebApplication1
{
    using System;
    using System.Data.Entity;
    using System.ComponentModel.DataAnnotations.Schema;
    using System.Linq;

    public partial class Northwind : DbContext
    {
        public Northwind()
            : base("name=Northwind")
        {

        }

        public virtual DbSet<Customer> Customers { get; set; }

        protected override void OnModelCreating(DbModelBuilder modelBuilder)
        {
            modelBuilder.Entity<Customer>()
                .Property(e => e.CustomerID)
                .IsFixedLength();
        }
    }
}
```

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'ConsoleApp47' (2 projects)

- ConsoleApp47
- Properties
- References
- App.config
- Customers.cs
- Northwind.cs
- packages.config
- Program.cs

WebApplication1

- Connected Services
- Properties
- References
  - Analyzers
    - AntiX.Runtime
    - EntityFramework
    - EntityFramework.SqlServer
    - Microsoft.CodeDom.Providers.DotNetCompiler
    - Microsoft.CSharp
    - Microsoft.Web.Infrastructure
    - Newtonsoft.Json
    - System
    - System.ComponentModel.DataAnnotations
    - System.Configuration
    - System.Core
    - System.Data
    - System.Data.DataSetExtensions
    - System.Drawing
    - System.EnterpriseServices
    - System.Net.Http
    - System.Net.Http.WebRequest
    - System.Runtime.Serialization
  - Antlr3.Runtime
  - EntityFramework
  - EntityFramework.SqlServer
  - Microsoft.CodeDom.Providers.DotNetCompiler
  - Microsoft.CSharp
  - Microsoft.Web.Infrastructure
  - Newtonsoft.Json
  - System
  - System.ComponentModel.DataAnnotations
  - System.Configuration
  - System.Core
  - System.Data
  - System.Data.DataSetExtensions
  - System.Drawing
  - System.EnterpriseServices
  - System.Net.Http
  - System.Net.Http.WebRequest
  - System.Runtime.Serialization

Toolbox Test Explorer

Error List Package Manager Console Output

Ln 9 Col 6 Ch 6 INS Add to Source Control

4 ENG UKX 14:21 16/10/2025

The screenshot shows the Microsoft Visual Studio interface with the following details:

- File Menu:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help.
- Toolbox:** Available on the left side of the IDE.
- Test Explorer:** Shows a note about discovering tests in the solution.
- Solution Explorer:** Displays the solution structure with two projects: ConsoleApp47 and WebApplication1. The WebApplication1 project is selected, showing its files: Northwind.cs, Program.cs, and App.config.
- Task List:** Located at the bottom of the screen, showing recent items like "ConsoleApp47 - Microsoft Visual Studio (window)" and "ConsoleApp47 - Microsoft Visual Studio".

The main code editor window displays the following C# code:

```
namespace WebApplication1
{
    using System;
    using System.Data.Entity;
    using System.ComponentModel.DataAnnotations.Schema;
    using System.Linq;

    public partial class Northwind : DbContext
    {
        public Northwind()
            : base("name=Northwind")
        {

        }

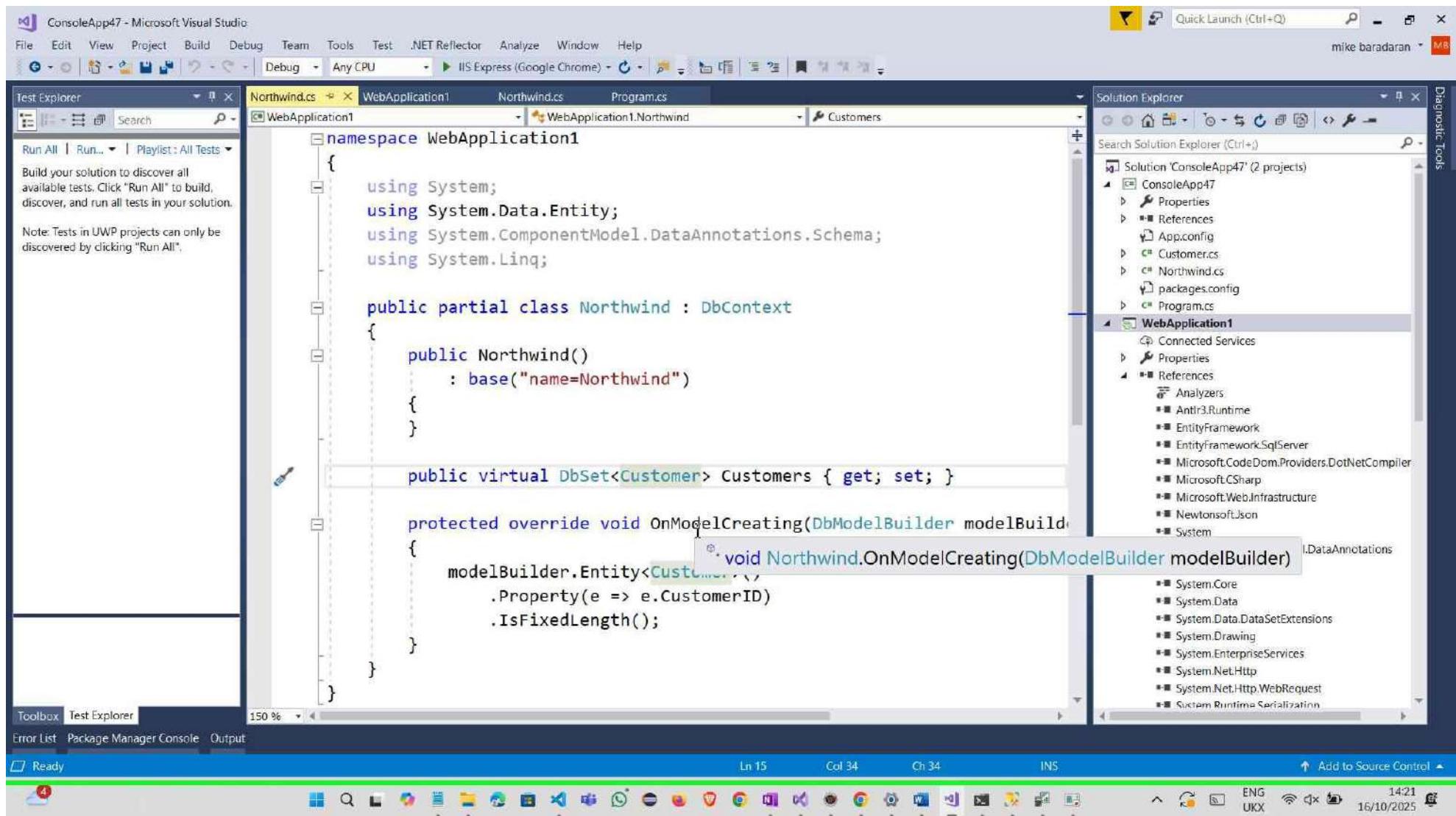
        public virtual DbSet<Customer> Customers { get; set; }

        protected override void OnModelCreating(DbModelBuilder modelBuilder)
        {
            modelBuilder.Entity<Customer>()
                .Property(e => e.CustomerID)
                .IsFixedLength();
        }
    }
}
```

Step 31 screenshot.

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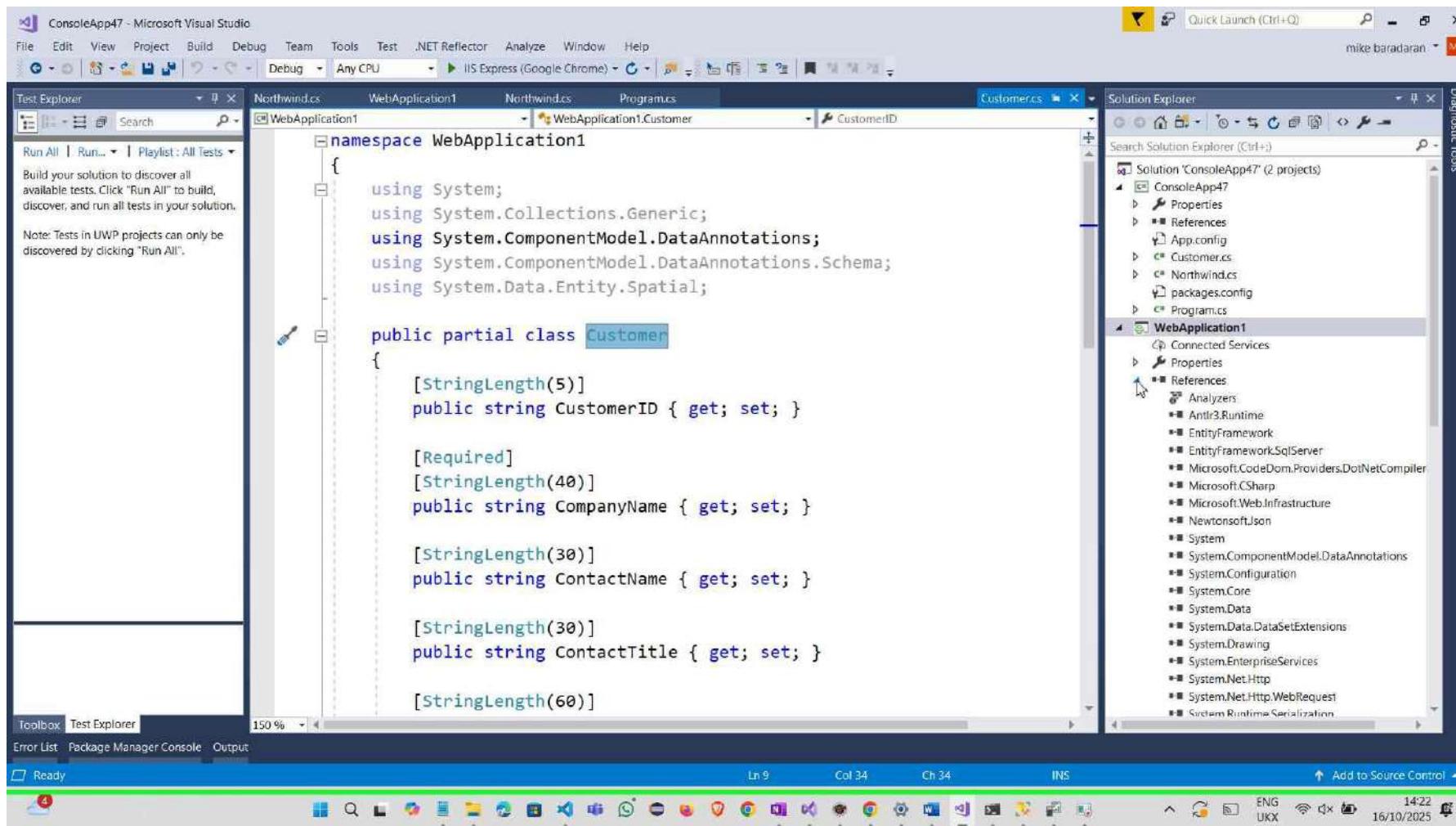
**Step 32:** User keyboard input on "ConsoleApp47 - Microsoft Visual Studio (window)" in "ConsoleApp47 - Microsoft Visual Studio " [F12]



Step 32 screenshot.

User left click on "References (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "

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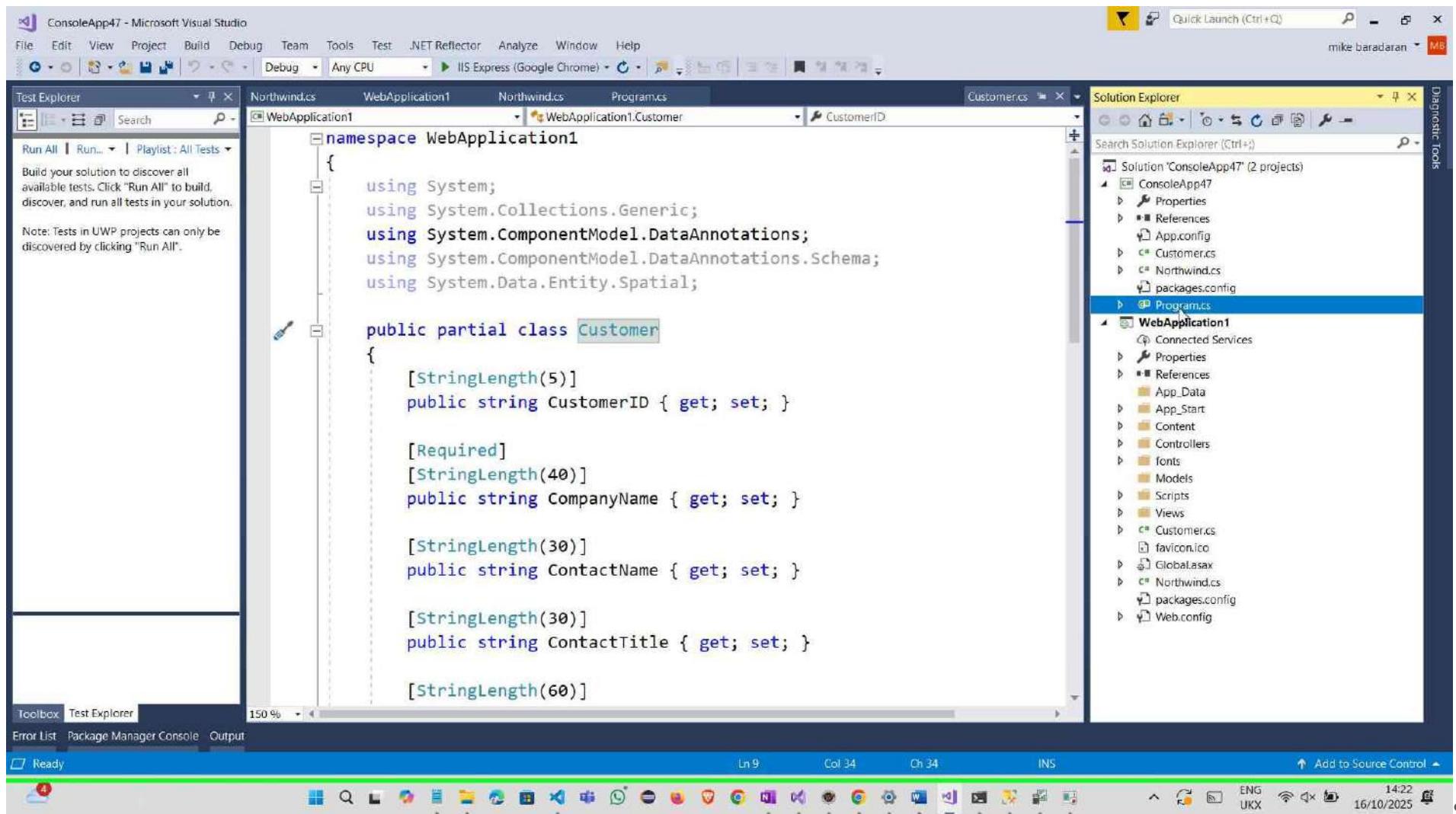


screenshot.

Step 33

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Step 34: (16/10/2025 14:22:21) User left double click on "Program.cs (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "

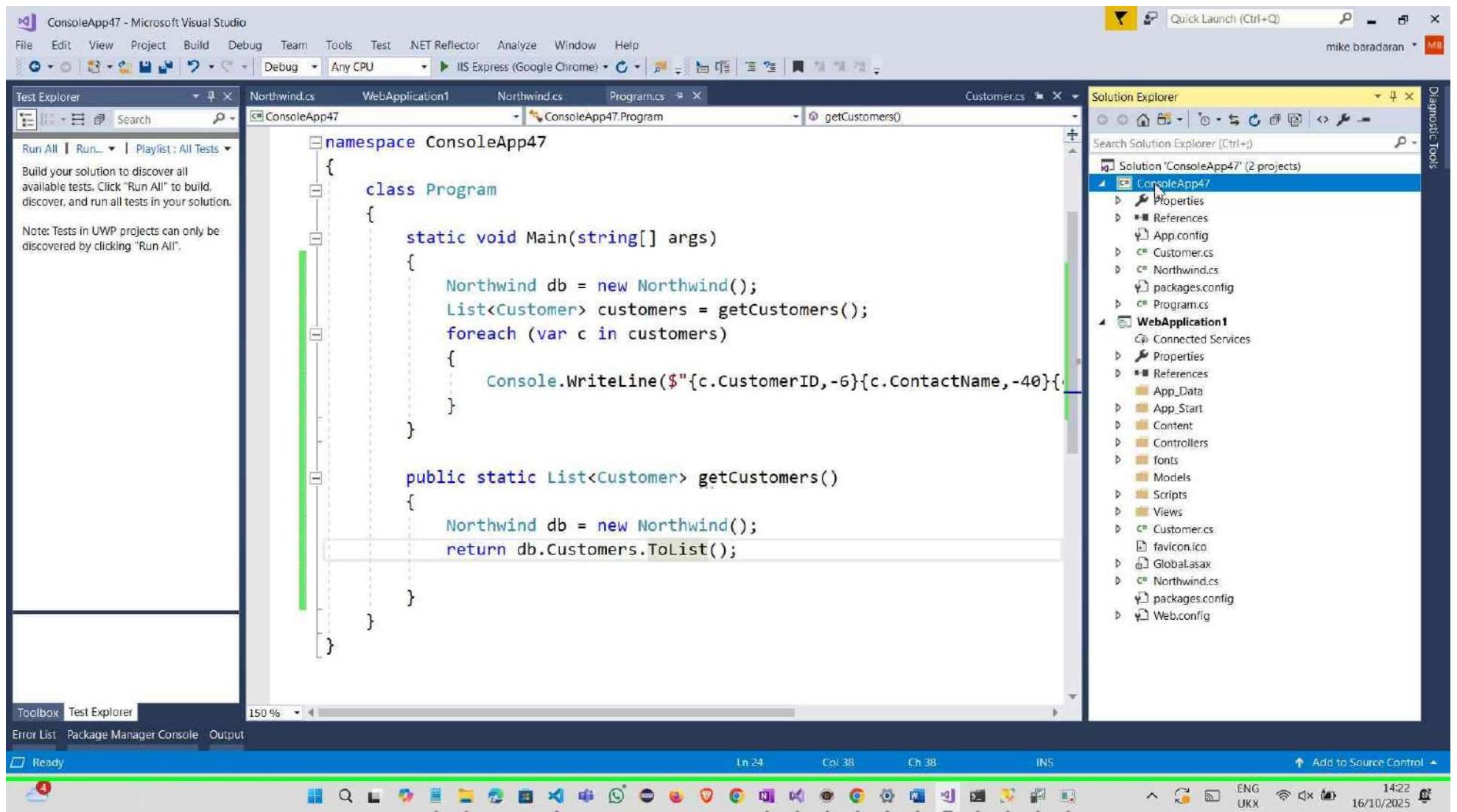


34 screenshot.

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**Step 35: (16/10/2025 14:22:43)** User left click on "ConsoleApp47 (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "

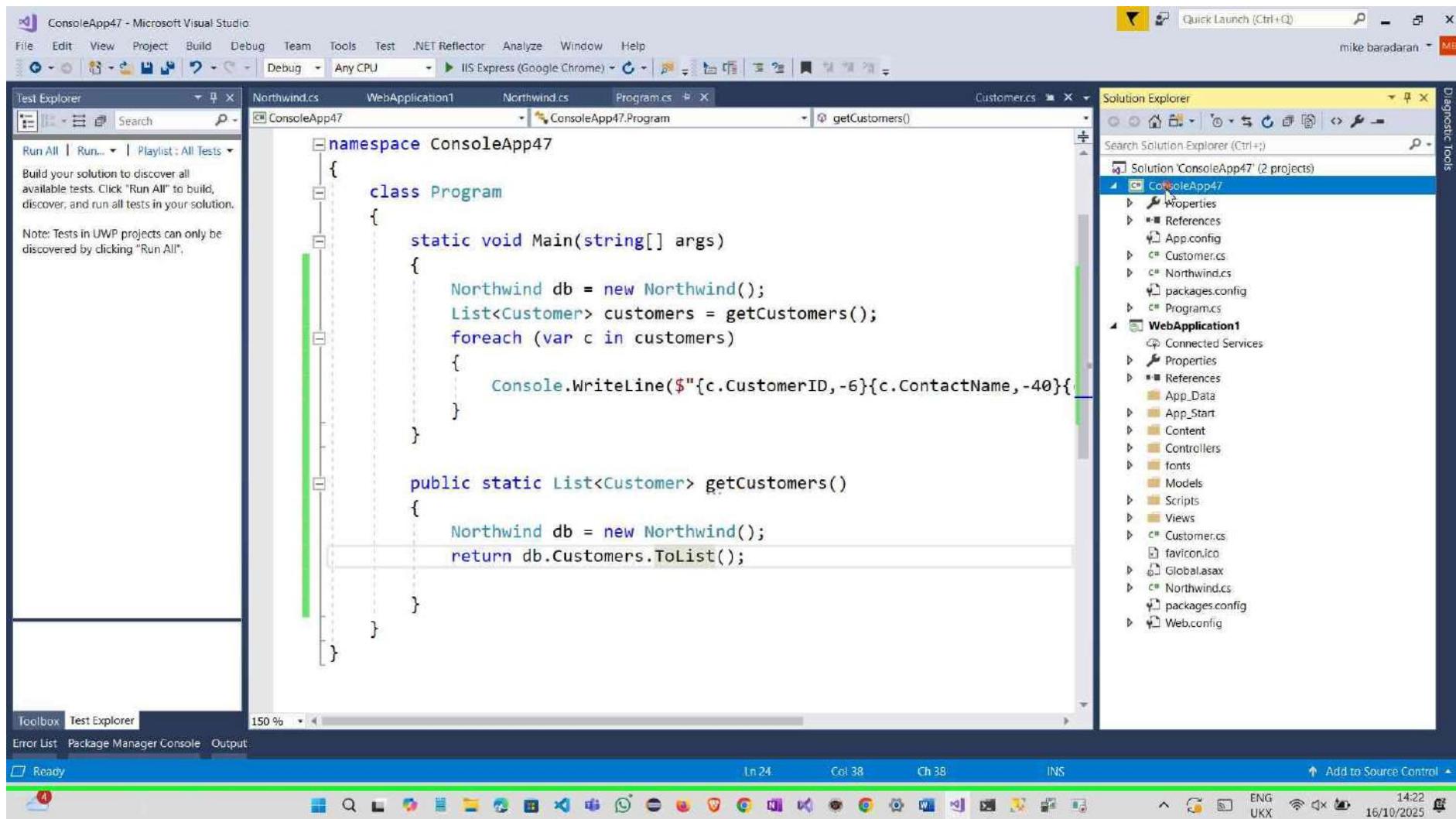
Step



Step 35 screenshot.

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**Step 36: (16/10/2025 14:22:43)** User right click on "ConsoleApp47 (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "

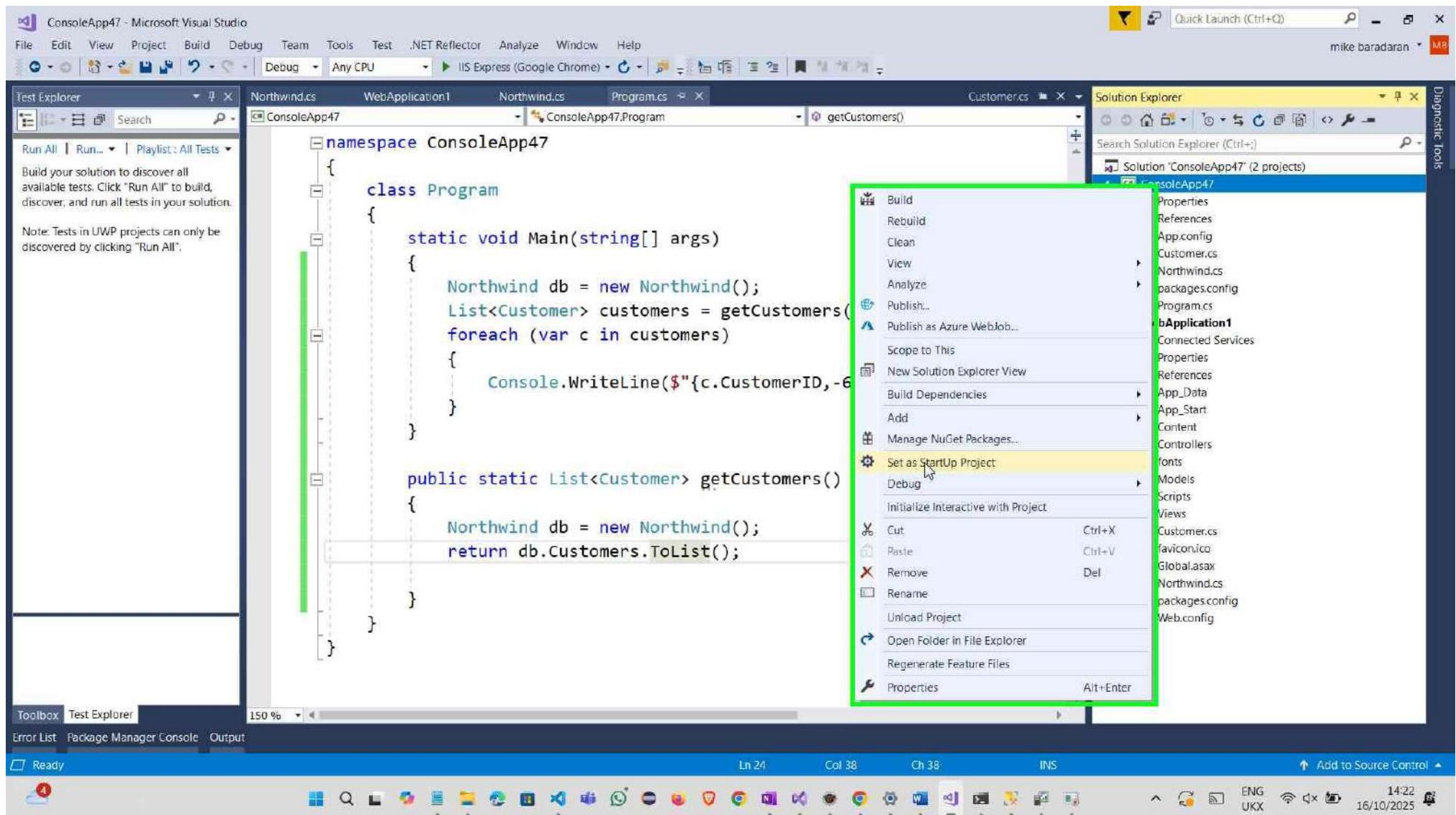


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Step 37: (16/10/2025 14:22:46) User left click on "Text Editor (edit)"

Step



Step 37 screenshot.

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Step 38: (16/10/2025 14:22:53) User left click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbox:** Standard Visual Studio toolbox icons.
- Test Explorer:** Shows a note about discovering tests in UWP projects.
- Solution Explorer:** Displays the solution structure for "ConsoleApp47" (2 projects) and "WebApplication1".
- Code Editor:** The "Program.cs" file contains the following code:

```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}");
            }
        }

        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.ToList();
        }
    }
}
```
- Status Bar:** Shows the current file is "Program.cs", line 19, column 10, character 10, and the date/time is 16/10/2025.

Step 38 screenshot.

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**Step 39: (16/10/2025 14:22:54) User keyboard input on "ConsoleApp47 - Microsoft Visual Studio (window)" in "ConsoleApp47 - Microsoft Visual Studio" [... Ctrl-F5]**

The screenshot shows the Microsoft Visual Studio interface with two projects open: 'ConsoleApp47' and 'WebApplication1'. The 'Program.cs' file in 'ConsoleApp47' contains the following code:

```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}{c}
            }
        }

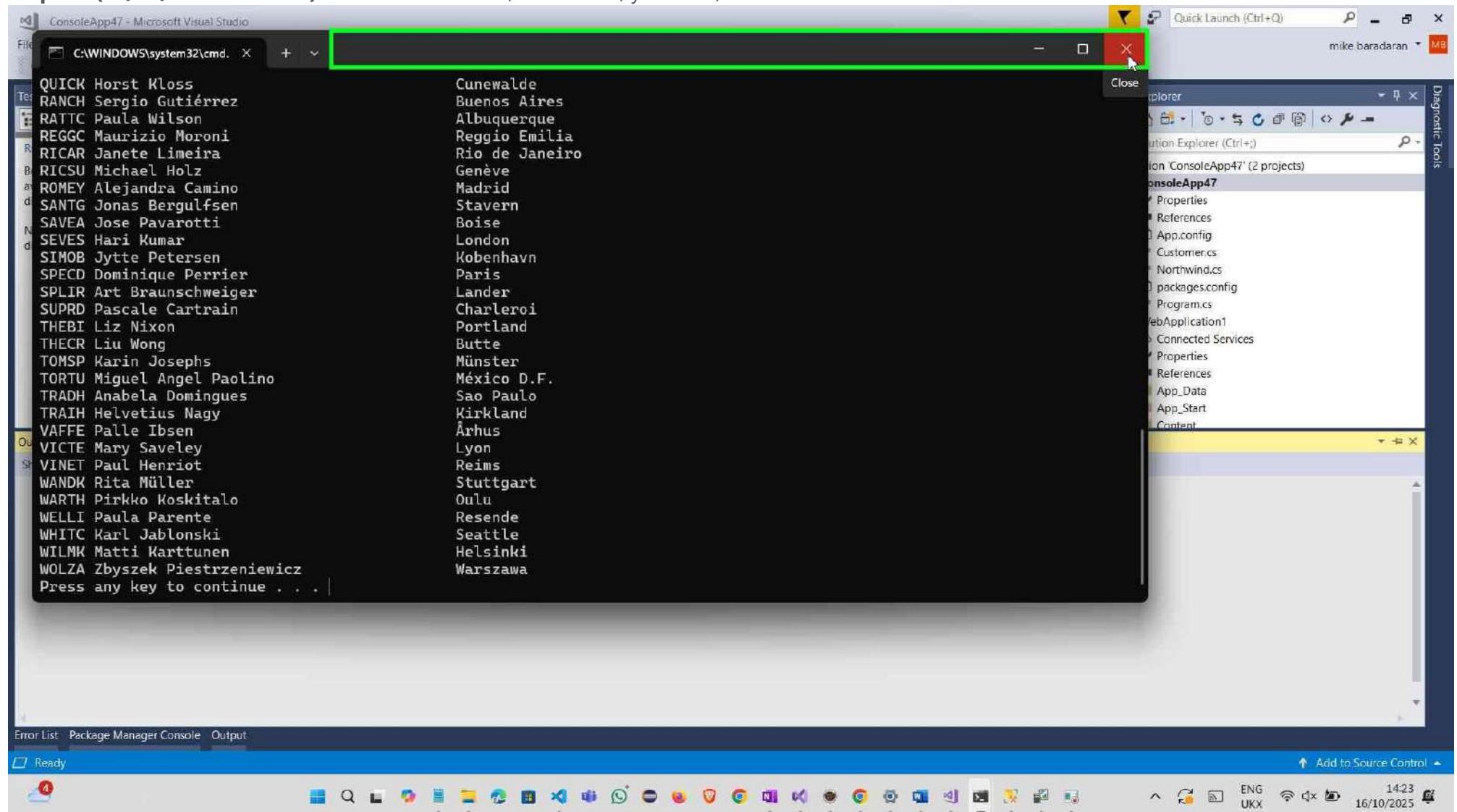
        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.ToList();
        }
    }
}
```

The 'Solution Explorer' pane on the right lists the files for both projects. The 'ConsoleApp47' project includes 'Properties', 'References', 'App.config', 'Customer.cs', 'Northwind.cs', 'packages.config', and 'Program.cs'. The 'WebApplication1' project includes 'Connected Services', 'Properties', 'References', 'App\_Data', 'App\_Start', 'Content', 'Controllers', 'fonts', 'Models', 'Scripts', 'Views', 'Customer.cs', 'favicon.ico', 'Global.asax', 'Northwind.cs', 'packages.config', and 'Web.config'. The status bar at the bottom shows the date and time as 16/10/2025 14:22.

Step 39 screenshot.

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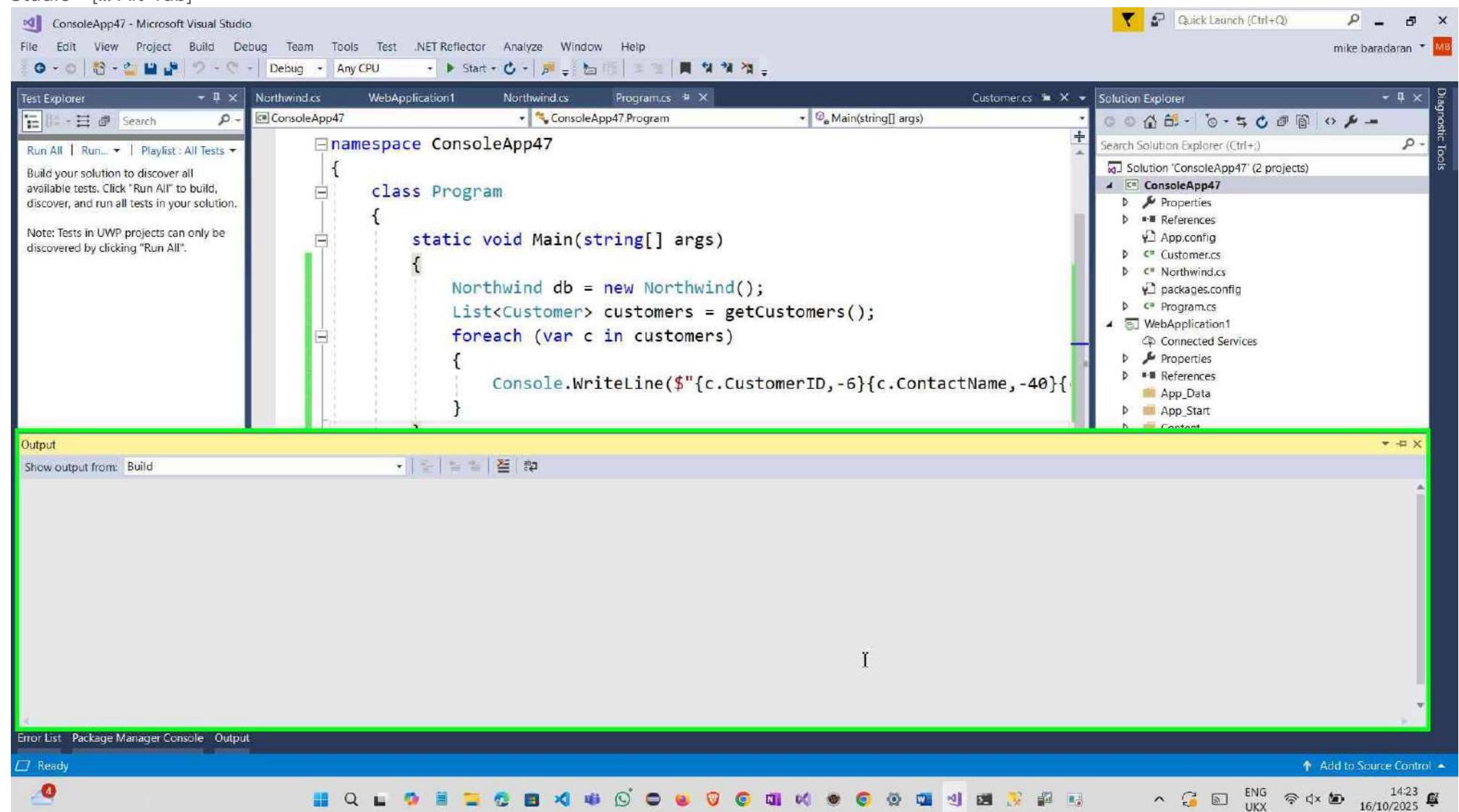
Step 40: (16/10/2025 14:23:03) User left click in "C:\WINDOWS\system32\cmd.exe"



Step 40 screenshot.

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Step 41: (16/10/2025 14:23:06) User keyboard input on "ConsoleApp47 - Microsoft Visual Studio (window)" in "ConsoleApp47 - Microsoft Visual Studio" [... Alt-Tab]



Step 41 screenshot.

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SQL Server Profiler - [Untitled - 6 (.SQLEXPRESS)]

File Edit View Replay Tools Window Help

EventClass TextData DatabaseID DatabaseName ObjectID ObjectName ServerName BinaryData SPID StartTime

RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT Count(*) FROM INFORMATION_...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_executesql N'SELECT [G...	5	Northwind	35783...	sp_exec...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
SP:StmtStarting	SELECT [GroupBy1].[A1] AS [C1]...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT [GroupBy1].[A1] AS [C1]...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT TOP (1) [Extent1].[Id] ...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT [Extent1].[CustomerID] ...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Logout		1	master			.\\SQLEX...	0X20000...	71	2025-10-16 14:22:55...

```
SELECT
    [Extent1].[CustomerID] AS [CustomerID],
    [Extent1].[CompanyName] AS [CompanyName],
    [Extent1].[ContactName] AS [ContactName],
    [Extent1].[ContactTitle] AS [ContactTitle],
    [Extent1].[Address] AS [Address],
    [Extent1].[City] AS [City],
    [Extent1].[Region] AS [Region],
    [Extent1].[PostalCode] AS [PostalCode],
    [Extent1].[Country] AS [Country],
    [Extent1].[Phone] AS [Phone],
    [Extent1].[Fax] AS [Fax]
FROM [dbo].[Customers] AS [Extent1]
```

Trace is running.

Ln 127, Col 2 Rows: 129

Connections: 1

4 1423 ENG UKX 16/10/2025

Step 45 screenshot.

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Step 46: (16/10/2025 14:23:24) User keyboard input on "Trace results table (table)" in "SQL Server Profiler - [Untitled - 6 (.SQLEXPRESS)]" [... Alt-Tab]

SQL Server Profiler - [Untitled - 6 (SQLEXPRESS)]

File Edit View Replay Tools Window Help

EventClass TextData DatabaseID DatabaseName ObjectID ObjectName ServerName BinaryData SPID StartTime

EventClass	TextData	DatabaseID	DatabaseName	ObjectID	ObjectName	ServerName	BinaryData	SPID	StartTime
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	SELECT Count(*) FROM INFORMATION...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_executesql N'SELECT [G...	5	Northwind	35763...	sp_exec...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
SP:StmtStarting	SELECT [GroupBy1].[A1] AS [C1]...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT [GroupBy1].[A1] AS [C1]...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT TOP (1) [Extent1].[Id] ...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:22:55...
Audit Logout	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
SQL:BatchStarting	SELECT [Extent1].[CustomerID] ...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Logout		5				.\\SQLEX...	0X20000...	70	2025-10-16 14:22:55...
Audit Logout		1	master			.\\SQLEX...	0X20000...	71	2025-10-16 14:22:55...

```
SELECT [Extent1].[CustomerID] AS [CustomerID],
[Extent1].[CompanyName] AS [CompanyName],
[Extent1].[ContactName] AS [ContactName],
[Extent1].[ContactTitle] AS [ContactTitle],
[Extent1].[Address] AS [Address],
[Extent1].[City] AS [city],
[Extent1].[Region] AS [Region],
[Extent1].[PostalCode] AS [PostalCode],
[Extent1].[Country] AS [Country],
[Extent1].[Phone] AS [Phone],
[Extent1].[Fax] AS [Fax]
FROM [dbo].[Customers] AS [Extent1]
```

Trace is running.

Ln 127, Col 2 Rows: 129

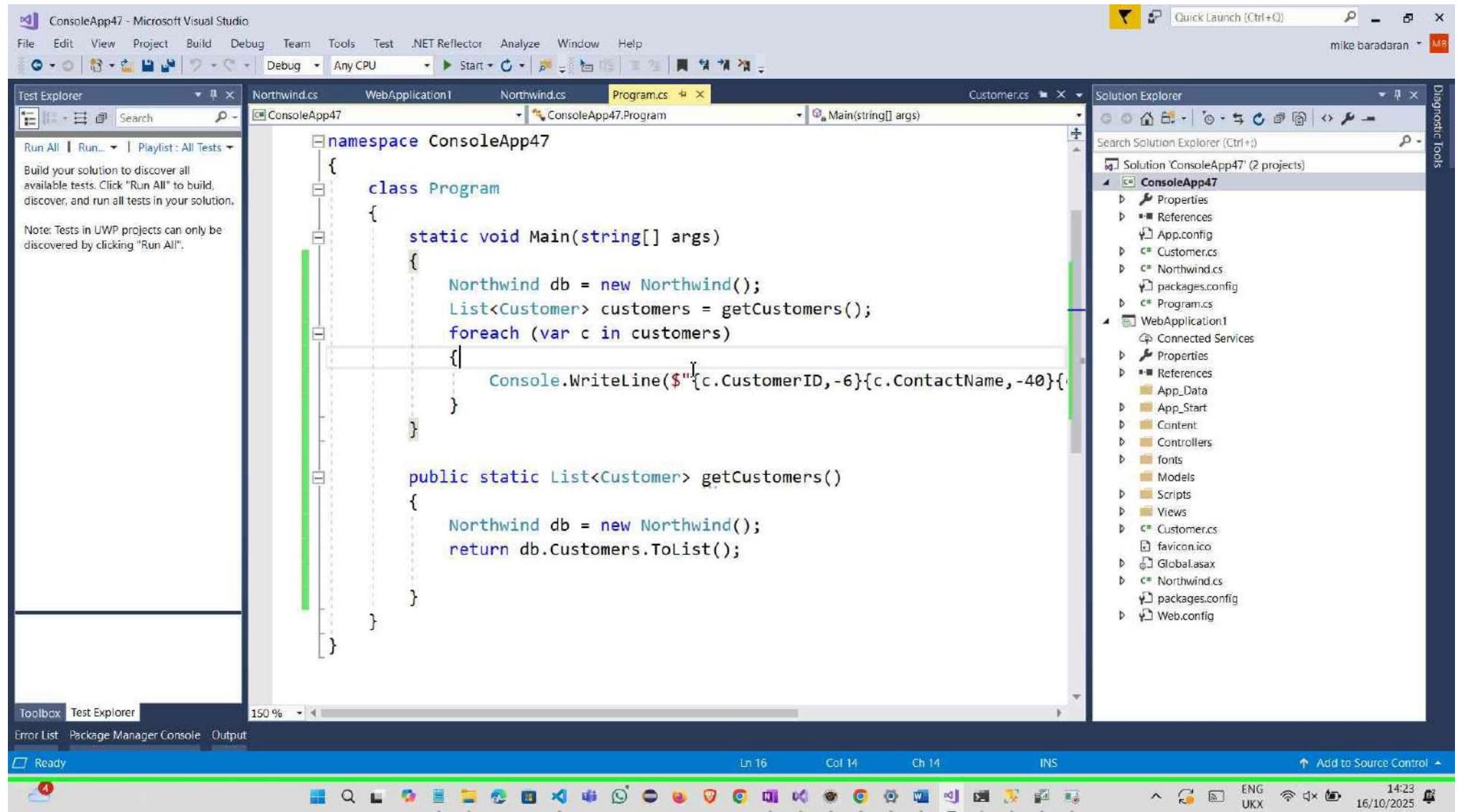
Connections: 1

4 14:23:27 16/10/2025 ENG UKX

Step 46 screenshot.

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Step 47: (16/10/2025 14:23:27) User left click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "



Step 47 screenshot.

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Step 48: (16/10/2025 14:23:37) User left click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- File Menu:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbars:** Standard, Debugging, Task List, Solution Explorer, Properties, Task List, Status Bar.
- Toolbox:** Toolbox, Test Explorer, Error List, Package Manager Console, Output.
- Solution Explorer:** Shows two projects: ConsoleApp47 and WebApplication1. ConsoleApp47 contains Properties, References, App.config, Customer.cs, Northwind.cs, packages.config, Program.cs. WebApplication1 contains Connected Services, Properties, References, App\_Data, App\_Start, Content, Controllers, fonts, Models, Scripts, Views, Customer.cs, favicon.ico, Global.asax, Northwind.cs, packages.config, Web.config.
- Task List:** Quick Launch (Ctrl+Q), mike baradaran, MB.
- Code Editor:** Program.cs (selected tab) contains the following C# code:

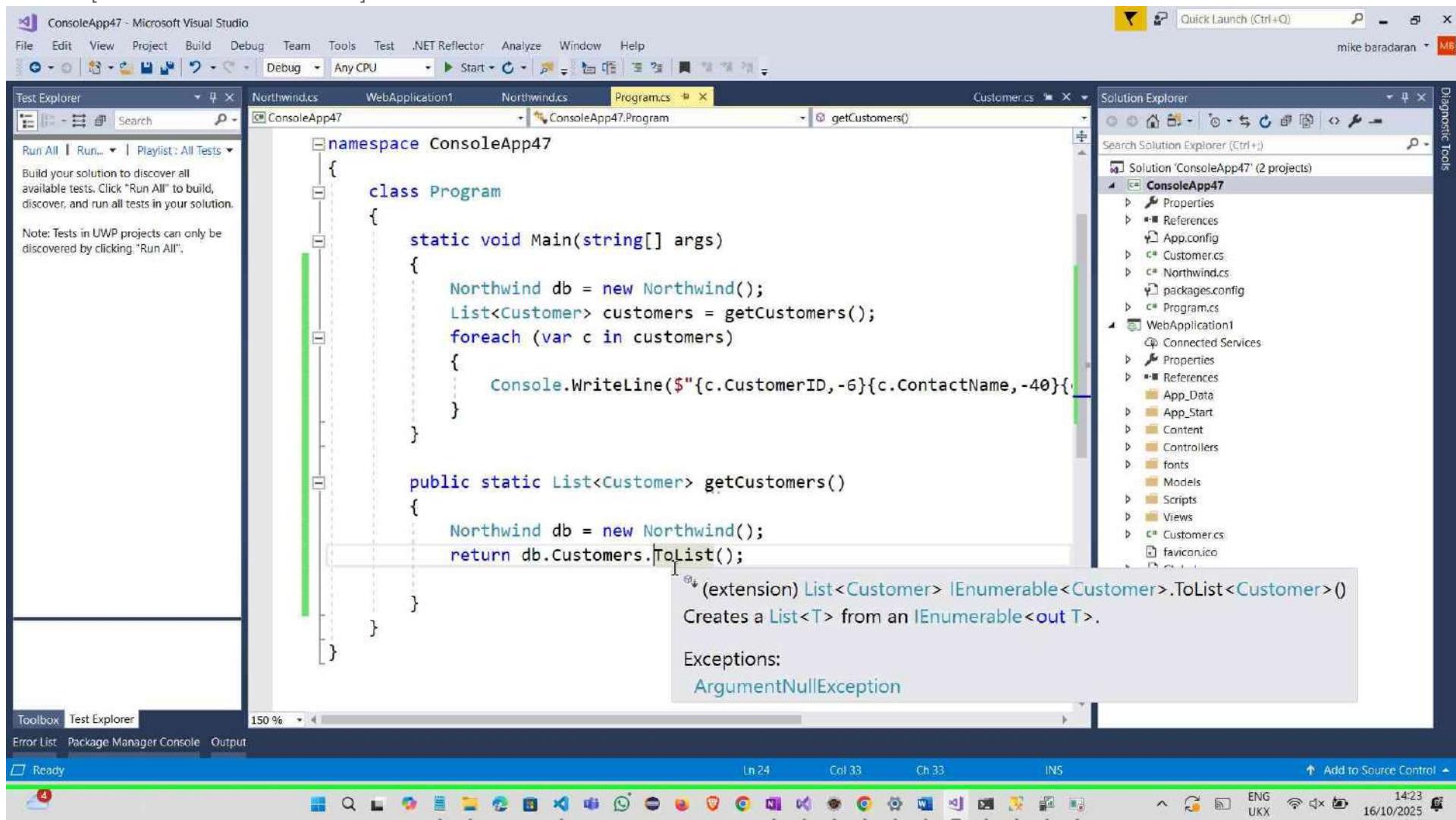
```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}");
            }
        }

        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.ToList();
        }
    }
}
```
- Status Bar:** Ready, Ln 24, Col 33, Ch 33, INS, Add to Source Control, 14:23, ENG UKX, 16/10/2025.

Step 48 screenshot.

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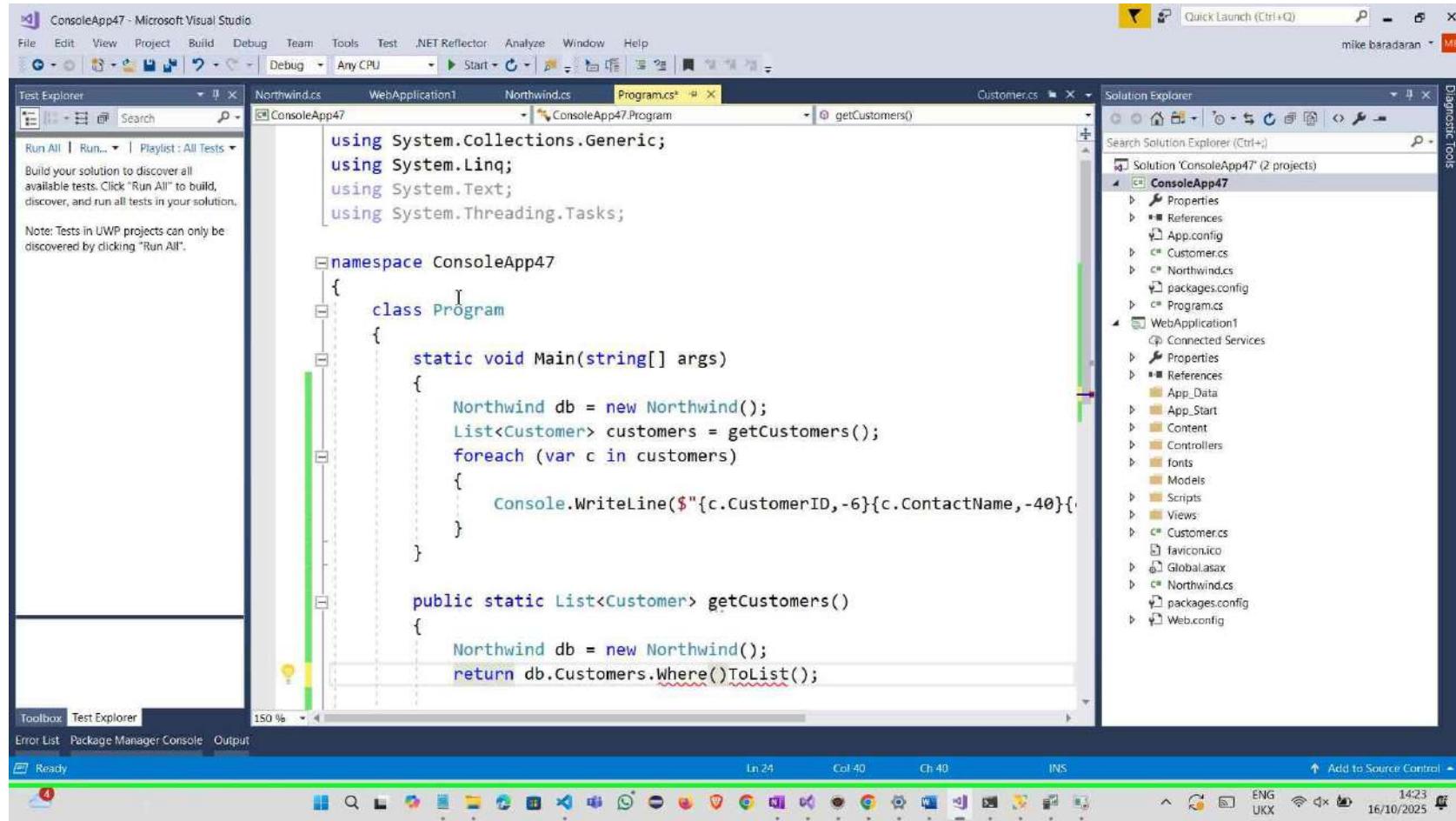
**Step 49: (16/10/2025 14:23:38)** User keyboard input on "ConsoleApp47 - Microsoft Visual Studio (window)" in "ConsoleApp47 - Microsoft Visual Studio" [... Shift-Shift ... Shift-Shift ...]



Step 49 screenshot.

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**Step 50: (16/10/2025 14:23:44)** User mouse wheel up on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio"



The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbar:** Standard icons for file operations, search, and navigation.
- Toolbox:** Available at the bottom left.
- Test Explorer:** Shows a note about discovering tests in UWP projects.
- Solution Explorer:** Displays the solution structure with two projects: ConsoleApp47 and WebApplication1. The WebApplication1 project contains files like App.config, Customer.cs, Northwind.cs, packages.config, Program.cs, and various folder structures for Connected Services, Properties, References, and Views.
- Code Editor:** The main window displays the `Program.cs` file with the following code:

```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}");
            }
        }

        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.ToList();
        }
    }
}
```
- Status Bar:** Shows the current state as "Ready", zoom level at 150%, and the date/time as 14:24 16/10/2025.

Step 53 screenshot.

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**Step 54: (16/10/2025 14:24:50)** User keyboard input on "DesktopWindowXamlSource (pane)" in "C:\WINDOWS\system32\cmd.exe" [... Alt-Tab]

ConsoleApp47 - Microsoft Visual Studio

File Edit View Project Build Debug Team Test .NET Reflector Analyze Window Help

C:\WINDOWS\system32\cmd. x

Test Explorer Run All Build Available discover Note: discover

AROUT Thomas Hardy  
BSBEV Victoria Ashworth  
CONSH Elizabeth Brown  
EASTC Ann Devon  
NORTS Simon Crowther  
SEVES Hari Kumar

London  
London  
London  
London  
London  
London

Press any key to continue . . .

Output Show Output 1> C:\<--- 1> C:\<---

Error List Package Manager Console Output

Build succeeded

Quick Launch (Ctrl+Q) mike baradarani MB Diagnostic Tools

ConsoleApp47 (2 projects)  
ConsoleApp47 Properties References app.config Customer.cs Northwind.cs packages.config program.cs application1 Connected Services Properties References app\_Data app\_Start content

14:24 16/10/2025

The screenshot shows a Microsoft Visual Studio interface with a console application running. The console window title is 'C:\WINDOWS\system32\cmd.' and it contains the following output:

```
AROUT Thomas Hardy
BSBEV Victoria Ashworth
CONSH Elizabeth Brown
EASTC Ann Devon
NORTS Simon Crowther
SEVES Hari Kumar

London
London
London
London
London
London

Press any key to continue . . .
```

The application has successfully built and run, as indicated by the 'Build succeeded' message at the bottom of the screen.

SQL Server Profiler - Untitled - 6 (SQLEXPRESS)

File Edit View Replay Tools Window Help

EventClass TextData DatabaseID DatabaseName ObjectID ObjectName ServerName BinaryData SPID StartTime

RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:24:39...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
SQL:BatchStarting	SELECT COUNT(*) FROM INFORMATION_...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
RPC:Starting	exec sp_reset_connection	5	Northwind	35783...	sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:24:39...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
RPC:Starting	exec sp_executesql N'SELECT [G...	5	Northwind		sp_exec...	.\\SQLEX...	0X00000...	70	2025-10-16 14:24:39...
SP:StmtStarting	SELECT [GroupBy1].[A1] AS [C1]...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:24:39...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
SQL:BatchStarting	SELECT [GroupBy1].[A1] AS [C1]...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:24:39...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
SQL:BatchStarting	SELECT TOP (1) [Extent1].[Id] ...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
RPC:Starting	exec sp_reset_connection	5	Northwind		sp_rese...	.\\SQLEX...	0X00000...	70	2025-10-16 14:24:39...
Audit Logout		5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
Audit Login	-- network protocol: LPC set quoted...	5	Northwind			.\\SQLEX...	0X20000...	70	2025-10-16 14:24:39...
SQL:BatchStarting	SELECT [Extent1].[CustomerID] ...	5	Northwind			.\\SQLEX...	70	2025-10-16 14:24:39...	
Audit Logout		5	Northwind			.\\SQLEX...	70	2025-10-16 14:24:39...	
Audit Logout		1	master			.\\SQLEX...	71	2025-10-16 14:24:39...	

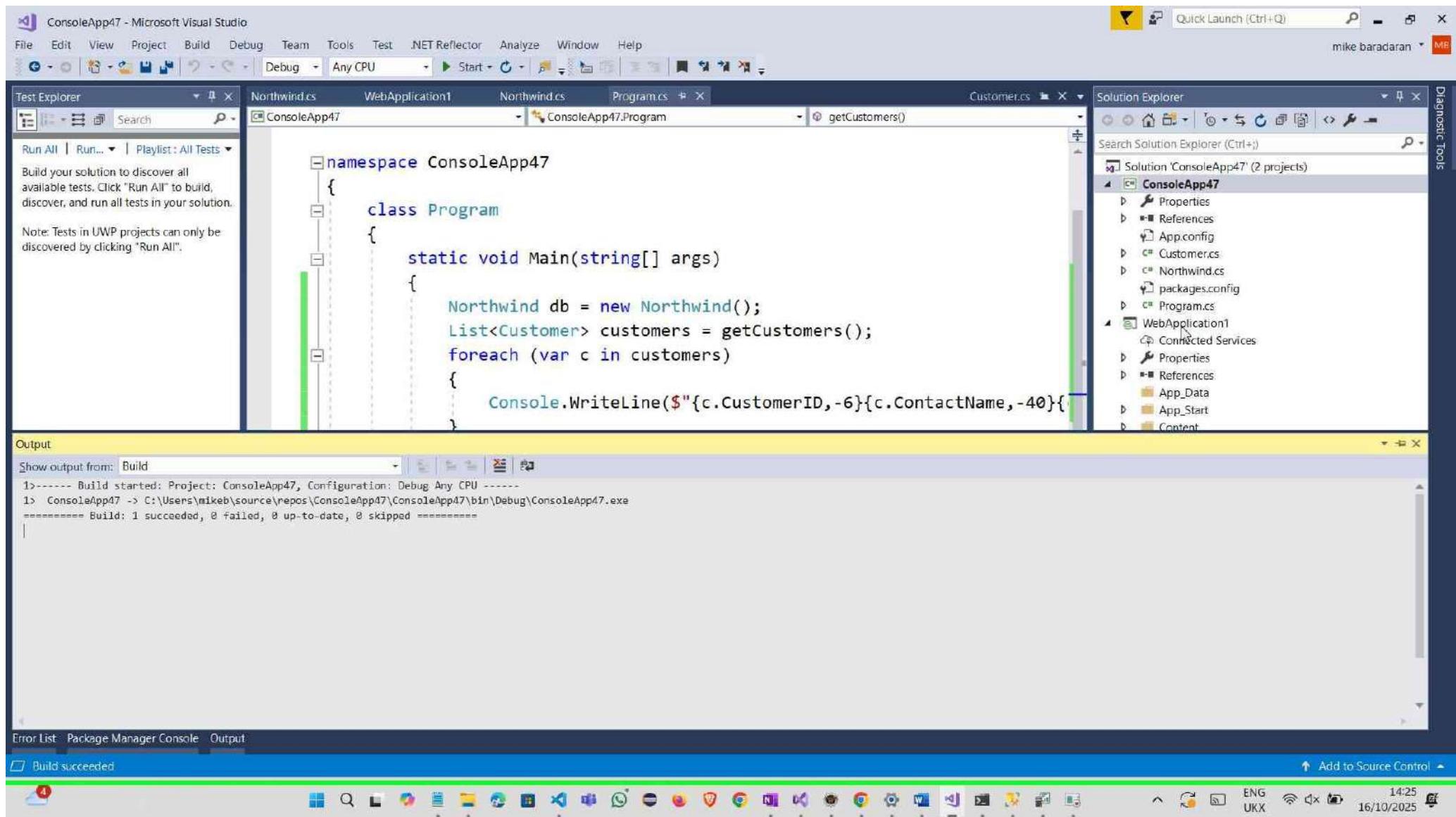
```

SELECT
[Extent1].[CustomerID] AS [CustomerID],
[Extent1].[CompanyName] AS [CompanyName],
[Extent1].[ContactName] AS [ContactName],
[Extent1].[ContactTitle] AS [ContactTitle],
[Extent1].[Address] AS [Address],
[Extent1].[City] AS [City],
[Extent1].[Region] AS [Region],
[Extent1].[PostalCode] AS [PostalCode],
[Extent1].[Country] AS [Country],
[Extent1].[Phone] AS [Phone],
[Extent1].[Fax] AS [Fax]
FROM [dbo].[Customers] AS [Extent1]
WHERE N'London' = [Extent1].[City]

```

Trace is running. Ln 154, Col 2 Rows: 156

Connections: 1 ENG UKX 14:25 16/10/2025



Step 62 screenshot.

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Step 63: (16/10/2025 14:25:21) User right click on "WebApplication1 (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "

ConsoleApp47 - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test .NET Reflector Analyze Window Help

Debug Any CPU Start

Test Explorer Northwind.cs WebApplication1 Northwind.cs Programs.cs Customers.cs

ConsoleApp47 Program.cs getCustomers()

Search Solution Explorer (Ctrl+F)

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'ConsoleApp47' (2 projects)

- ConsoleApp47
  - Properties
  - References
    - App.config
  - Customer.cs
  - Northwind.cs
  - packages.config
  - Program.cs
- WebApplication1
  - Connected Services
  - Properties
  - References
    - App\_Data
    - App\_Start
    - Content
    - Controllers
    - fonts
    - Models
    - Scripts
    - Views
  - Customer.cs
    - favicon.ico
  - Global.asax
  - Northwind.cs
  - packages.config
  - Web.config

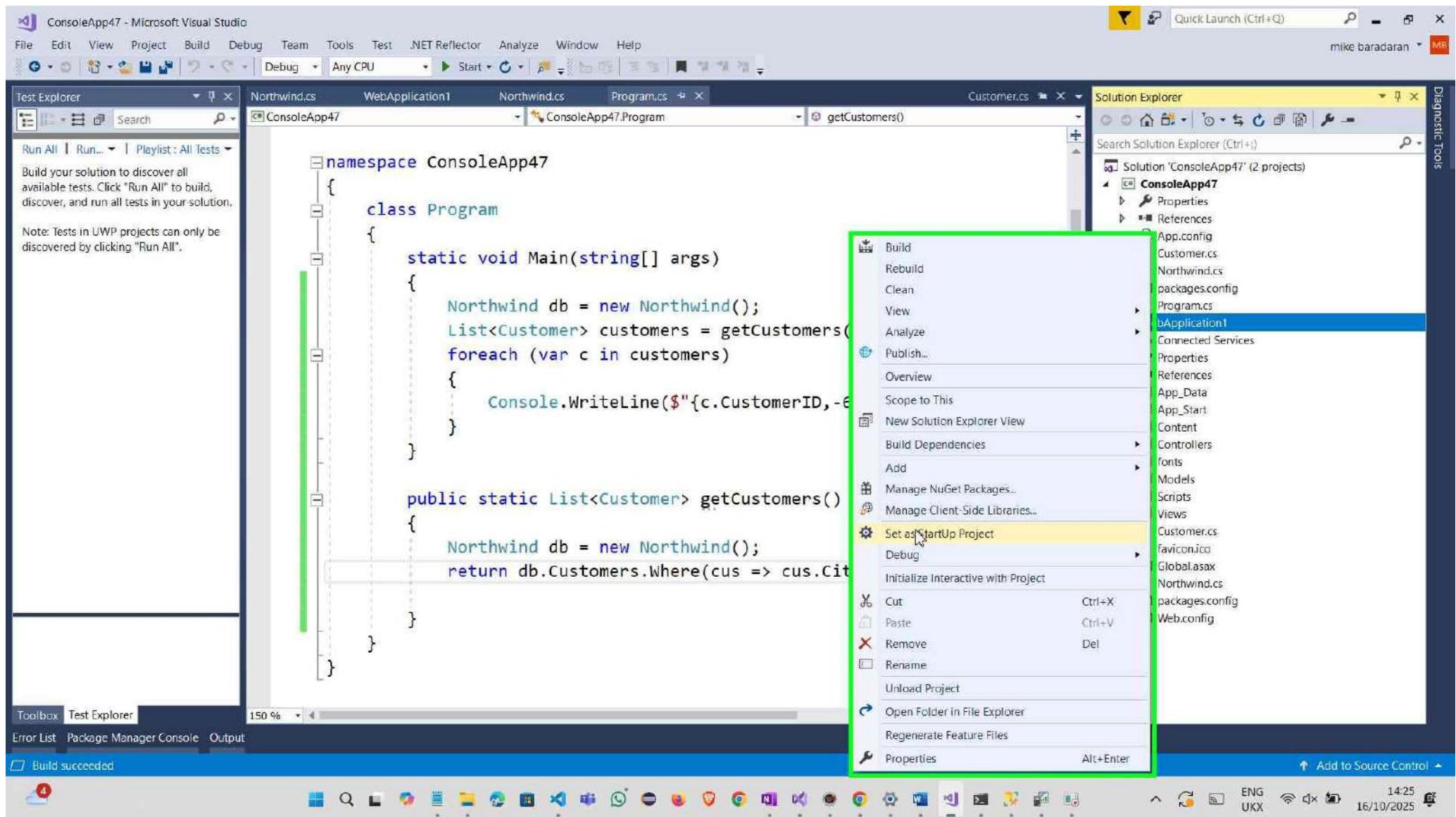
Toolbox Test Explorer 150% Error List Package Manager Console Output

Build succeeded Add to Source Control

4 ENG UKX 14:25 16/10/2025

```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}");
            }
        }

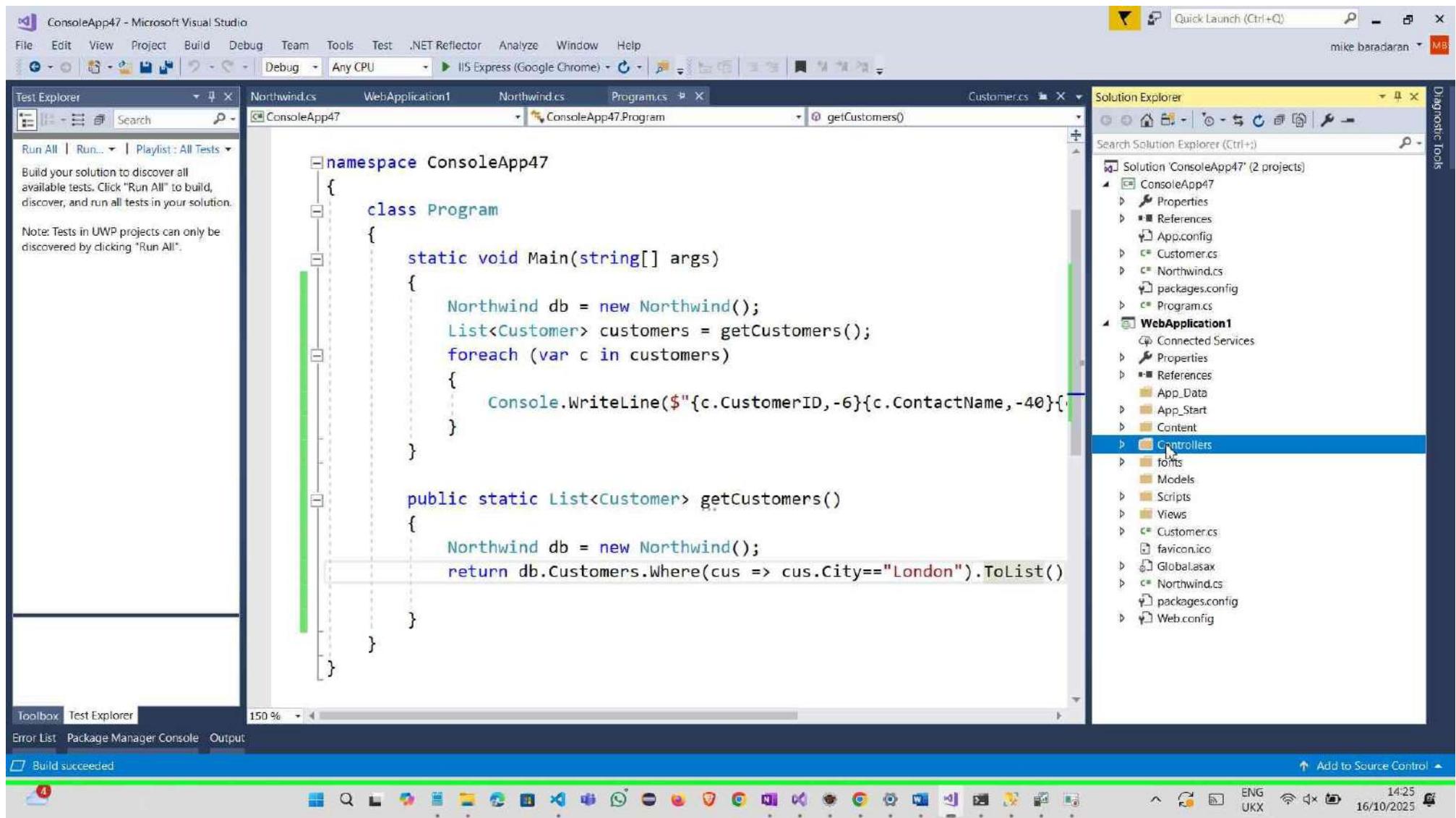
        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.Where(cus => cus.City=="London").ToList();
        }
    }
}
```



Step 64 screenshot.

Previous Next

Step 65: (16/10/2025 14:25:31) User left click on "Controllers (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "



The screenshot shows a Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbars:** Standard, Debug, Task List, Solution Explorer, Properties, Task List, Status Bar.
- Toolbox:** Standard
- Test Explorer:** Run All, Run..., Playlist: All Tests
- Solution Explorer:** Solution 'ConsoleApp47' (2 projects)
  - ConsoleApp47
    - Properties
    - References
    - App.config
    - Customer.cs
    - Northwind.cs
    - packages.config
    - Program.cs
  - WebApplication1
    - Connected Services
    - Properties
    - References
    - App\_Data
    - App\_Start
    - Content
    - Controllers
      - HomeController.cs
    - fonts
    - Models
    - Scripts
    - Views
    - Customer.cs
    - favicon.ico
    - Global.asax
    - Northwind.cs
    - packages.config
    - Web.config
- Diagnostic Tools:** Search Solution Explorer (Ctrl+F)
- Code Editor:** Shows the `ConsoleApp47.Program` file with the following code:

```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}");
            }
        }

        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.Where(cus => cus.City=="London").ToList();
        }
    }
}
```
- Status Bar:** Build succeeded, Add to Source Control, ENG UKX, 14:25, 16/10/2025

Step 66 screenshot.

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Step 67: (16/10/2025 14:25:36) User right click on "Controllers (tree view item)" in "ConsoleApp47 - Microsoft Visual Studio "

ConsoleApp47 - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test .NET Reflector Analyze Window Help

Debug Any CPU IIS Express (Google Chrome) Customer.cs

Test Explorer Search Run All Run... Playlist: All Tests Build your solution to discover all available tests. Click "Run All" to build, discover, and run all tests in your solution. Note: Tests in UWP projects can only be discovered by clicking "Run All".

```
namespace ConsoleApp47
{
    class Program
    {
        static void Main(string[] args)
        {
            Northwind db = new Northwind();
            List<Customer> customers = getCustomers();
            foreach (var c in customers)
            {
                Console.WriteLine($"{c.CustomerID,-6}{c.ContactName,-40}");
            }
        }

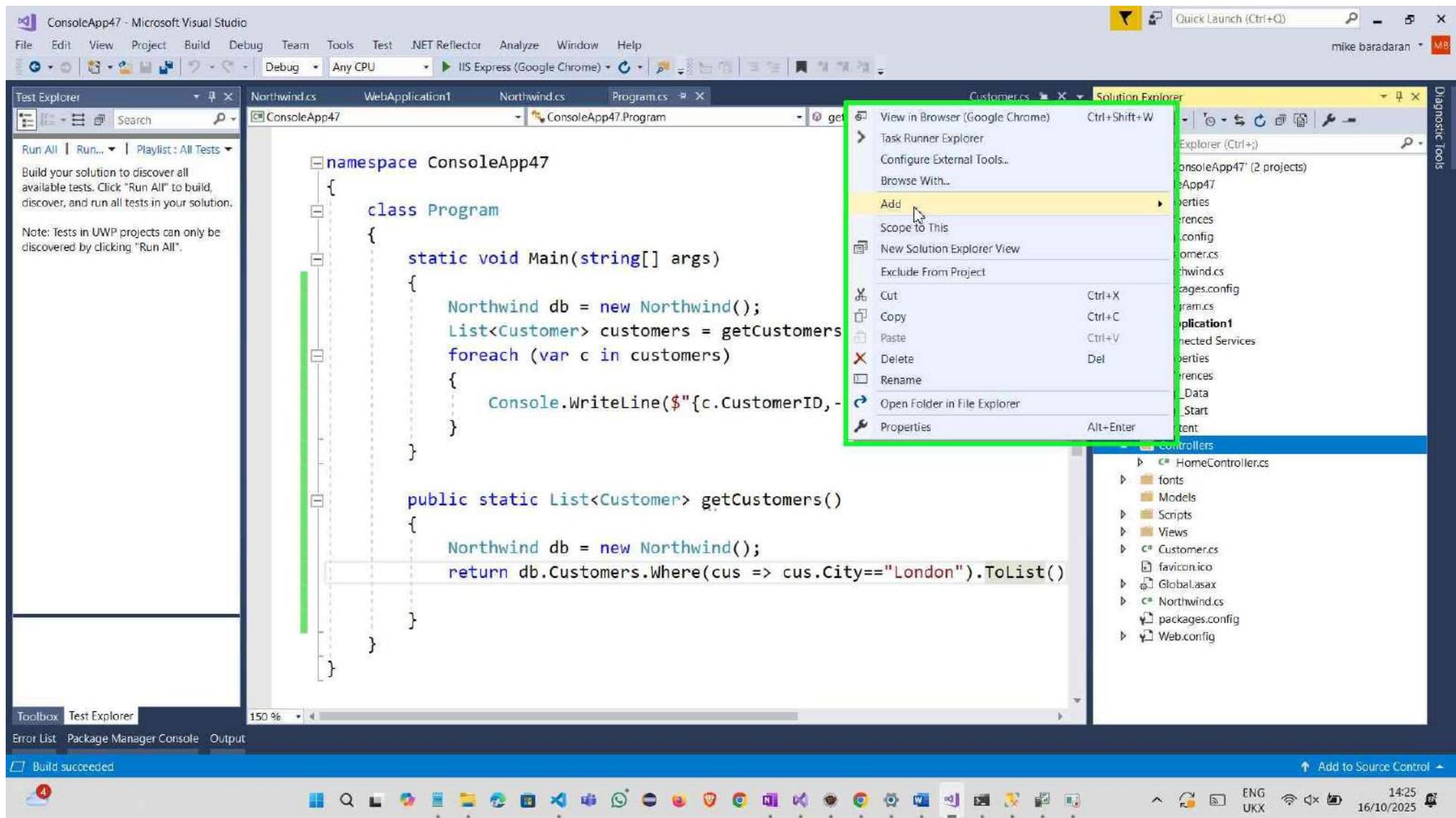
        public static List<Customer> getCustomers()
        {
            Northwind db = new Northwind();
            return db.Customers.Where(cus => cus.city=="London").ToList();
        }
    }
}
```

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'ConsoleApp47' (2 projects)

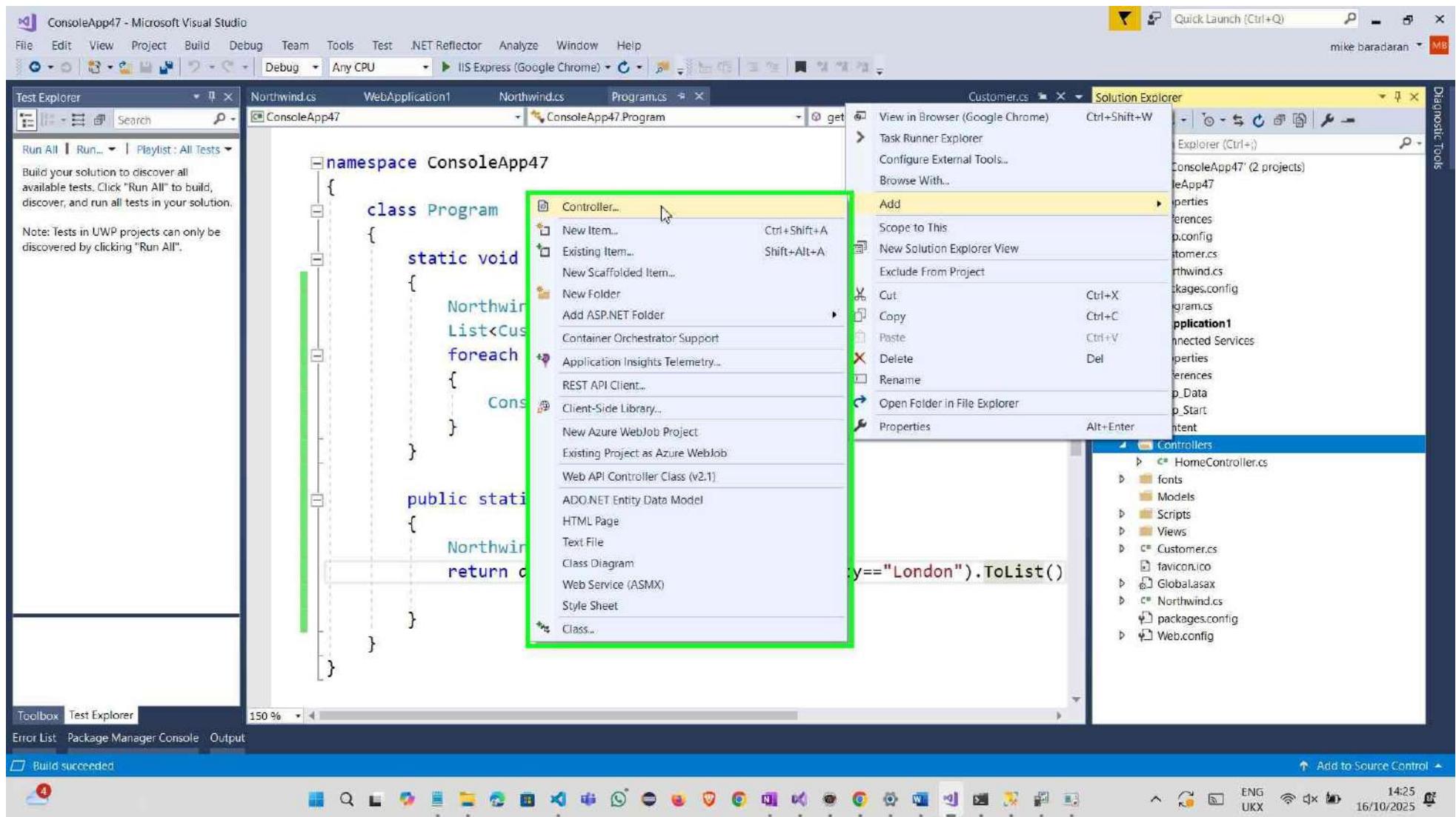
- ConsoleApp47
  - Properties
  - References
    - App.config
  - Customer.cs
  - Northwind.cs
  - packages.config
  - Program.cs
- WebApplication1
  - Connected Services
  - Properties
  - References
    - App\_Data
    - App\_Start
    - Content
    - Controllers
      - HomeController.cs
      - fonts
      - Models
      - Scripts
      - Views
    - Customer.cs
      - favicon.ico
    - Global.asax
    - Northwind.cs
    - packages.config
    - Web.config



Step 68 screenshot.

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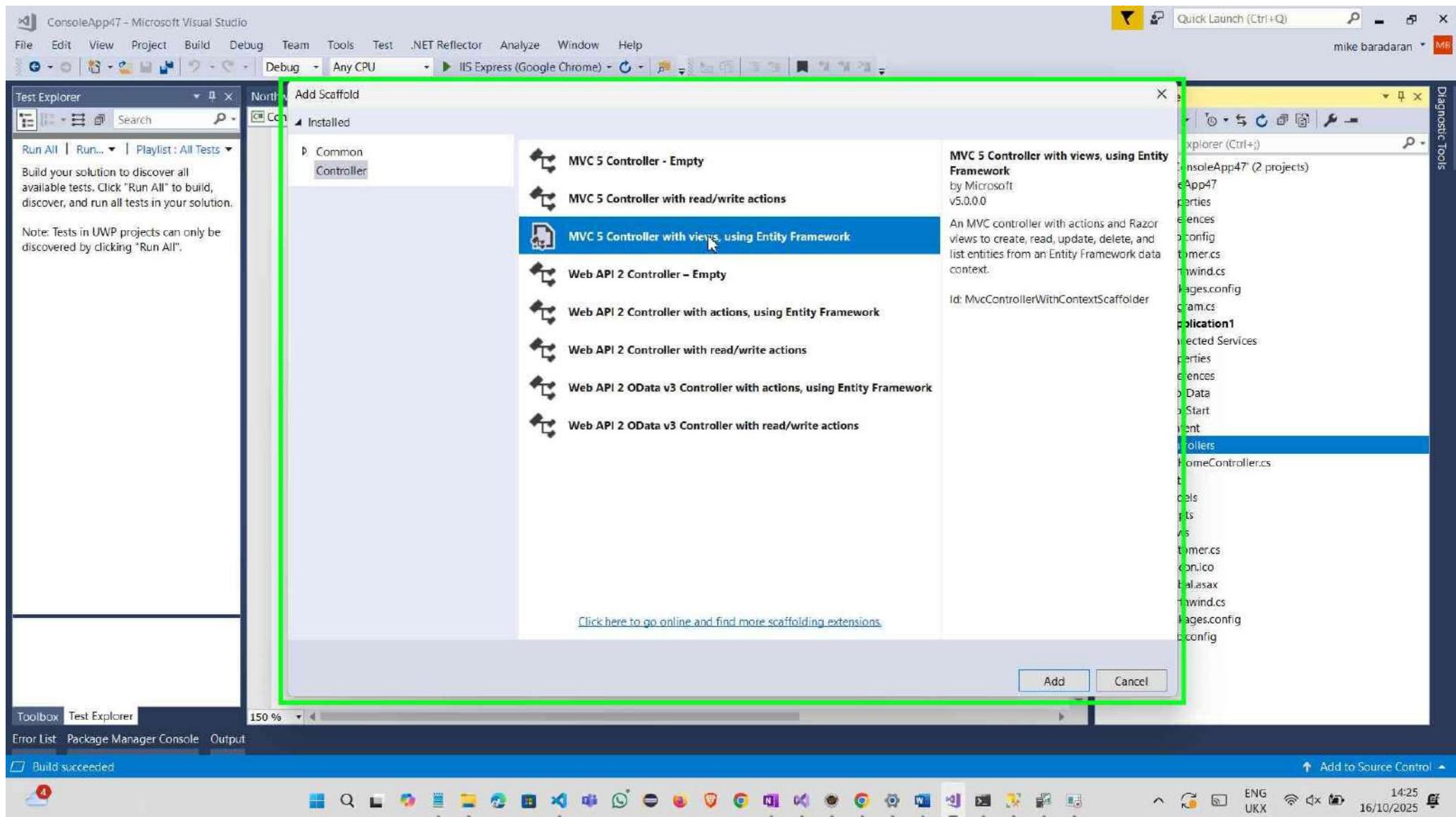
Step 69: (16/10/2025 14:25:39) User left click on "Controller... (menu item)"



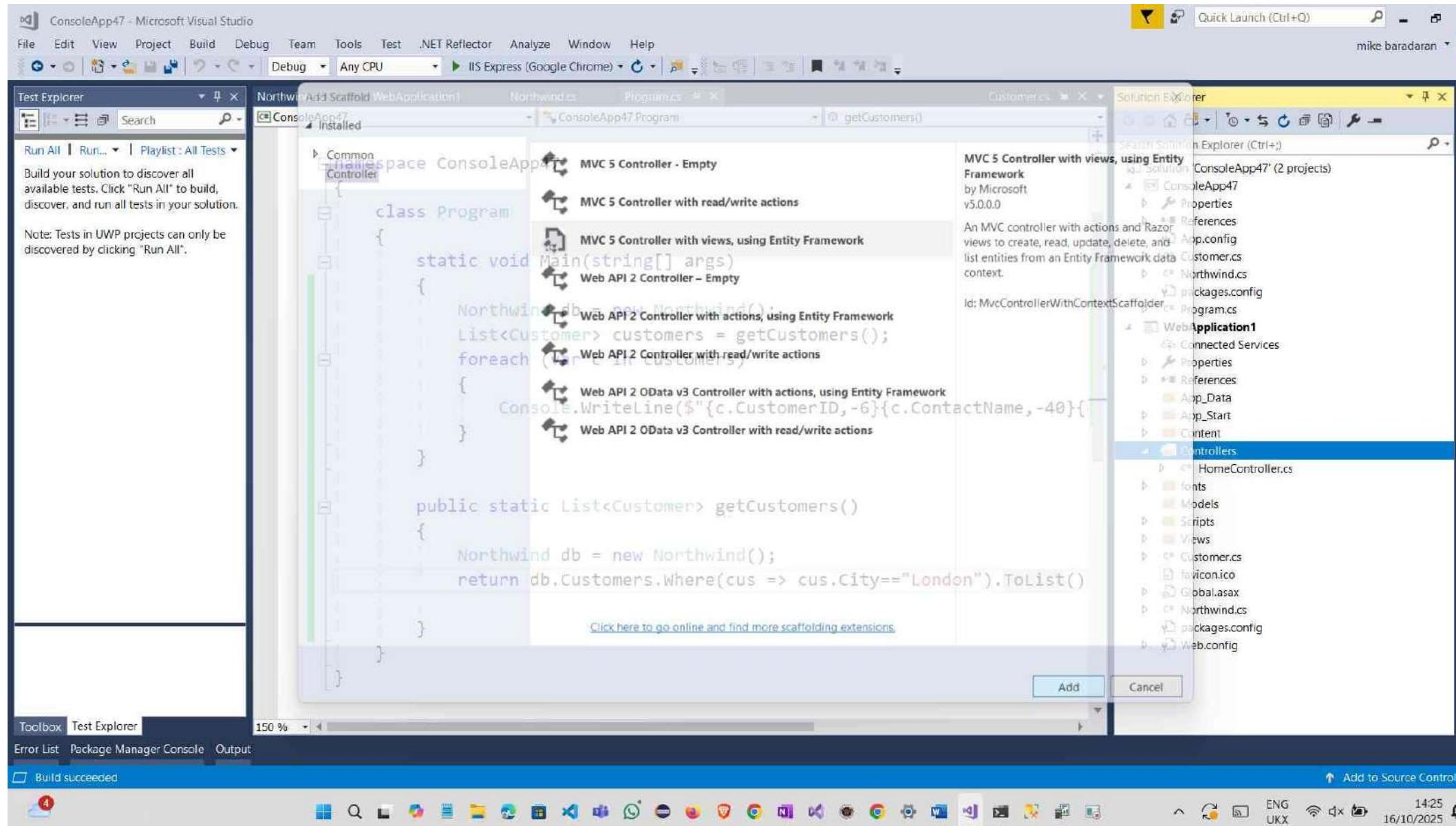
Step 69 screenshot.

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**Step 70: (16/10/2025 14:25:45)** User left click on "MVC 5 Controller with views, using Entity Framework (text)" in "Add Scaffold"

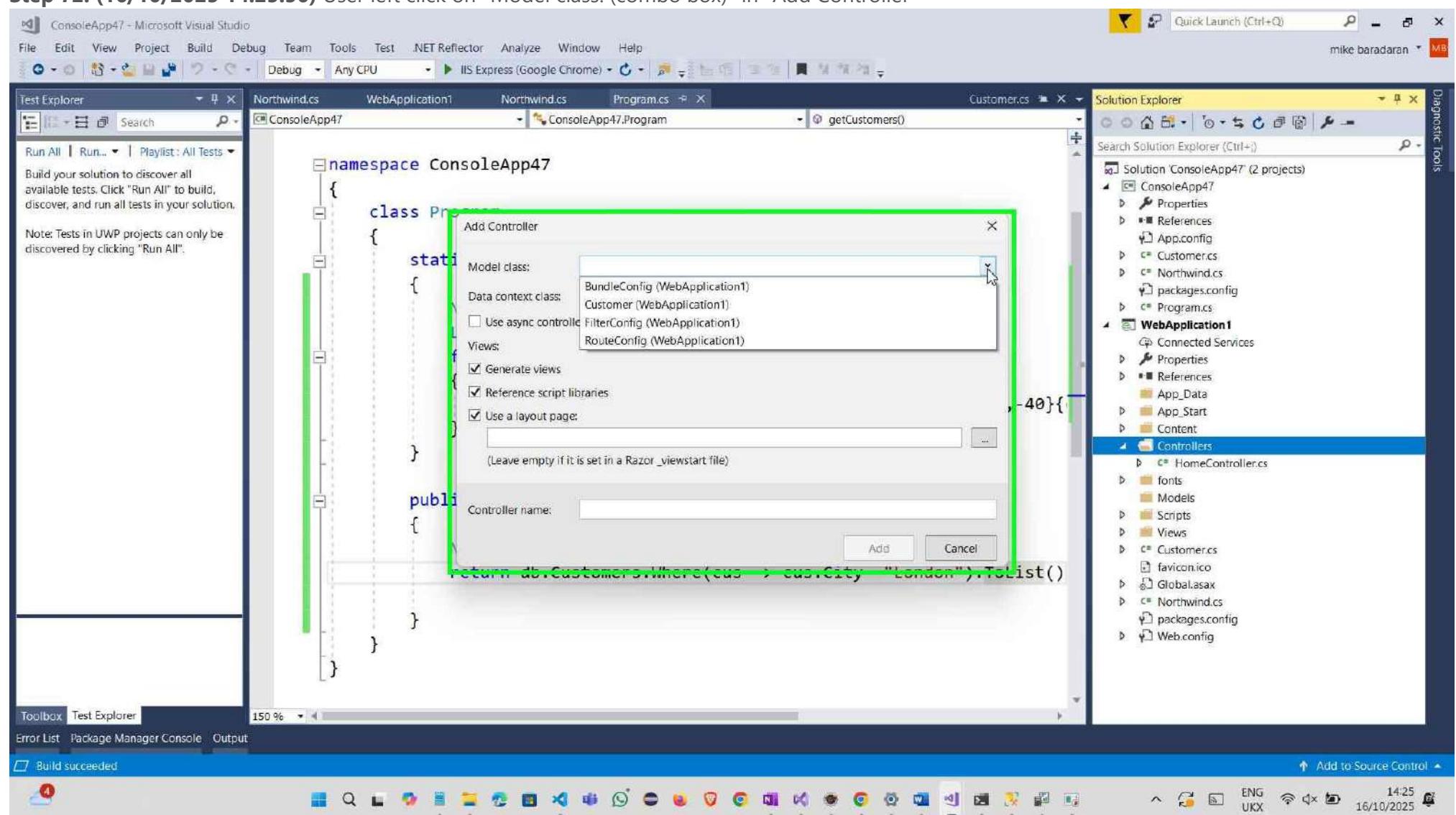


Step 70 screenshot.



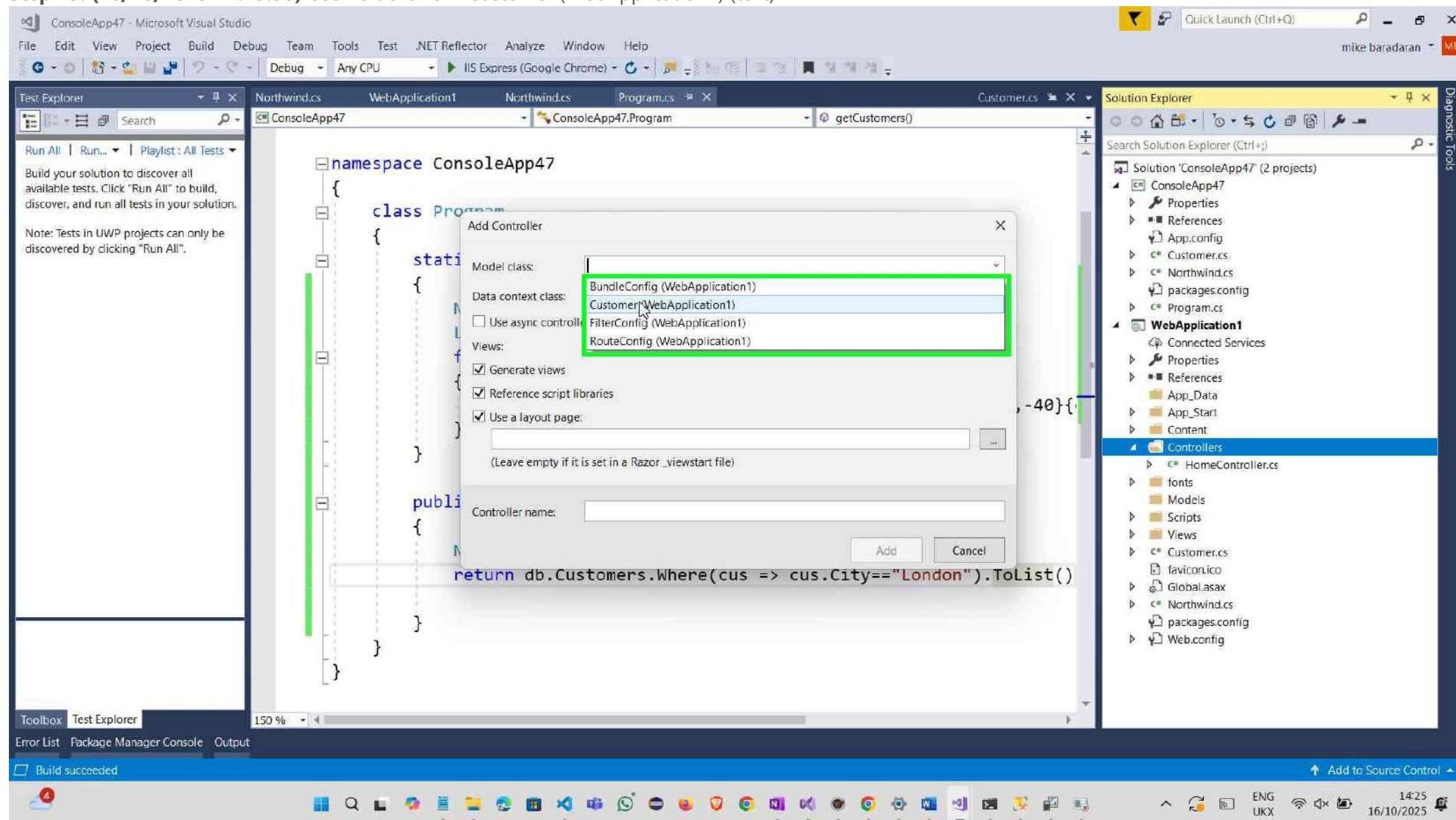
Step 71 screenshot.

## Step 72: (16/10/2025 14:25:56) User left click on "Model class: (combo box)" in "Add Controller"



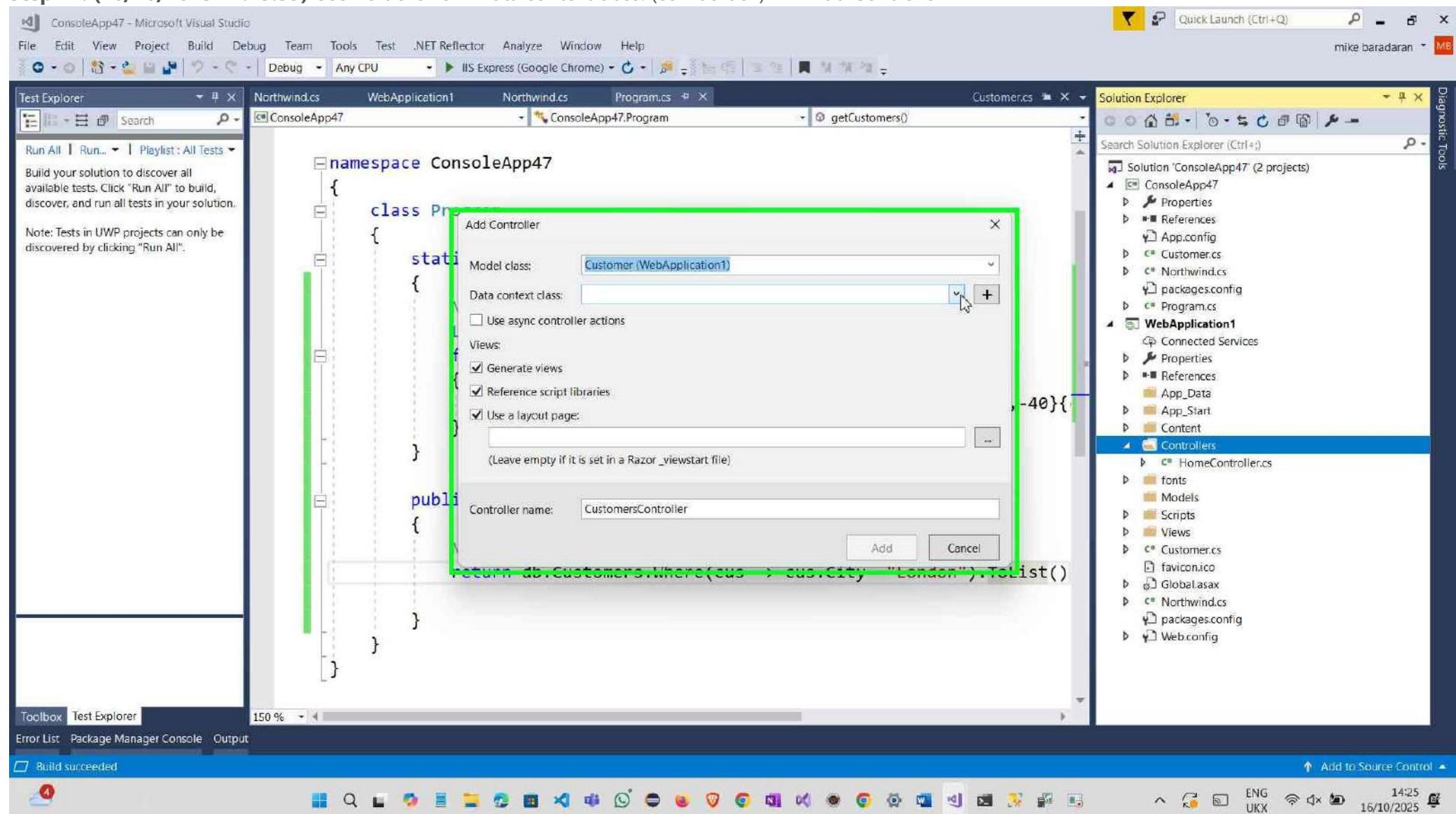
Step 72 screenshot.

## Step 73: (16/10/2025 14:25:58) User left click on "Customer (WebApplication1) (text)"



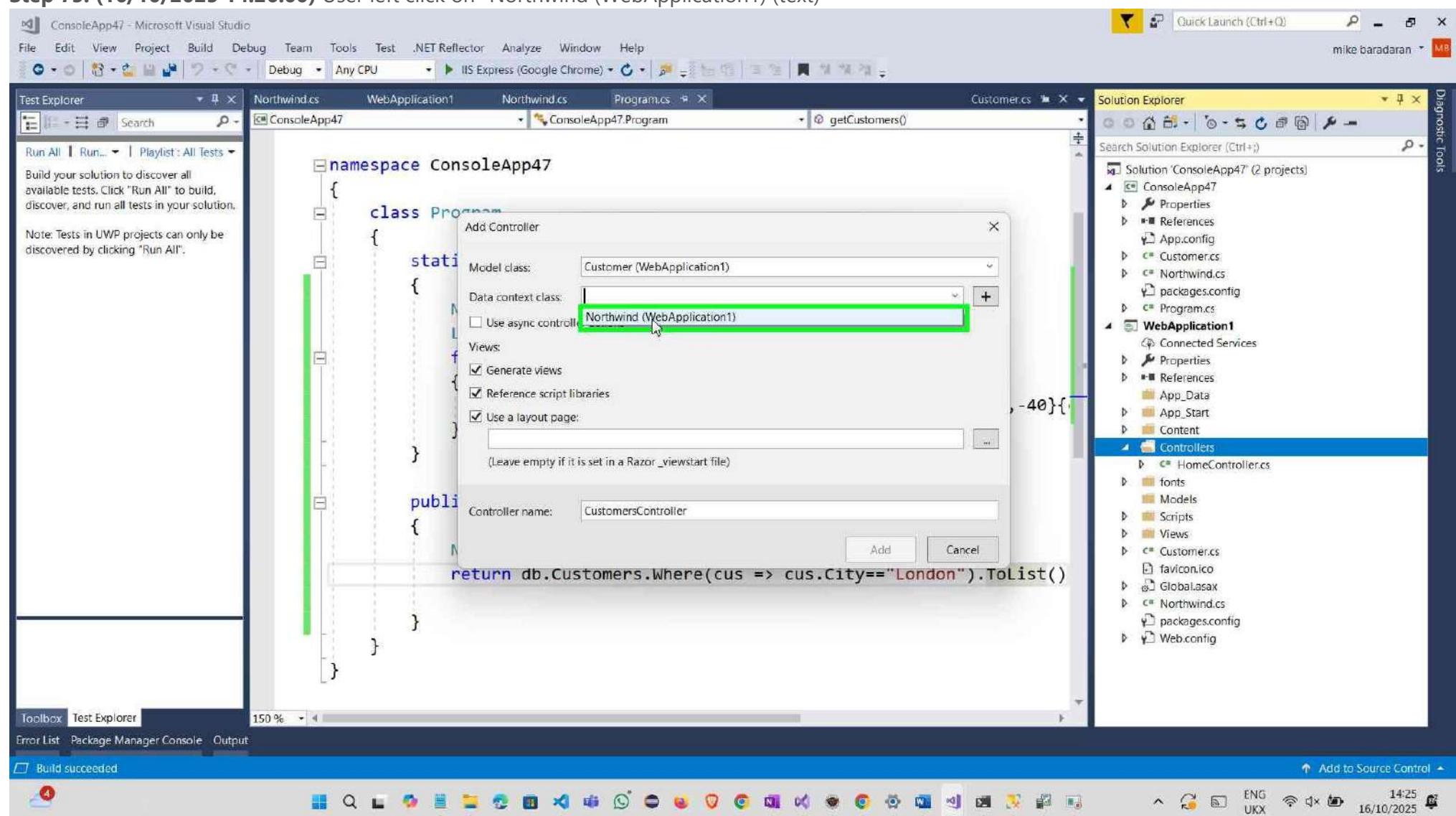
Step 73 screenshot.

## Step 74: (16/10/2025 14:25:59) User left click on "Data context class: (combo box)" in "Add Controller"



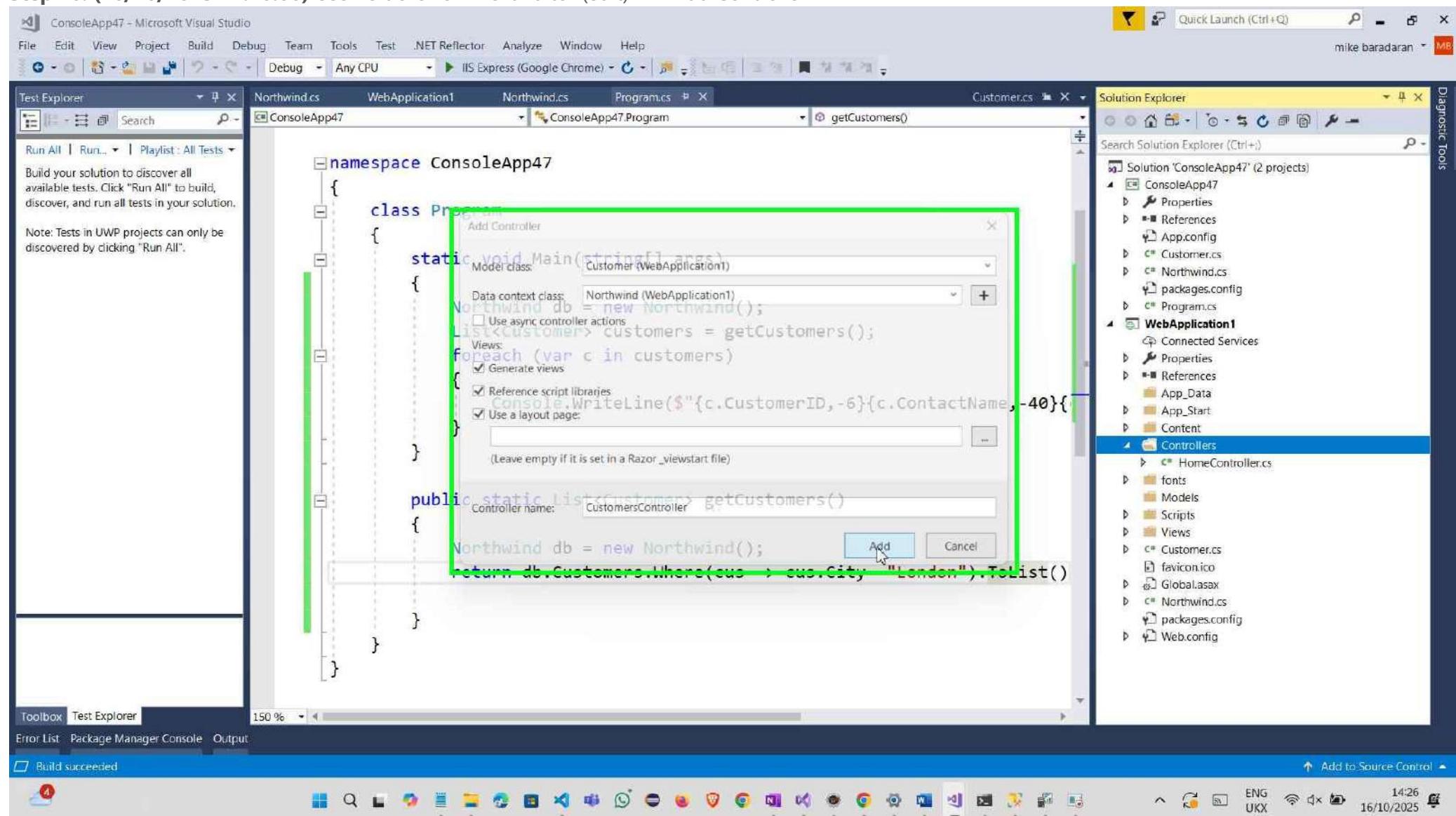
Step 74 screenshot.

## Step 75: (16/10/2025 14:26:00) User left click on "Northwind (WebApplication1) (text)"



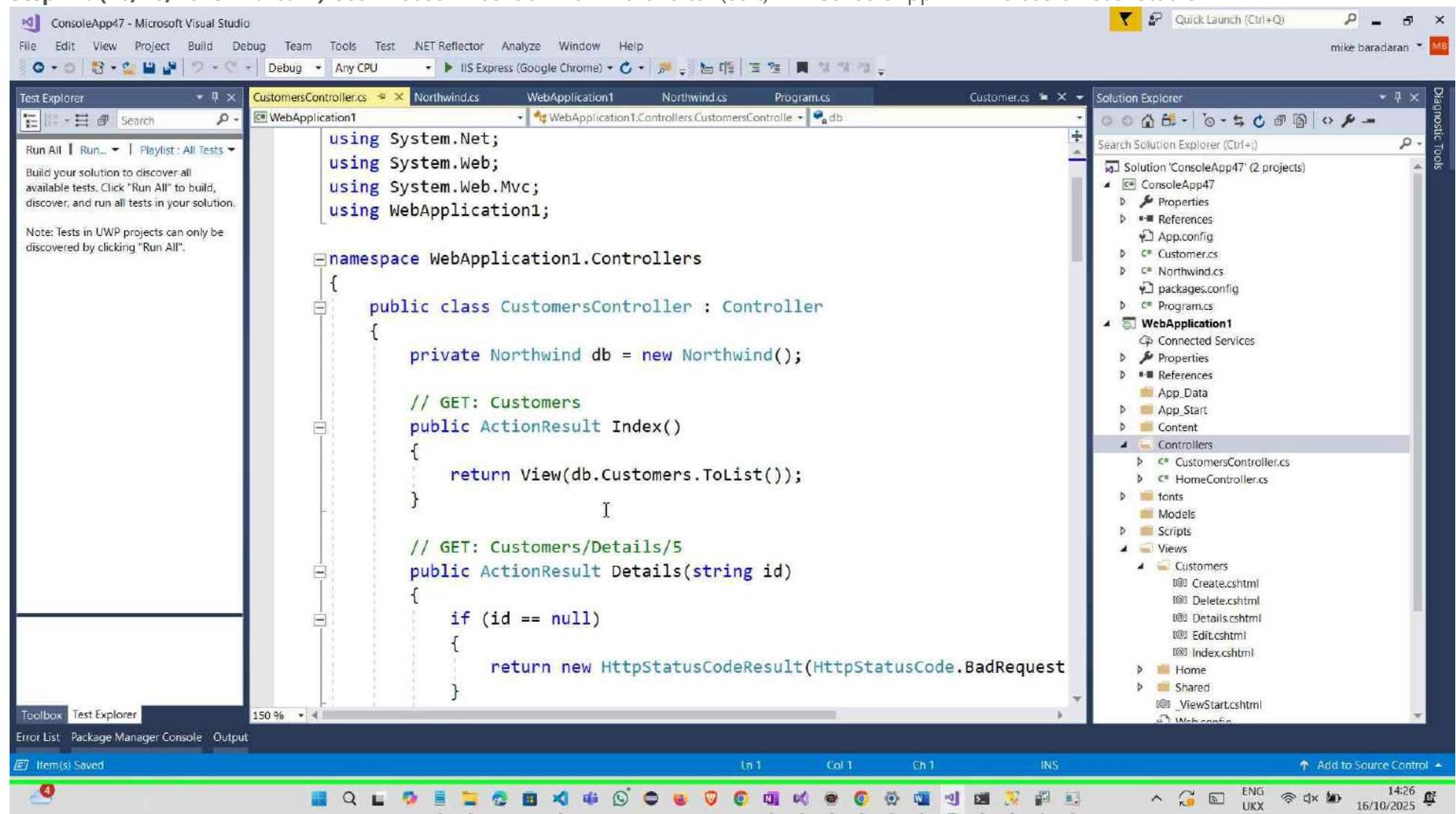
Step 75 screenshot.

## Step 76: (16/10/2025 14:26:06) User left click on "Text Editor (edit)" in "Add Controller"



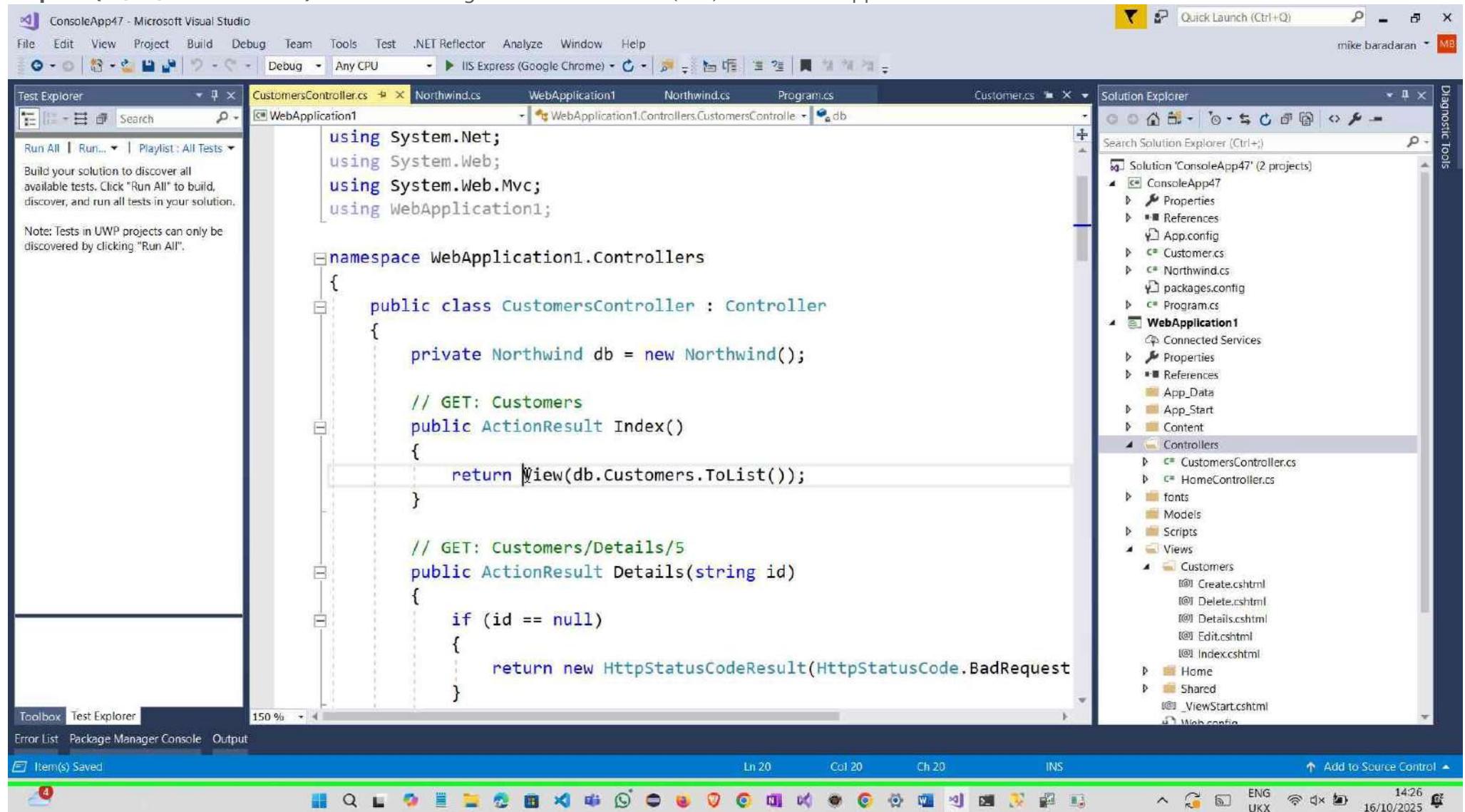
Step 76 screenshot.

## Step 77: (16/10/2025 14:26:14) User mouse wheel down on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "



Step 77 screenshot.

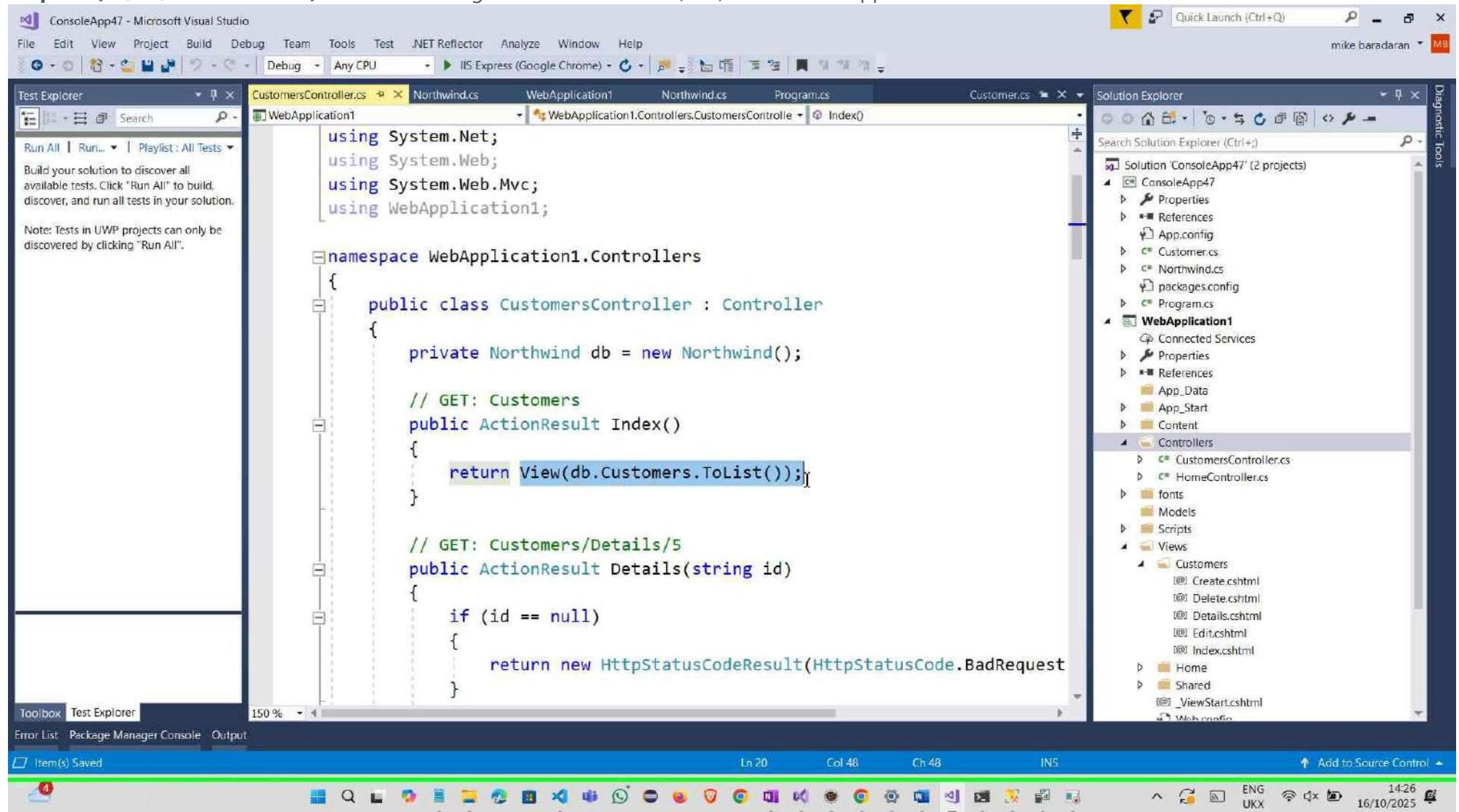
**Step 78: (16/10/2025 14:26:18) User mouse drag start on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "**



Step 78 screenshot.

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**Step 79: (16/10/2025 14:26:19) User mouse drag end on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "**



Step 79 screenshot.

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**Step 80: (16/10/2025 14:26:22) User right click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "**

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Toolbars:** Standard, Debug, Task List, Solution Explorer, Properties, Task List, Status Bar.
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help.
- Quick Launch:** mike baradaran
- Test Explorer:** Shows 'Run All' and 'Run...' options.
- Code Editor:** Displays the `CustomersController.cs` file content:

```
using System.Net;
using System.Web;
using System.Web.Mvc;
using WebApplication1;

namespace WebApplication1.Controllers
{
    public class CustomersController : Controller
    {
        private Northwind db = new Northwind();

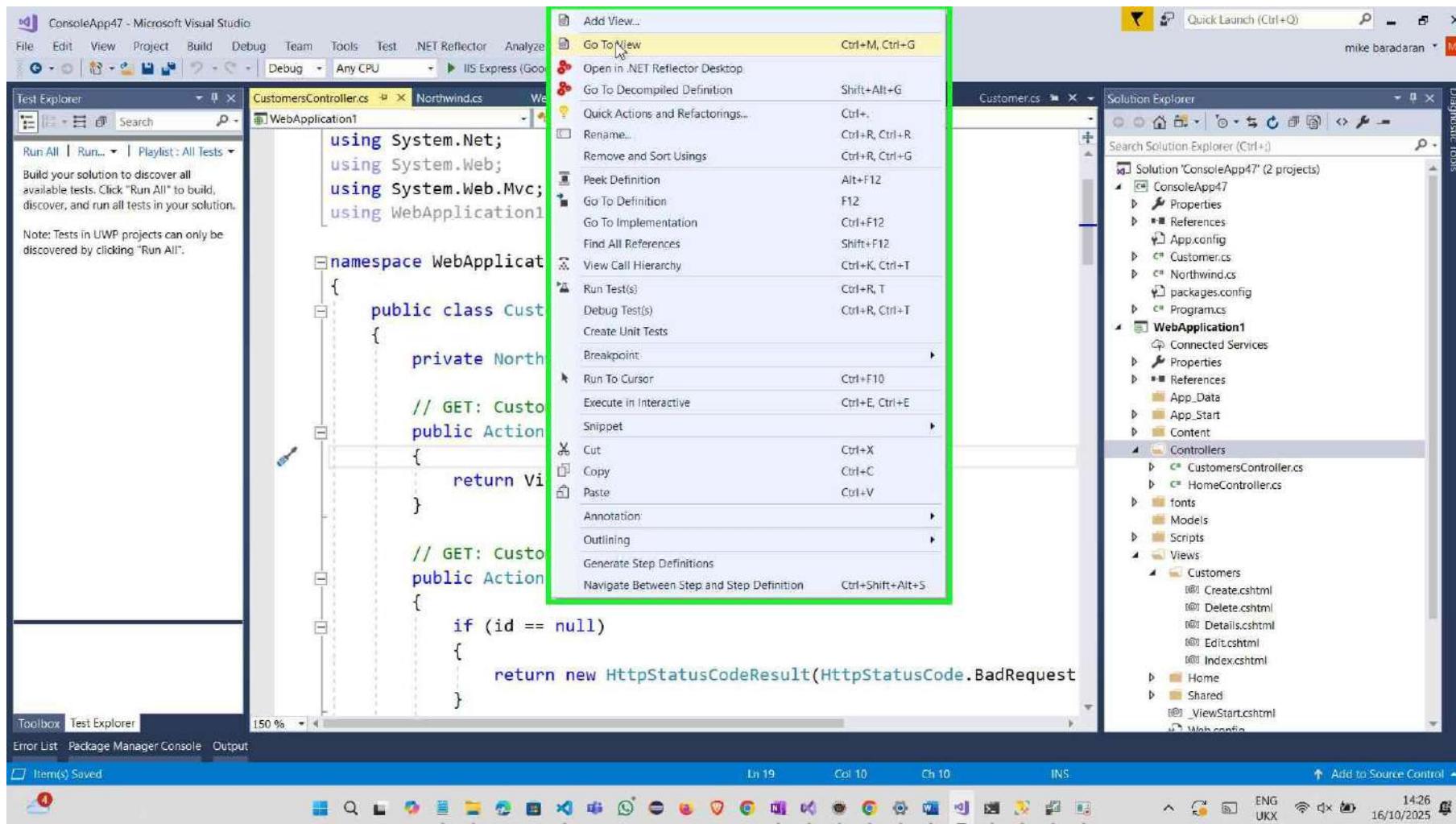
        // GET: Customers
        public ActionResult Index()
        {
            return View(db.Customers.ToList());
        }

        // GET: Customers/Details/5
        public ActionResult Details(string id)
        {
            if (id == null)
            {
                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
            }
        }
    }
}
```
- Solution Explorer:** Shows the solution structure for 'ConsoleApp47' (2 projects) and 'WebApplication1'. The 'Controllers' folder under 'WebApplication1' is selected, showing files like `CustomersController.cs`, `HomeController.cs`, and view folders for `Customers`, `Home`, and `Shared`.
- Status Bar:** Item(s) Saved, Ln 20, Col 48, Ch 48, INS, Add to Source Control, ENG UKX, 14:26, 16/10/2025.

Step 80 screenshot.

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Step 81: (16/10/2025 14:26:25) User left click on "Go To View (menu item)"



screenshot.

Step 81

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Step 82: (16/10/2025 14:26:27) User mouse wheel down on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio"

ConsoleApp47 - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test .NET Reflector Analyze Window Help

Quick Launch (Ctrl+Q) mike baradarani MB

Test Explorer | Index.cshtml | CustomersController.cs | Northwind.cs | WebApplication1 | Northwind.cs | Programs | Solution Explorer

Index.cshtml

```
<h2>Index</h2>



@Html.ActionLink("Create New", "Create")



| @Html.DisplayNameFor(model => model.CompanyName)  |
|---------------------------------------------------|
| @Html.DisplayNameFor(model => model.ContactName)  |
| @Html.DisplayNameFor(model => model.ContactTitle) |
| @Html.DisplayNameFor(model => model.Address)      |
| @Html.DisplayNameFor(model => model.City)         |
| @Html.DisplayNameFor(model => model.Region)       |


```

Search Solution Explorer (Ctrl+F)

Solution 'ConsoleApp47' (2 projects)

- ConsoleApp47
  - Properties
  - References
  - App.config
  - Customer.cs
  - Northwind.cs
  - packages.config
  - Program.cs
- WebApplication1
  - Connected Services
  - Properties
  - References
  - App\_Data
  - App\_Start
  - Content
  - Controllers
    - CustomersController.cs
    - HomeController.cs
  - fonts
  - Models
  - Scripts
  - Views
    - Customers
      - Create.cshtml
      - Delete.cshtml
      - Details.cshtml
      - Edit.cshtml
      - Index.cshtml
    - Home
    - Shared
      - \_ViewStart.cshtml
      - Web.config

Toolbox Test Explorer 150% Error List Package Manager Console Output

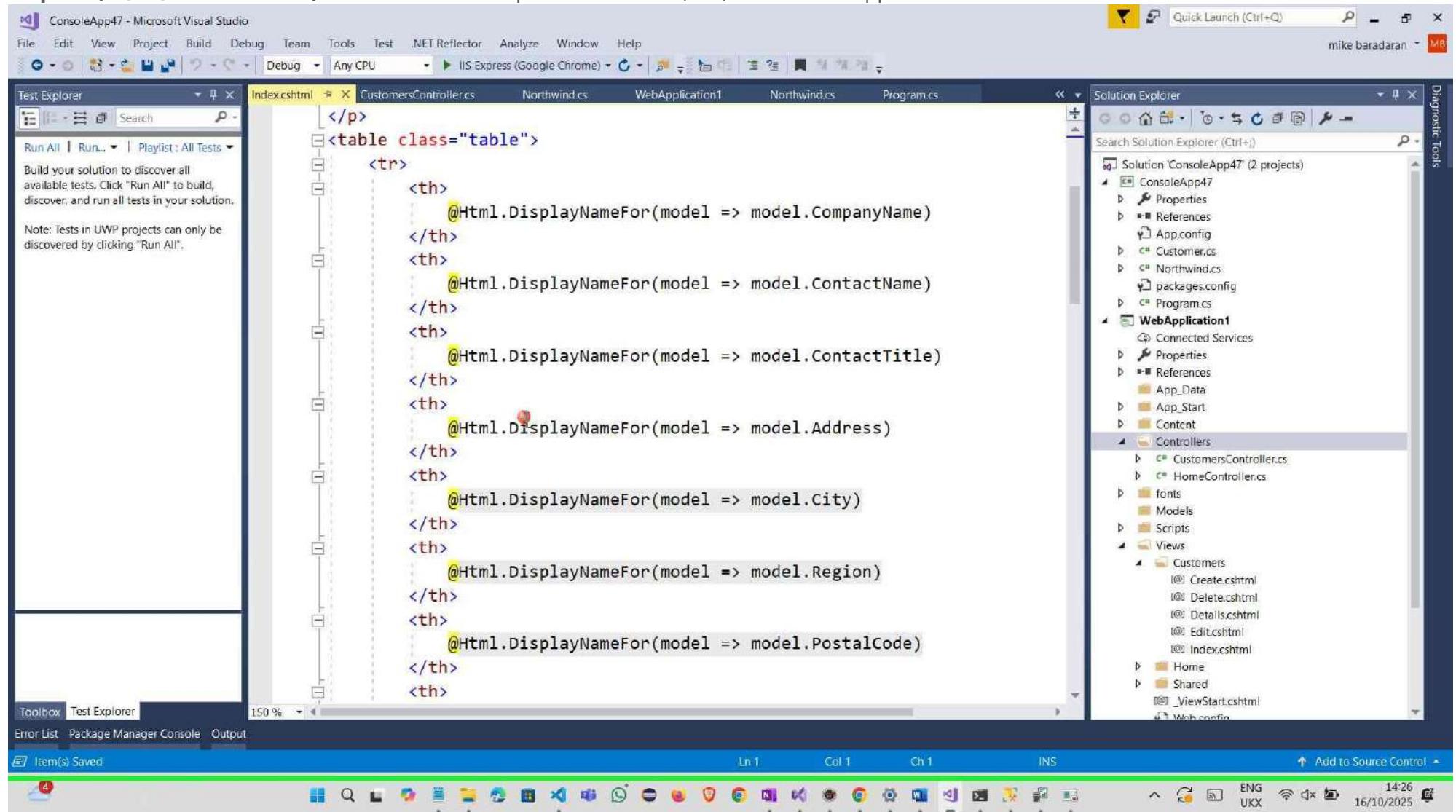
Item(s) Saved Line 1 Col 1 Ch 1 INS Add to Source Control 14:26 ENG UKX 16/10/2025

The screenshot shows the Microsoft Visual Studio interface. The main area displays the ASP.NET MVC view file 'Index.cshtml' with C# Razor syntax. The Solution Explorer on the right shows two projects: 'ConsoleApp47' and 'WebApplication1'. The 'WebApplication1' project is expanded, showing its structure including controllers like 'CustomersController.cs' and 'HomeController.cs', and views like 'Create.cshtml', 'Delete.cshtml', etc. The Taskbar at the bottom shows various pinned application icons.

Step 82 screenshot.

Previous Next

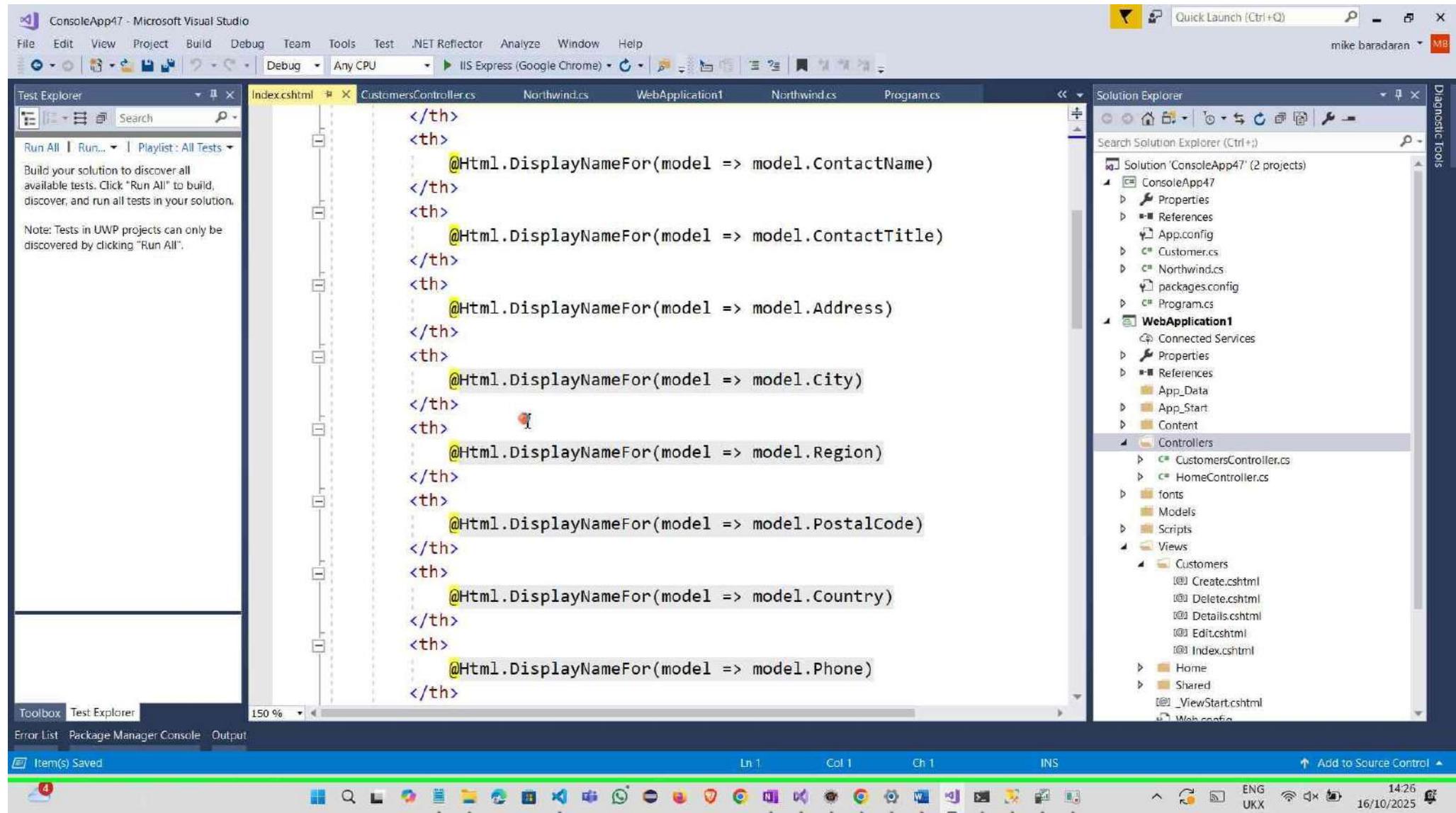
Step 83: (16/10/2025 14:26:28) User mouse wheel up on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "



Step 83 screenshot.

[Previous](#) [Next](#)

Step 84: (16/10/2025 14:26:28) User mouse wheel down on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "



Step 84 screenshot.

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Step 85: (16/10/2025 14:26:32) User right click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

ConsoleApp47 - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test .NET Reflector Analyze Window Help

Debug Any CPU IIS Express (Google Chrome)

Test Explorer

Index.cshtml

CustomersController.cs

Northwind.cs

WebApplication1

Northwind.cs

Program.cs

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'ConsoleApp47' (2 projects)

- ConsoleApp47
  - Properties
  - References
  - App.config
  - Customer.cs
  - Northwind.cs
  - packages.config
  - Program.cs
- WebApplication1
  - Connected Services
  - Properties
  - References
  - App\_Data
  - App\_Start
  - Content
  - Controllers
    - CustomersController.cs
    - HomeController.cs
  - fonts
  - Models
  - Scripts
  - Views
    - Customers
      - Create.cshtml
      - Delete.cshtml
      - Details.cshtml
      - Edit.cshtml
      - Index.cshtml
    - Home
    - Shared
    - \_ViewStart.cshtml
    - Web.config

Diagnostic Tools

Toolbox Test Explorer

Error List Package Manager Console Output

Item(s) Saved

Ln 37 Col 14 Ch 14 INS

150 %

14:26 16/10/2025

```
<thead>
    <tr>
        <th>@Html.DisplayNameFor(model => model.City)</th>
        <th>@Html.DisplayNameFor(model => model.Region)</th>
        <th>@Html.DisplayNameFor(model => model.PostalCode)</th>
        <th>@Html.DisplayNameFor(model => model.Country)</th>
        <th>@Html.DisplayNameFor(model => model.Phone)</th>
        <th>@Html.DisplayNameFor(model => model.Fax)</th>
    </tr>
</thead>
<tbody>
    @foreach (var item in Model) {
        <tr>
            <td>@Html.DisplayFor(modelItem => item.CompanyName)</td>
```

Step 85 screenshot.

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Step 86: (16/10/2025 14:26:43) User left click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbar:** Standard icons for file operations, search, and navigation.
- Text Editor:** The main window displays the code for `Index.cshtml`. The code includes HTML table headers and a foreach loop that iterates over a model named `Model`, displaying the `CompanyName` for each item.
- Solution Explorer:** Shows the solution structure for 'ConsoleApp47' (2 projects). The `WebApplication1` project is expanded, showing its controllers, models, and views. The `Views/Customers` folder contains files for Create, Delete, Details, Edit, and Index actions.
- Toolbox:** Standard .NET development tools.
- Status Bar:** Item(s) Saved, Line 42, Column 27, Ch 27, INS, Add to Source Control, Date/Time (14:26, 16/10/2025).

Step 86 screenshot.

Previous Next

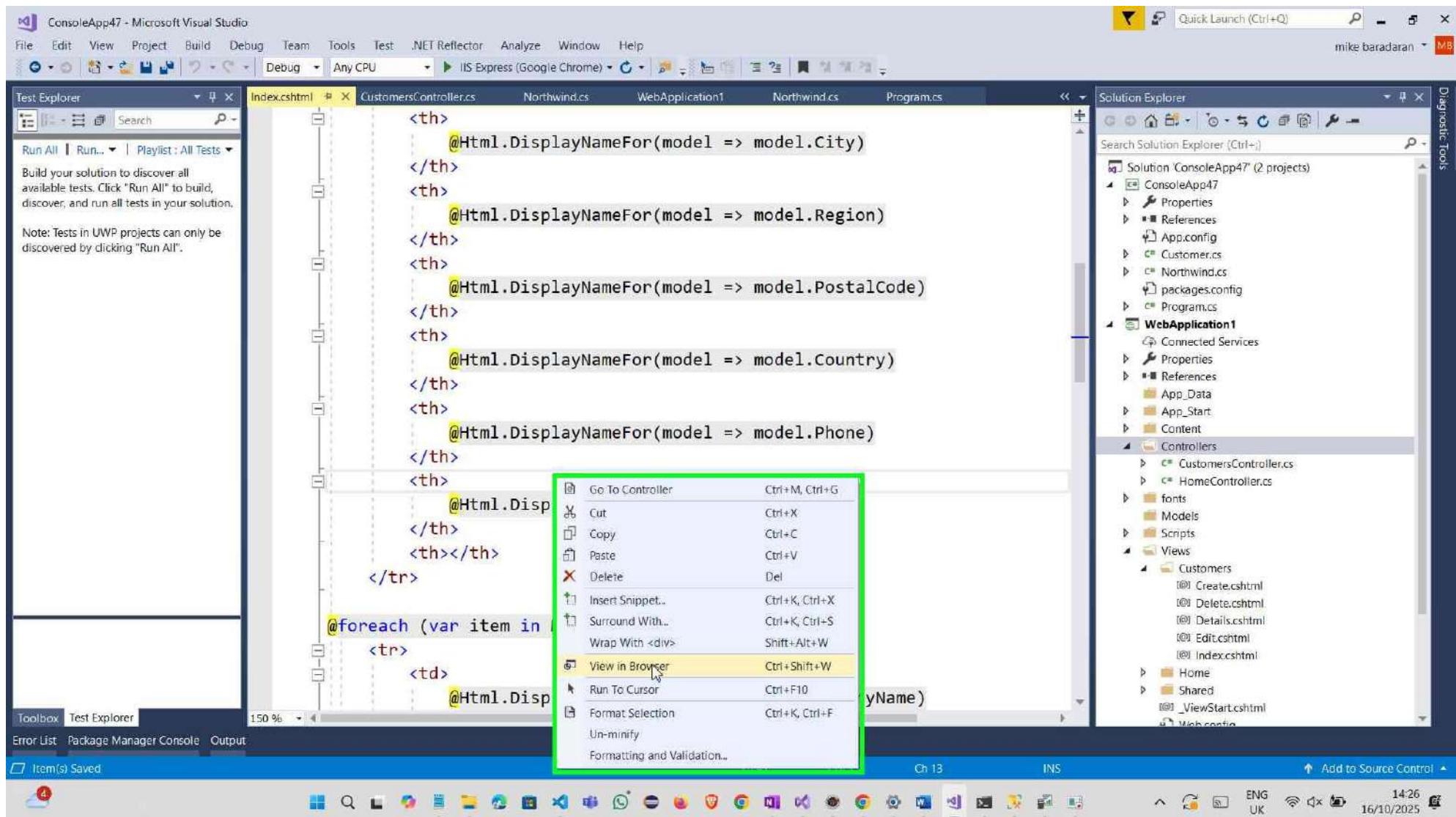
Step 87: (16/10/2025 14:26:44) User left click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbox:** Test Explorer, Error List, Package Manager Console, Output
- Code Editor:** The file Index.cshtml is open, displaying C# Razor syntax for generating a table from a model. The code includes `<th>` tags for columns and a `@foreach` loop for rows.
- Solution Explorer:** Shows the solution structure with two projects: ConsoleApp47 and WebApplication1. Under WebApplication1, the Controllers and Views folders are expanded, showing files like CustomersController.cs, HomeController.cs, and various views for the Customers model.
- Status Bar:** Item(s) Saved, Ln 41, Col 13, Ch 13, INS, Add to Source Control, 14:26, ENG UKX, 16/10/2025

Step 87 screenshot.

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The screenshot shows a Microsoft Edge browser window with three tabs open: "Introducing ChatGPT | OpenAI", "SQL Profiler current queries", and "Index - My ASP.NET Application". The "Index - My ASP.NET Application" tab is active, displaying the "Index" page of an ASP.NET application. The page title is "Index". Below the title, there is a "Create New" button. The main content is a table with the following data:

CompanyName	ContactName	ContactTitle	Address	City	Region	PostalCode	Country	Phone	Fax
QA Ltd	Mike Baradaran	Mr	World!	Newcastle	North	NW1	UK	0208-123456	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin		12209	Germany	030-0074321	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
QA Training	MikeB			Paris			France		<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la Constitución 2222	México D.F.		05021	Mexico	(5) 555-4729	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Antonio Moreno Taquería	Antonio Moreno	Owner	Mataderos 2312	México D.F.		05023	Mexico	(5) 555-3932	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London		WA1 1DP	UK	(171) 555-7788	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8	Luleå		S-958 22	Sweden	0921-12 34 65	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57	Mannheim		68306	Germany	0621-08460	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

Step 91 screenshot.

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Step 92: (16/10/2025 14:27:32) User left click on "City (edit)" in "Edit - My ASP.NET Application - Google Chrome"

Introducing ChatGPT | OpenAI | SQL Profiler current queries | Edit - My ASP.NET Application

http://localhost:64217/Customers/Edit/ABCDE

Application name Home About Contact

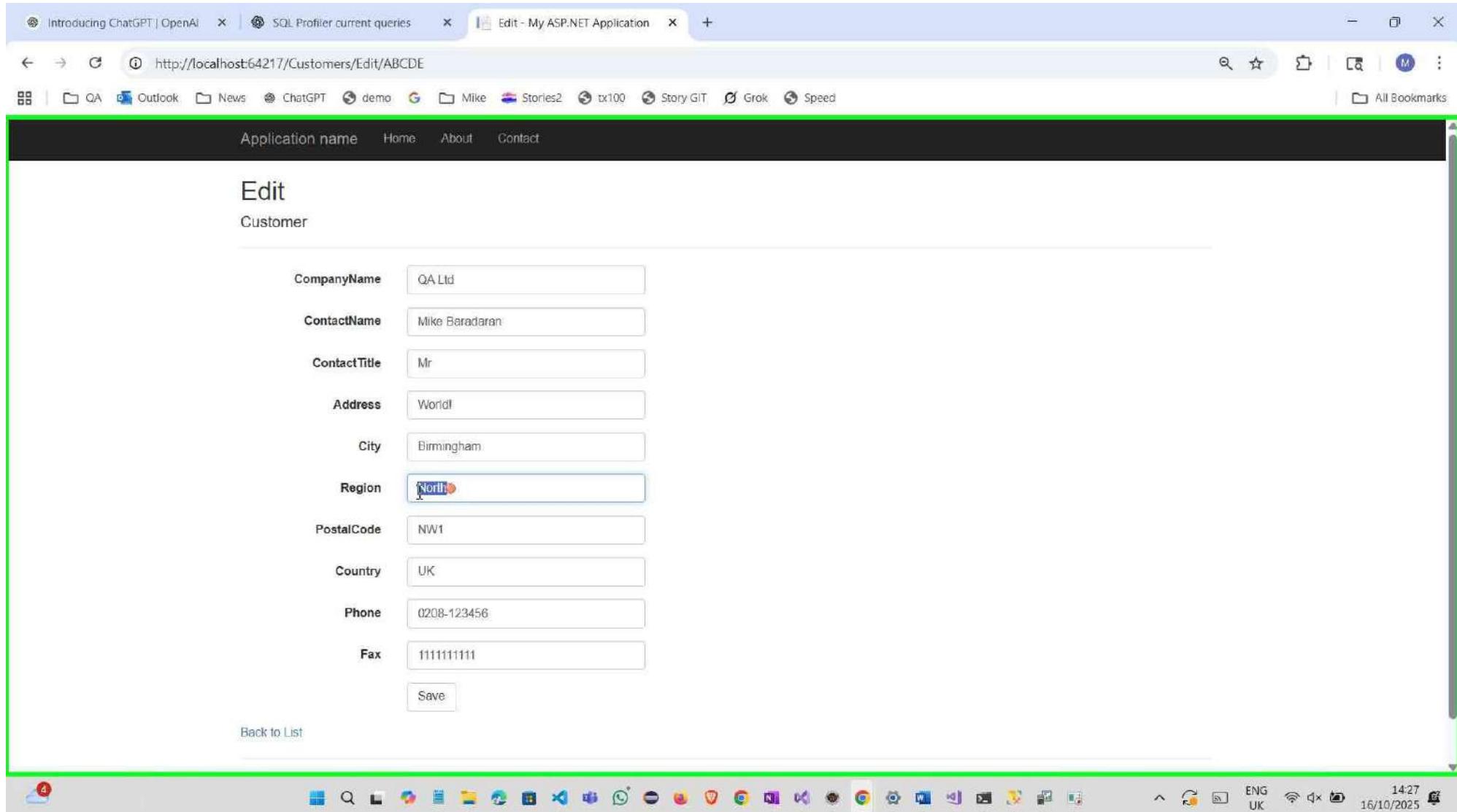
## Edit

Customer

CompanyName	QA Ltd
ContactName	Mike Baradaran
ContactTitle	Mr
Address	World!
City	Newcastle
Region	North
PostalCode	NW1
Country	UK
Phone	0208-123456
Fax	1111111111

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14:27 16/10/2025 ENG UK



Step 100 screenshot.

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**Step 101: (16/10/2025 14:28:42)** User left click on "Index - My ASP.NET Application - Google Chrome (region)" in "Index - My ASP.NET Application - Google Chrome"

Introducing ChatGPT | OpenAI | SQL Profiler current queries | Index - My ASP.NET Application | +

http://localhost:64217/Customers

QA Outlook News ChatGPT demo Mike Stories2 tx100 Story GIT Grek Speed All Bookmarks

Application name Home About Contact

## Index

Create New

CompanyName	ContactName	ContactTitle	Address	City	Region	PostalCode	Country	Phone	Fax	
QA Ltd	Mike Baradaran	Mr	World!	Birmingham	Middle	NW1	UK	0208-123456	12345656778	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin		12209	Germany	030-0074321	030-0076545	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
QA Training	MikeB			Paris			France			<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la Constitución 2222	México D.F.		05021	Mexico	(5) 555-4729	(5) 555-3745	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Antonio Moreno Taquería	Antonio Moreno	Owner	Mataderos 2312	México D.F.		05023	Mexico	(5) 555-3932		<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London		WA1 1DP	UK	(171) 555-7788	(171) 555-6750	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Berglunds snabbköp	Christina Berglund	Order Administrator	Berguvsvägen 8	Luleå		S-958 22	Sweden	0621-12 34 65	0621-12 34 67	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Blauer See Delikatessen	Hanna Moos	Sales Representative	Forsterstr. 57	Mannheim		68306	Germany	0621-08460	0621-08924	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

right click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface. The main window displays the code for the `CustomersController.cs` file. The code defines a controller that interacts with a `Northwind` database to retrieve customer data. The Solution Explorer on the right shows two projects: `ConsoleApp47` and `WebApplication1`. The `WebApplication1` project contains files for controllers, views, and shared components.

```
using System.Net;
using System.Web;
using System.Web.Mvc;
using WebApplication1;

namespace WebApplication1.Controllers
{
    public class CustomersController : Controller
    {
        private Northwind db = new Northwind();

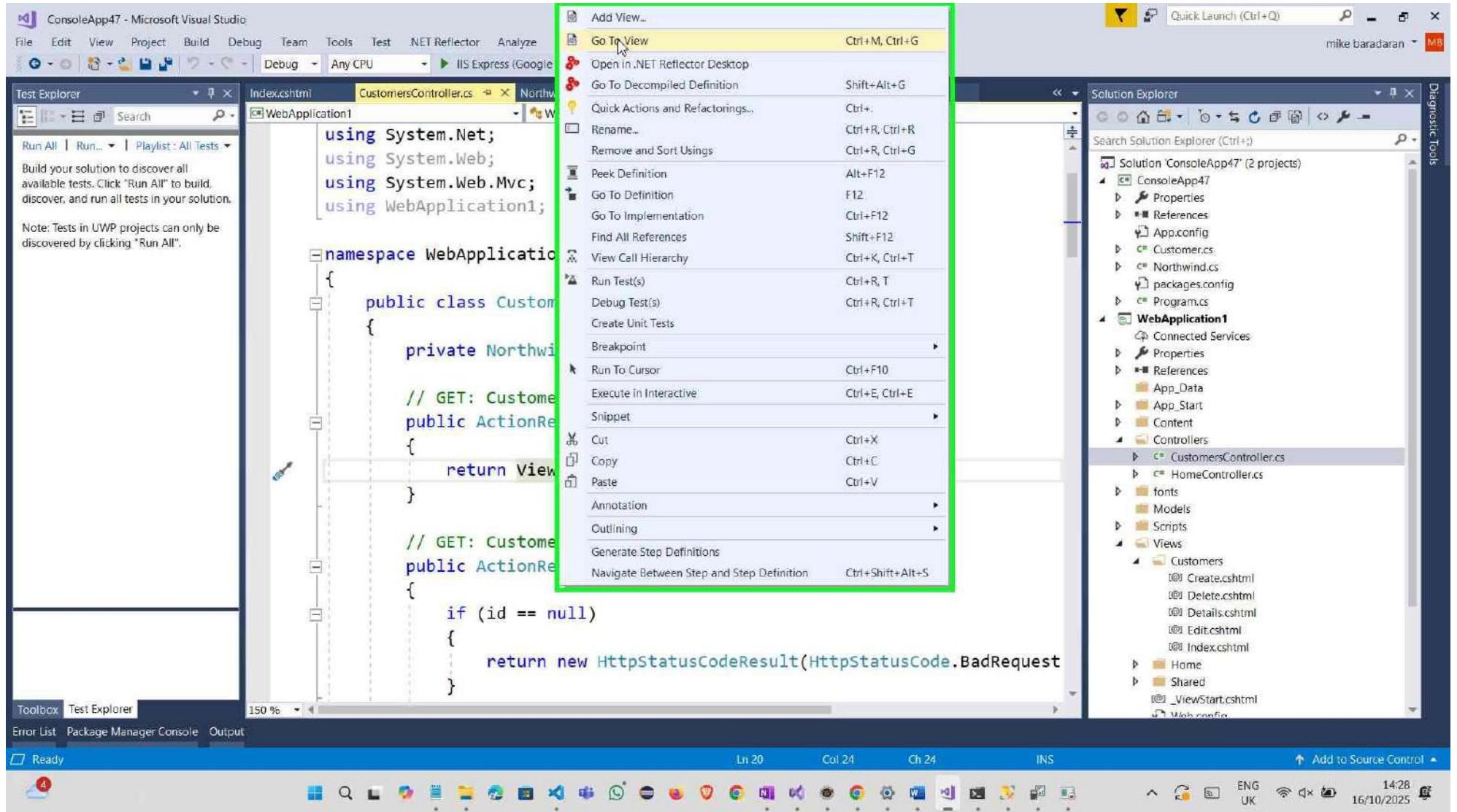
        // GET: Customers
        public ActionResult Index()
        {
            return View(db.Customers.ToList());
        }

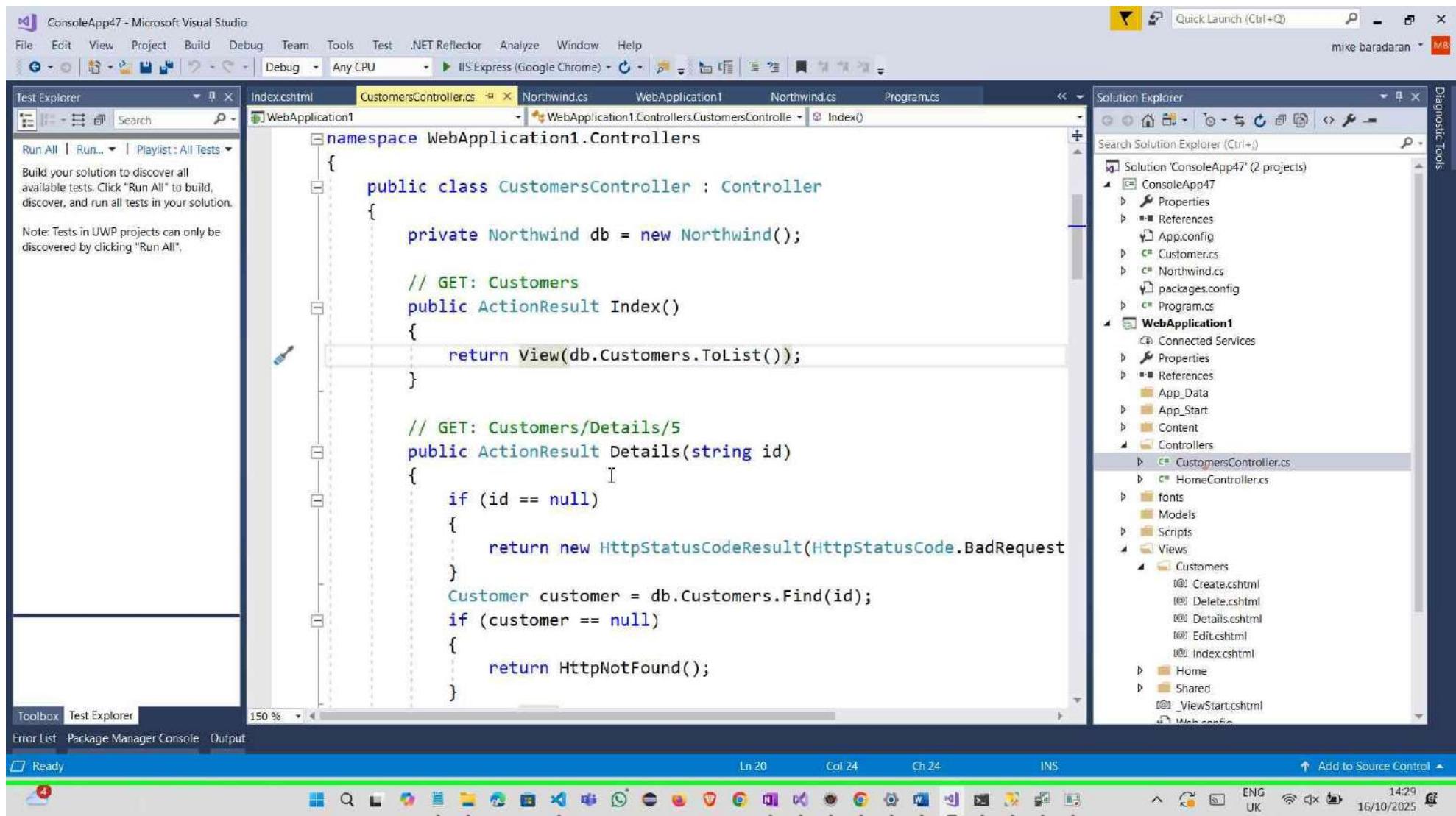
        // GET: Customers/Details/5
        public ActionResult Details(string id)
        {
            if (id == null)
            {
                return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
            }
        }
    }
}
```

Step 104 screenshot.

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Step 105: (16/10/2025 14:28:59) User left click on "Go To View (menu item)"

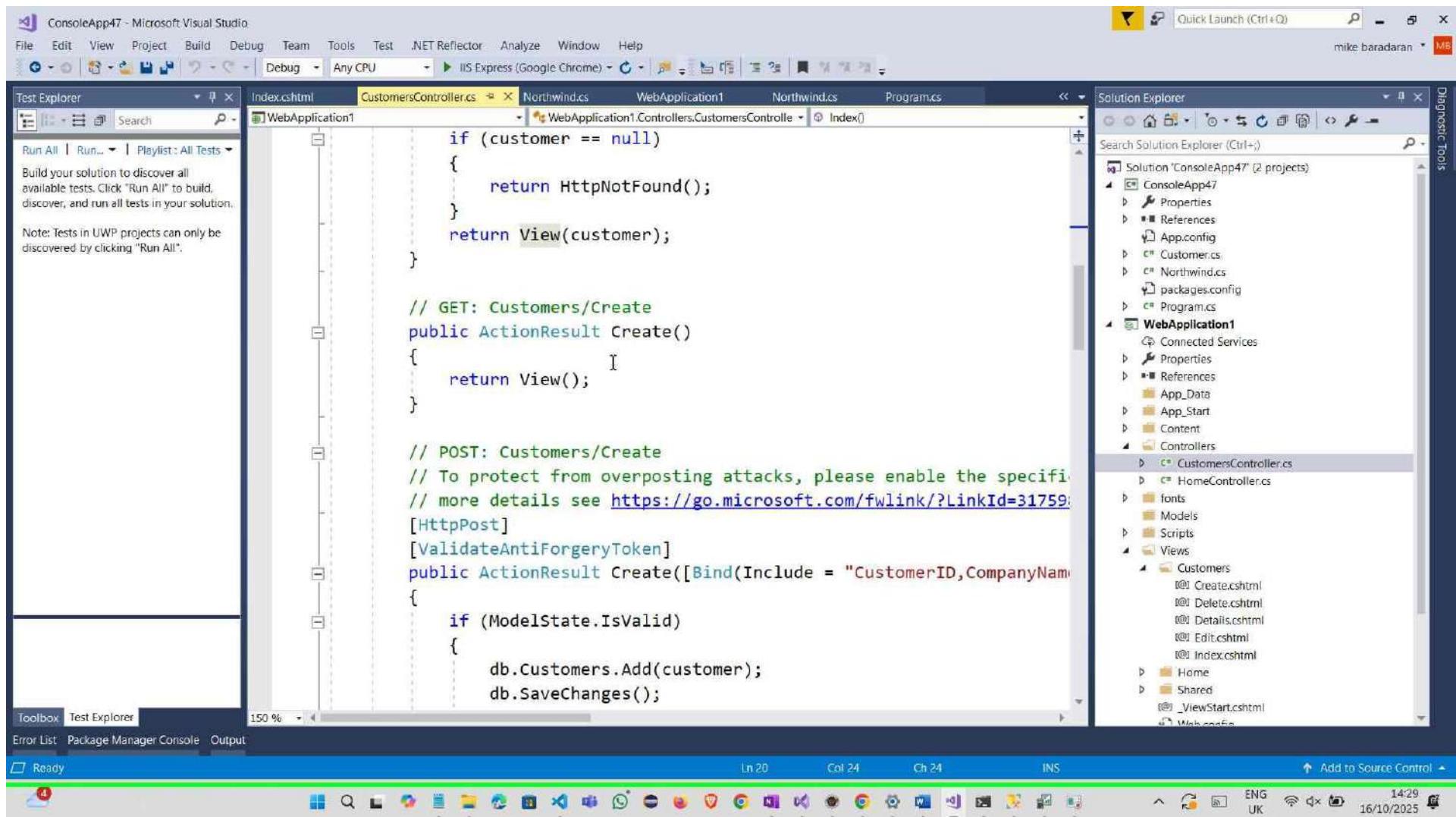


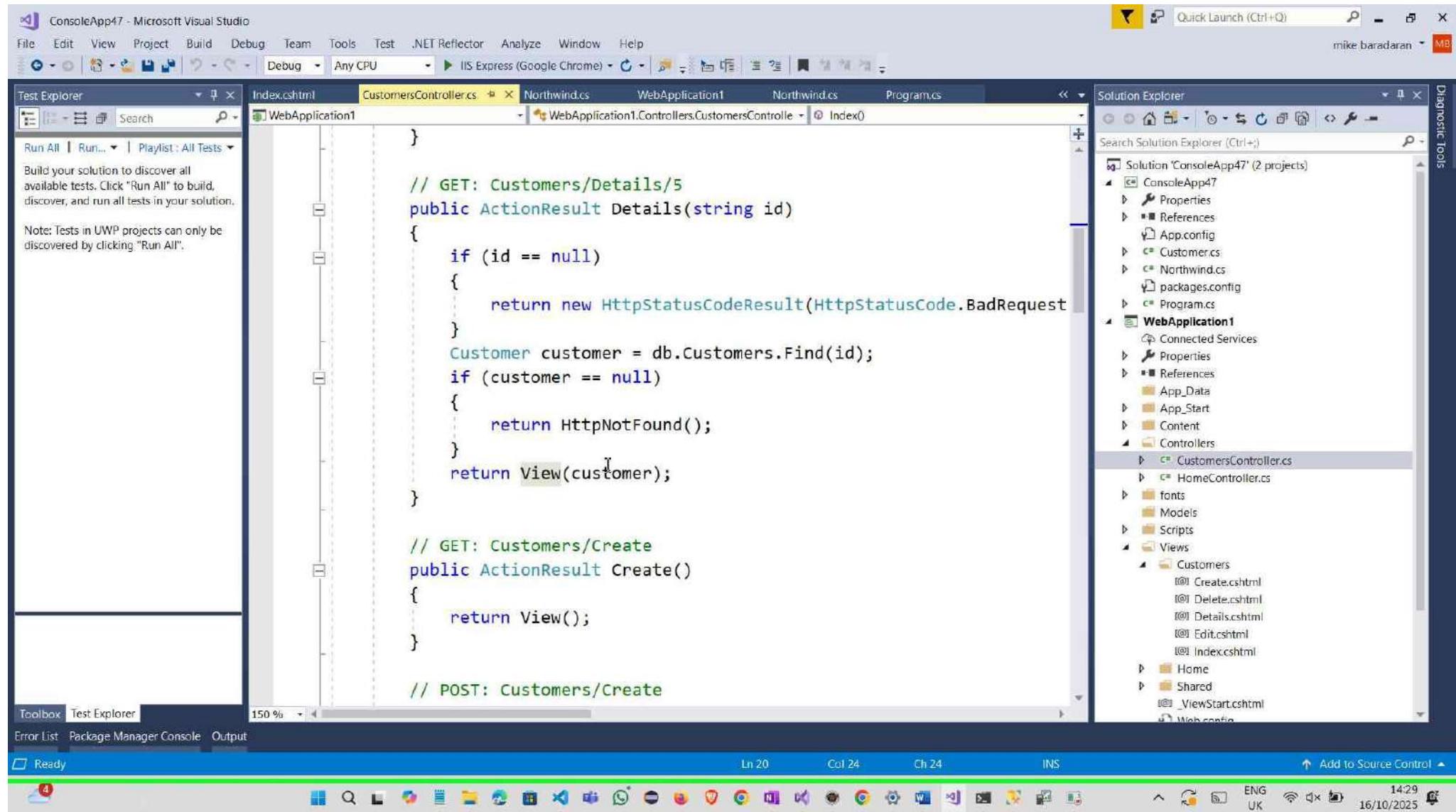


Step 107 screenshot.

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Step 108: (16/10/2025 14:29:07) User mouse wheel up on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

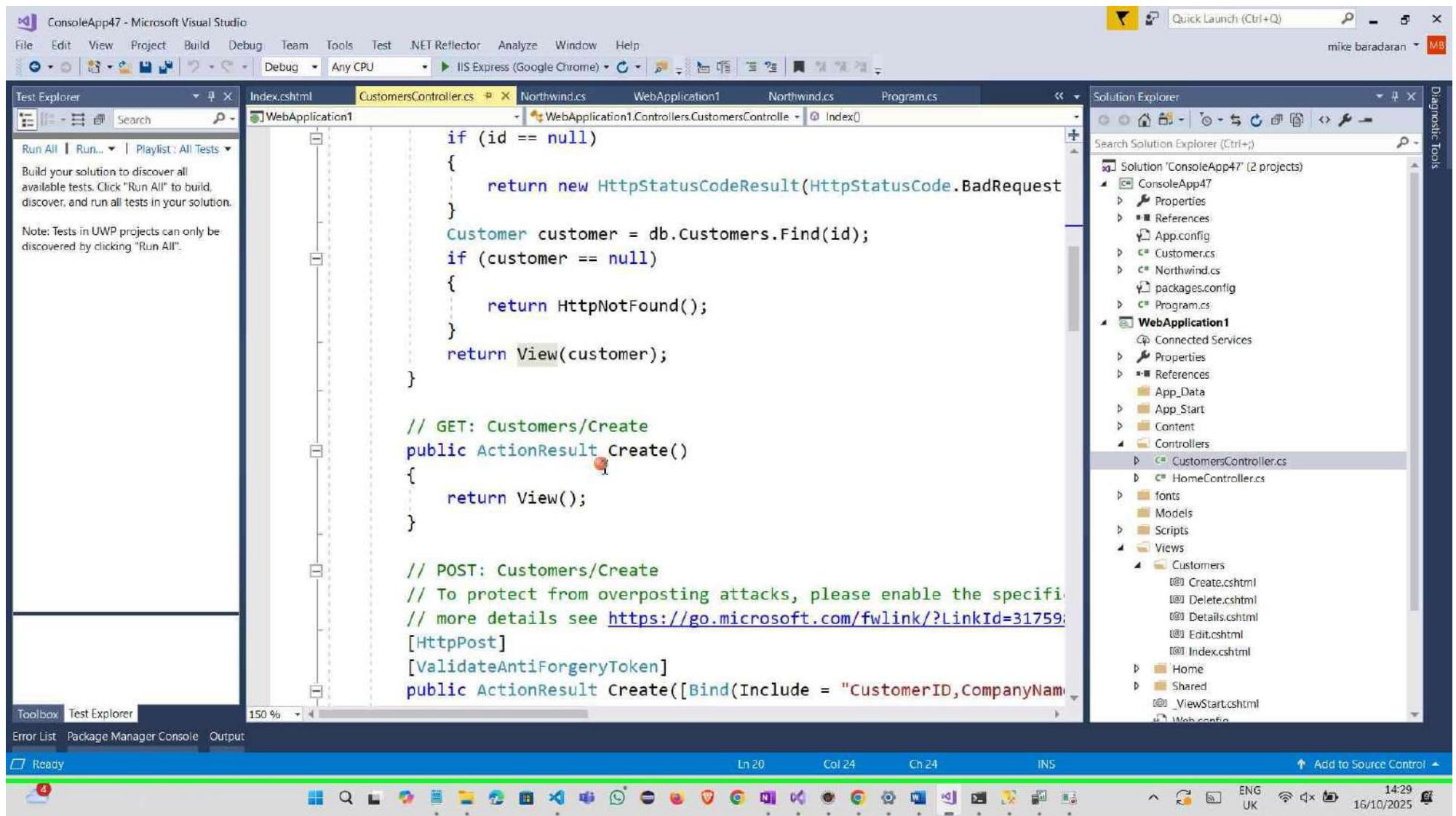




Step 109 screenshot.

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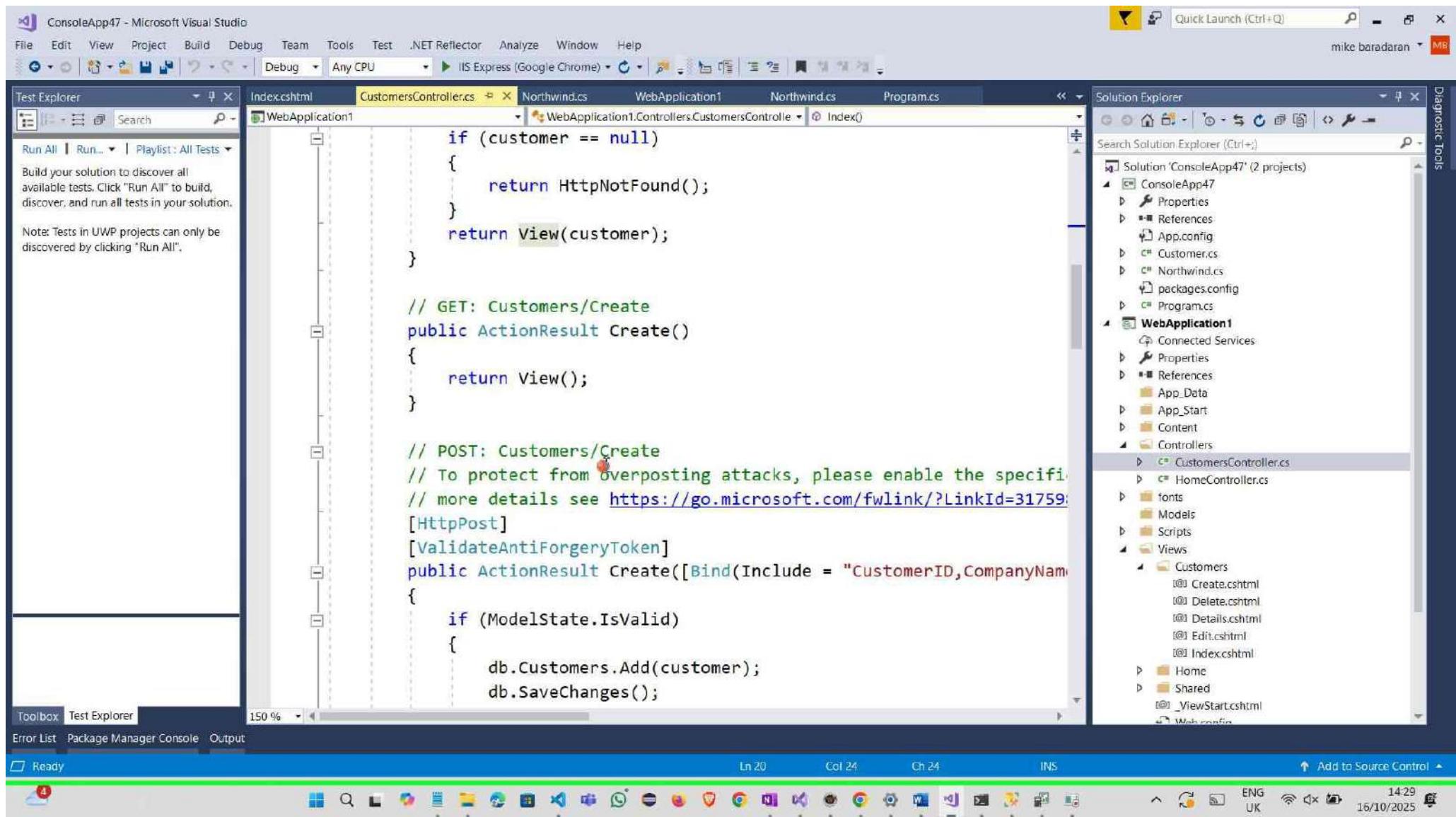
Step 110: (16/10/2025 14:29:10) User mouse wheel up on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "



Step 110 screenshot.

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Step 111: (16/10/2025 14:29:11) User mouse wheel down on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

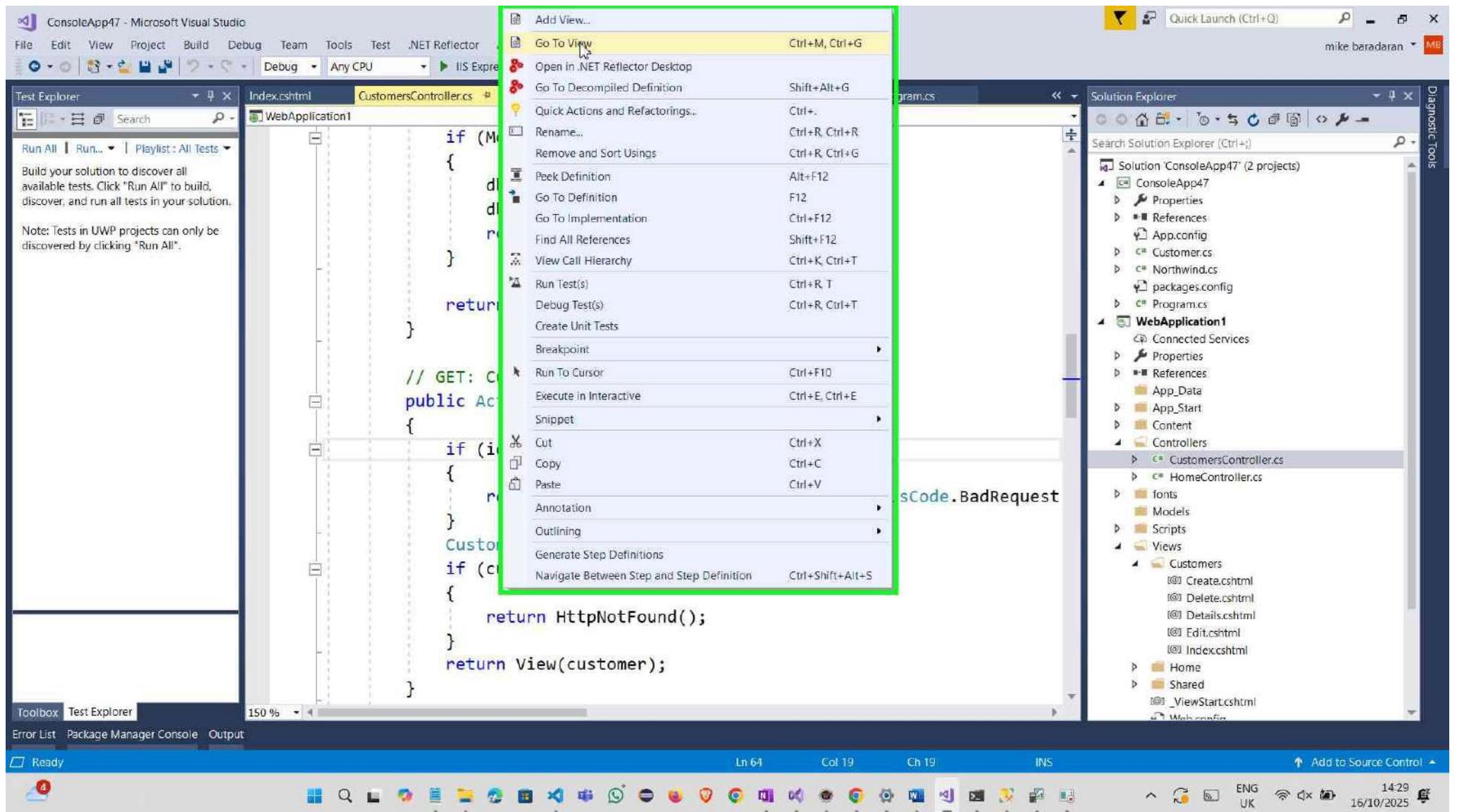


The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbar:** Standard icons for file operations like Open, Save, Print, etc.
- Status Bar:** Ready, Line 20, Column 24, Ch 24, INS, 14:29, 16/10/2025, ENG UK, 4G, Signal strength, Battery level.
- Solution Explorer:** Shows the solution structure with two projects: ConsoleApp47 and WebApplication1. Under WebApplication1, it lists Properties, References, App.config, Customer.cs, Northwind.cs, packages.config, Programs, Connected Services, Properties, References, App\_Data, App\_Start, Content, Controllers, CustomersController.cs, HomeController.cs, fonts, Models, Scripts, Views, Customers, Create.cshtml, Delete.cshtml, Details.cshtml, Edit.cshtml, Index.cshtml, Home, Shared, \_ViewStart.cshtml, and Web.config.
- Code Editor:** Displays the `CustomersController.cs` file with the following code: return View(); }  
  
 // POST: Customers/Create  
 // To protect from overposting attacks, please enable the specific  
 // more details see <https://go.microsoft.com/fwlink/?LinkId=31759>  
 [HttpPost]  
 [ValidateAntiForgeryToken]  
 public ActionResult Create([Bind(Include = "CustomerID,CompanyName,..."))]  
 {  
 if (ModelState.IsValid)  
 {  
 db.Customers.Add(customer);  
 db.SaveChanges();  
 return RedirectToAction("Index");  
 }  
  
 return View(customer);  
 }  
  
 // GET: Customers/Edit/5  
 public ActionResult Edit(string id)  
 {  
 if (id == null)  
 }
- Toolbars:** Test Explorer, Error List, Package Manager Console, Output.

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Step 116: (16/10/2025 14:29:16) User left click on "Go To View (menu item)"



Step 116 screenshot.

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Step 117: (16/10/2025 14:29:18) User mouse wheel down on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbar:** Standard icons for file operations.
- Toolbox:** Standard development tools.
- Solution Explorer:** Shows two projects: ConsoleApp47 (Properties, References, App.config, Customer.cs, Northwind.cs, Program.cs) and WebApplication1 (Connected Services, Properties, References, App\_Data, App\_Start, Content, Controllers (CustomersController.cs, HomeController.cs), Fonts, Models, Scripts, Views (Customers, Home, Shared, \_ViewStart.cshtml), Web.config).
- Editor:** The main window displays the code for Edit.cshtml:

```
<h2>Edit</h2>

@using (Html.BeginForm())
{
    @Html.AntiForgeryToken()

    <div class="form-horizontal">
        <h4>Customer</h4>
        <hr />
        @Html.ValidationSummary(true, "", new { @class = "text-danger" })
        @Html.HiddenFor(model => model.CustomerID)

        <div class="form-group">
            @Html.LabelFor(model => model.CompanyName, htmlAttributes: new { @class = "control-label col-md-2" })
            <div class="col-md-10">
                @Html.EditorFor(model => model.CompanyName, new { htmlAttributes: new { @class = "form-control" } })
                @Html.ValidationMessageFor(model => model.CompanyName, "")
            </div>
        </div>

        <div class="form-group">
            @Html.LabelFor(model => model.ContactName, htmlAttributes: new { @class = "control-label col-md-2" })
            <div class="col-md-10">
```
- Status Bar:** Shows the current status as "Ready".
- Taskbar:** Displays various pinned application icons.
- System Tray:** Shows the date and time (16/10/2025 14:29), battery level (4), and connectivity status.

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Step 118: (16/10/2025 14:29:24) User left click on "Text Editor (edit)" in "ConsoleApp47 - Microsoft Visual Studio "

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbar:** Standard icons for file operations.
- Taskbar:** Shows the current project (ConsoleApp47) and the browser (IIS Express (Google Chrome)).
- Solution Explorer:** Displays the solution structure for 'ConsoleApp47' (2 projects). The 'WebApplication1' project is selected, showing its files: Properties, References, App.config, Customer.cs, Northwind.cs, packages.config, Program.cs, Connected Services, Properties, References, App\_Data, App\_Start, Content, Controllers (CustomersController.cs is selected), Fonts, Models, Scripts, Views (Customers, Home, Shared, \_ViewStart.cshtml, Web.config).
- Code Editor:** The 'Edit.cshtml' file is open, displaying C# Razor code for an edit view. The code includes sections for customer information, company name, and contact name, using Bootstrap classes like 'form-horizontal', 'text-danger', and 'col-md-10'. The 'CustomerID' field is highlighted with a red border.
- Toolbox:** Standard .NET development tools.
- Test Explorer:** Shows test discovery results for UWP projects.
- Output:** Standard build output.
- Status Bar:** Shows the current state (Ready), line (Ln 15), column (Col 21), character (Ch 21), and status (INS). It also displays system icons for battery, signal, and date/time (14:29, 16/10/2025).

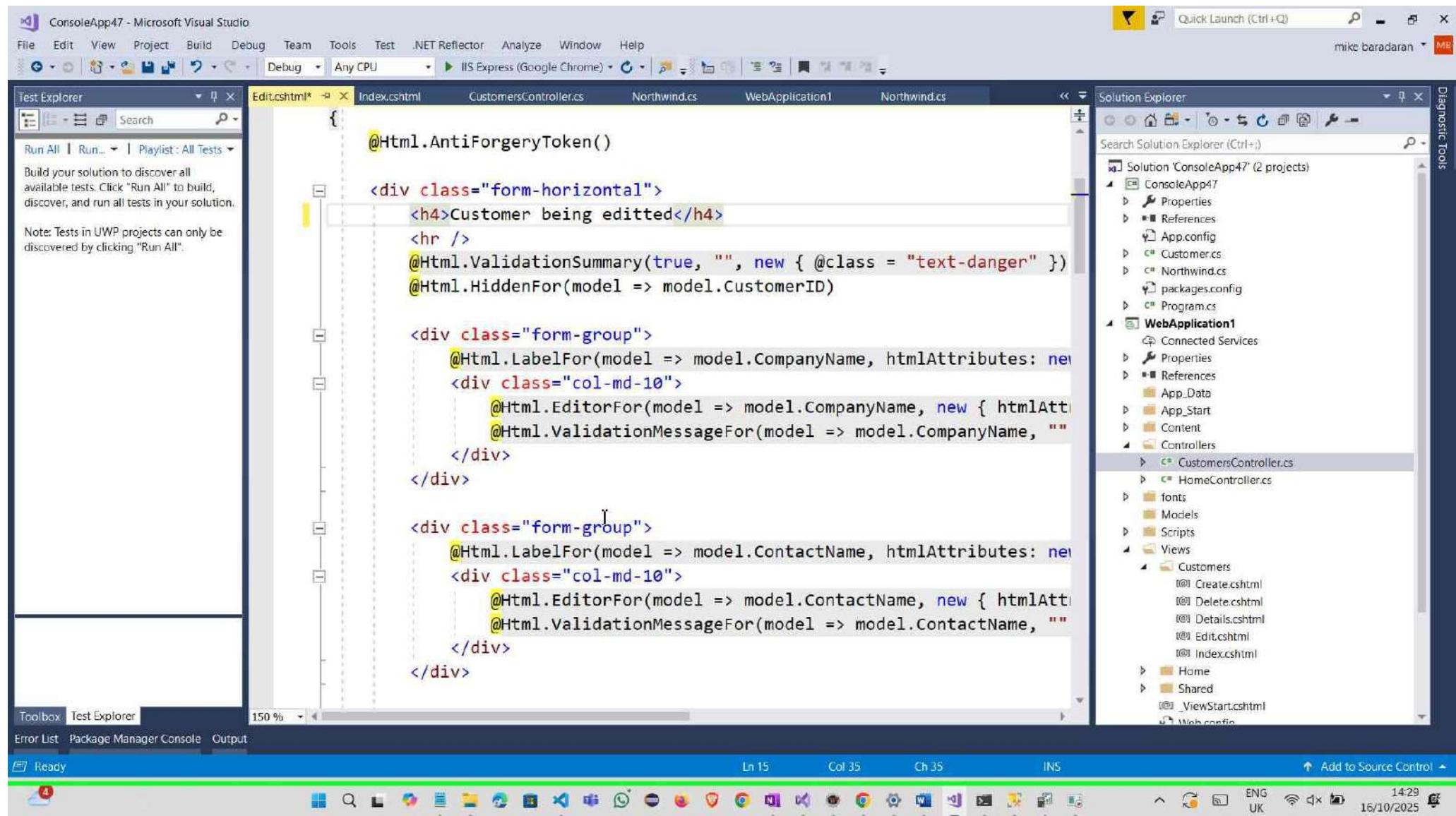
Step 118 screenshot.

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Step 119: (16/10/2025 14:29:26) User keyboard input on "ConsoleApp47 - Microsoft Visual Studio (window)" in "ConsoleApp47 - Microsoft Visual Studio" [...]

The screenshot shows the Microsoft Visual Studio interface with the following details:

- Title Bar:** ConsoleApp47 - Microsoft Visual Studio
- Menu Bar:** File, Edit, View, Project, Build, Debug, Team, Tools, Test, .NET Reflector, Analyze, Window, Help
- Toolbar:** Standard icons for file operations.
- Code Editor:** The active file is Index.cshtml, displaying C# Razor code for an edit view. The code includes sections for customer information and contact details, using Bootstrap classes like form-horizontal and form-group.
- Solution Explorer:** Shows the solution 'ConsoleApp47' containing two projects: ConsoleApp47 and WebApplication1. Under WebApplication1, the 'Views' folder is expanded, showing 'Customers' with files Create.cshtml, Delete.cshtml, Details.cshtml, Edit.cshtml, and Index.cshtml.
- Toolbars:** Test Explorer, Error List, Package Manager Console, Output.
- Status Bar:** Shows line numbers (Ln 15, Col 21, Ch 21), status (INS), and system icons.



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