

CS202: Software Tools and Techniques for CSE

Lecture 14

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August 2025



GitHub Copilot

Toolbox ▾ X Form1.Designer.cs Form1.cs [Design] Program.cs

Search Toolbox General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

C# WinFormsApp1 WinFormsApp1.Form1 button1_Click(object sender, EventArgs e)

```
13 }  
14 }  
15 private void button1_Click(object sender, EventArgs e)  
16 {  
17     //MessageBox.Show("button1 has was clicked!");
```

VoterEligibilityTest

Enter your age in years -2 textbox

Or, pick here 04 July 1963 picker

Click Me

```
on2.Checked == true)  
1 = dateTimePicker1.Value.Ticks;  
2 = DateTime.Today.Ticks;  
= Math.Abs(date1 - date2);  
ff / 21536000000000;  
int)d:  
28 }  
29  else if (radioButton  
30 {  
31     input = int.Parse  
32 }  
33 if (input < 18)  
34     MessageBox.Show("You are not eligible to vote at " + input.ToString() + " years!");  
35 else  
36     MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");  
37 }  
38 catch (Exception ex)  
39 }
```

You are not eligible to vote at -2 years!

OK

Output

Show output from: Build

```
1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll  
===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====  
===== Build completed at 18:20 and took 00.521 seconds =====
```

Server Explorer Toolbox Error List Output

Ready 379, 71 70 x 24 Add to Source Control Select Repository



Type here to search



18:21

06-04-2025





Toolbox ▾ X Form1.Designer.cs Form1.cs [Design] Program.cs

Search Toolbox General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

C# WinFormsApp1 WinFormsApp1.Form1 button1_Click(object sender, EventArgs e)

```
13 }  
14 }  
15 private void button1_Click(object sender, EventArgs e)  
16 {  
17     //MessageBox.Show("button1 has was clicked!");
```

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

```
on2.Checked == true)  
1 = dateTimePicker1.Value.Ticks;  
2 = DateTime.Today.Ticks;  
= Math.Abs(date1 - date2);  
ff / 31536000000000;  
int  
28 }  
29  else if (radioBu  
30 {  
31     input = int  
32 }  
33 if (input < 18)  
34     MessageBox.Show("You are not eligible to vote at " + input.ToString() + " years!");  
35 else  
36     MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");  
37 }  
38 catch (Exception ex)  
39 }
```

The input string '--2' was not in a correct format.

OK

110 % No issues found Ln: 29 Ch: 1 SPC CRLF

Output

Show output from: Build

```
1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll  
===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====  
===== Build completed at 18:20 and took 00.521 seconds =====
```

Server Explorer Toolbox Error List Output

Ready 379, 71 70 x 24 Add to Source Control Select Repository 18:22 06-04-2025



File Edit View Git Project Build Debug Format Test Analyze Tools Extensions Window Help | Search WinFormsApp1

GitHub Copilot

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Output

Show output from: Build

1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll

===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====

===== Build completed at 18:20 and took 00.521 seconds =====

Error List Output

Ready

19, 19 802 x 393 Add to Source Control Select Repository 18:23 06-04-2025

Search Solution Explorer (Ctrl+;) Solution Explorer

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

Dependencies

Form1.cs

Form1.Designer.cs

Form1.resx

Program.cs

Solution Explorer Git Changes

Properties

Form1 System.Windows.Forms.Form

RightToLeft No

RightToLeftLayout False

ShowIcon True

ShowInTaskbar True

Size 802, 393

SizeGripStyle Auto

StartPosition WindowsDefaultLocation

Tag

Text VoterEligibilityTest

The text associated with the control.

Type here to search

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

Server Explorer

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

Output

Show output from: Windows Forms

[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
 - Form1.Designer.cs
 - Form1.resx
- Program.cs

Solution Explorer Git Changes

Properties

groupBox1 System.Windows.Forms.GroupBox

MaximumSize	0, 0
MinimumSize	0, 0
Modifiers	Private
Padding	3, 3, 3, 3
RightToLeft	No
Size	327, 92
TabIndex	7
Tag	
Text	Contents of textbox

The text associated with the control.

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

Server Explorer

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

Output

Show output from: Windows Forms

[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
 - Form1.Designer.cs
 - Form1.resx
- Program.cs

Solution Explorer Git Changes

Properties

groupBox1 System.Windows.Forms.GroupBox

MaximumSize	0, 0
MinimumSize	0, 0
Modifiers	Private
Padding	3, 3, 3, 3
RightToLeft	No
Size	327, 92
TabIndex	7
Tag	
Text	Contents of textbox

The text associated with the control.

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

Server Explorer

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

label3

Output

Show output from: Windows Forms

[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
 - Form1.Designer.cs
 - Form1.resx
- Program.cs

Solution Explorer Git Changes

Properties

label3 System.Windows.Forms.Label

(Name) label3

(ControlBindings)

AccessibleDescription

AccessibleName

AccessibleRole Default

AllowDrop False

Anchor Top, Left

AutoEllipsis False

AutoSize True

(Name) Indicates the name used in code to identify the object.

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

Server Explorer

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

Output

Show output from: Windows Forms

[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
 - Form1.Designer.cs
 - Form1.resx
- Program.cs

Solution Explorer Git Changes

Properties

label3 System.Windows.Forms.Label

ImageList (none)
RightToLeft No
Text TopLeft
.TextAlign TopLeft
.UseMnemonic True
.UseWaitCursor False
Behavior
AllowDrop False
AutoEllipsis False
Text
The text associated with the control.

Toolbox

Search Toolbox

- NumericUpDown
- OpenFileDialog
- PageSetupDialog
- Panel
- PictureBox
- PrintDialog
- PrintDocument
- PrintPreviewControl
- PrintPreviewDialog
- Process
- ProgressBar
- PropertyGrid
- RadioButton
- RichTextBox
- SaveFileDialog
- SplitContainer
- Splitter
- StatusStrip
- TabControl
- TableLayoutPanel
- TextBox
- Timer
- ToolStrip
- ToolStripContainer
- ToolTip
- TrackBar
- TreeView
- VScrollBar

Common Controls

Containers

Menus & Toolbars

Data

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

Output

Show output from: Windows Forms

[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

- WinFormsApp1
 - Dependencies
 - Form1.cs
 - Form1.Designer.cs
 - Form1.resx
 - Program.cs

Solution Explorer Git Changes

Properties

Form1 System.Windows.Forms.Form

BackgroundImage (none)
BackgroundImageLayout Tile
Cursor Default
Font Segoe UI, 9pt
ForeColor ControlText
FormBorderStyle Sizable
RightToLeft No
RightToLeftLayout False
Text VoterEligibilityTest

The text associated with the control.

Toolbox

Search Toolbox

- NumericUpDown
- OpenFileDialog
- PageSetupDialog
- Panel
- PictureBox
- PrintDialog
- PrintDocument
- PrintPreviewControl
- PrintPreviewDialog
- Process
- ProgressBar
- PropertyGrid
- RadioButton
- RichTextBox
- SaveFileDialog
- SplitContainer
- Splitter
- StatusStrip
- TabControl
- TableLayoutPanel
- TextBox
- Timer
- ToolStrip
- ToolStripContainer
- ToolTip
- TrackBar
- TreeView
- VScrollBar
- Common Controls
- Containers
- Menus & Toolbars
- Data

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

Output

Show output from: Windows Forms

[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

- WinFormsApp1
 - Dependencies
 - Form1.cs
 - Form1.Designer.cs
 - Form1.resx
 - Program.cs

Solution Explorer Git Changes

Properties

textBox1 System.Windows.Forms.TextBox

BackColor	Window
BorderStyle	Fixed3D
Cursor	Default
Font	Segoe UI, 9pt
ForeColor	WindowText
Lines	String[] Array
RightToLeft	No
ScrollBars	None
Text	The text associated with the control.

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help | Search WinFormsApp1 GitHub Copilot

Toolbox Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest Enter your age in years textbox
Or, pick here 06 April 2025 picker
Click Me
Contents of textbox

Output Show output from: Windows Forms
[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.

Solution Explorer Solution 'WinFormsApp1' (1 of 1 project)
WinFormsApp1
Dependencies
Form1.cs
Form1.Designer.cs
Form1.resx
Program.cs

Properties BackColor Info
BorderStyle Fixed3D
Cursor Default
Font Segoe UI, 9pt
ForeColorWindowText
Lines String[] Array
RightToLeft No

Custom Web System
Highlight
HighlightText
HotTrack
InactiveBorder
InactiveCaption
InactiveCaptionText
Info
InfoText
Menu
MenuBar
MenuHighlight
MenuText

Ready Type here to search 18:34 06-04-2025

Screenshot of the Microsoft Visual Studio IDE interface showing a WinForms application development environment.

The main window title is "WinFormsApp1".

Top menu bar items include: File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help.

Search bar: Search WinFormsApp1.

Toolbox: Contains various Windows Forms controls such as NumericUpDown, OpenFileDialog, PageSetupDialog, Panel, PictureBox, PrintDialog, PrintDocument, PrintPreviewControl, PrintPreviewDialog, Process, ProgressBar, PropertyGrid, RadioButton, RichTextBox, SaveFileDialog, SplitContainer, Splitter, StatusStrip, TabControl, TableLayoutPanel, TextBox, Timer, ToolStrip, ToolStripContainer, ToolTip, TrackBar, TreeView, VScrollBar, Common Controls, Containers, Menus & Toolbars, Data.

Current tabs in the main area: Form1.Designer.cs*, Form1.cs*, Form1.cs [Design]* (selected), Program.cs.

Form Designer: Displays a window titled "VoterEligibilityTest" with the following controls:

- Text: "Enter your age in years" followed by a control labeled "textbox".
- Text: "Or, pick here" followed by a date picker control showing "06 April 2025" labeled "picker".
- Text: "Click Me" followed by a button control.
- Text: "Contents of textbox" followed by a control labeled "textBox1".

Output window:

```
Show output from: Windows Forms  
[18:27:08.379855] warn: Could not find field, 'panel1'.  
[18:27:47.661794] warn: Could not find field, 'panel1'.
```

Solution Explorer:

- Solution "WinFormsApp1" (1 of 1 project)
 - WinFormsApp1
 - Dependencies
 - Form1.cs
 - Form1.Designer.cs
 - Form1.resx
 - Program.cs

Properties window:

Property	Value
Font	Segoe UI, 9pt
ForeColor	WindowText
Lines	String[] Array
RightToLeft	No
ScrollBars	None
Text	Left
TextAlign	Left
UseWaitCursor	False

Text section of Properties window:

The text associated with the control.

Bottom status bar:

- Ready
- Add to Source Control
- Select Repository
- 18:34
- ENG
- 06-04-2025

Taskbar icons:

- Type here to search (Windows)
- File Explorer
- OneDrive
- Task View
- Microsoft Edge
- Zoom
- Teams
- PowerShell
- Notepad
- Google Chrome
- File Explorer

Screenshot of Microsoft Visual Studio IDE showing a WinForms application named "WinFormsApp1".

The main window displays the "Form1.cs [Design]" tab, showing a Windows Form titled "VoterEligibilityTest" with the following controls:

- A label "Enter your age in years" next to a **TextBox**.
- A label "Or, pick here" next to a **DateTimePicker** set to "06 April 2025".
- A button labeled "Click Me".
- A **RichTextBox** containing the placeholder text "Contents of textbox".

The Solution Explorer shows the project structure:

- Solution: WinFormsApp1 (1 of 1 project)
 - WinFormsApp1
 - Dependencies
 - Form1.cs
 - Form1.Designer.cs
 - Form1.resx
 - Program.cs

The Properties window is open for the **textBox1** control, showing the following properties:

Property	Value
MaxLength	32767
Multiline	False
PasswordChar	
ReadOnly	False
ShortcutsEnabled	True
TabIndex	0
TabStop	True
UseSystemPassword	False
Visible	True

The **ReadOnly** property is described in the tooltip as: "Controls whether the text in the edit control can be changed or not."

The Output window shows the following logs:

```
[18:27:08.379855] warn: Could not find field, 'panel1'.
[18:27:47.661794] warn: Could not find field, 'panel1'.
```

The status bar at the bottom right shows the date and time: 18:35 06-04-2025.

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help | Search WinFormsApp1 GitHub Copilot

Toolbox Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest Enter your age in years textbox
Or, pick here 06 April 2025 picker
Click Me
Contents of textbox

Output Show output from: Windows Forms
[18:36:17.345695] warn: Could not find field, 'bindingSource1'.
[18:36:37.397681] warn: Could not find field, 'backgroundWorker1'.
[18:38:24.591685] warn: Could not find field, 'richTextBox1'.

Solution Explorer Solution 'WinFormsApp1' (1 of 1 project)
WinFormsApp1
Dependencies
Form1.cs
Form1.Designer.cs
Form1.resx
Program.cs

Properties textBox1 System.Windows.Forms.TextBox
MaxLength 32767
Multiline False
PasswordChar
ReadOnly True
ShortcutsEnabled True
TabIndex 0
TabStop True
UseSystemPassword False
Visible True
ReadOnly
Controls whether the text in the edit control can be changed or not.

Ready Type here to search 18:39 06-04-2025

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help | Search WinFormsApp1 GitHub Copilot

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

Output

Show output from: Windows Forms

[18:36:17.345695] warn: Could not find field, 'bindingSource1'.
[18:36:37.397681] warn: Could not find field, 'backgroundWorker1'.
[18:38:24.591685] warn: Could not find field, 'richTextBox1'.

Solution Explorer

Search Solution Explorer (Ctrl+;) Solution 'WinFormsApp1' (1 of 1 project) WinFormsApp1 Dependencies Form1.cs Form1.Designer.cs Form1.resx Program.cs

Properties

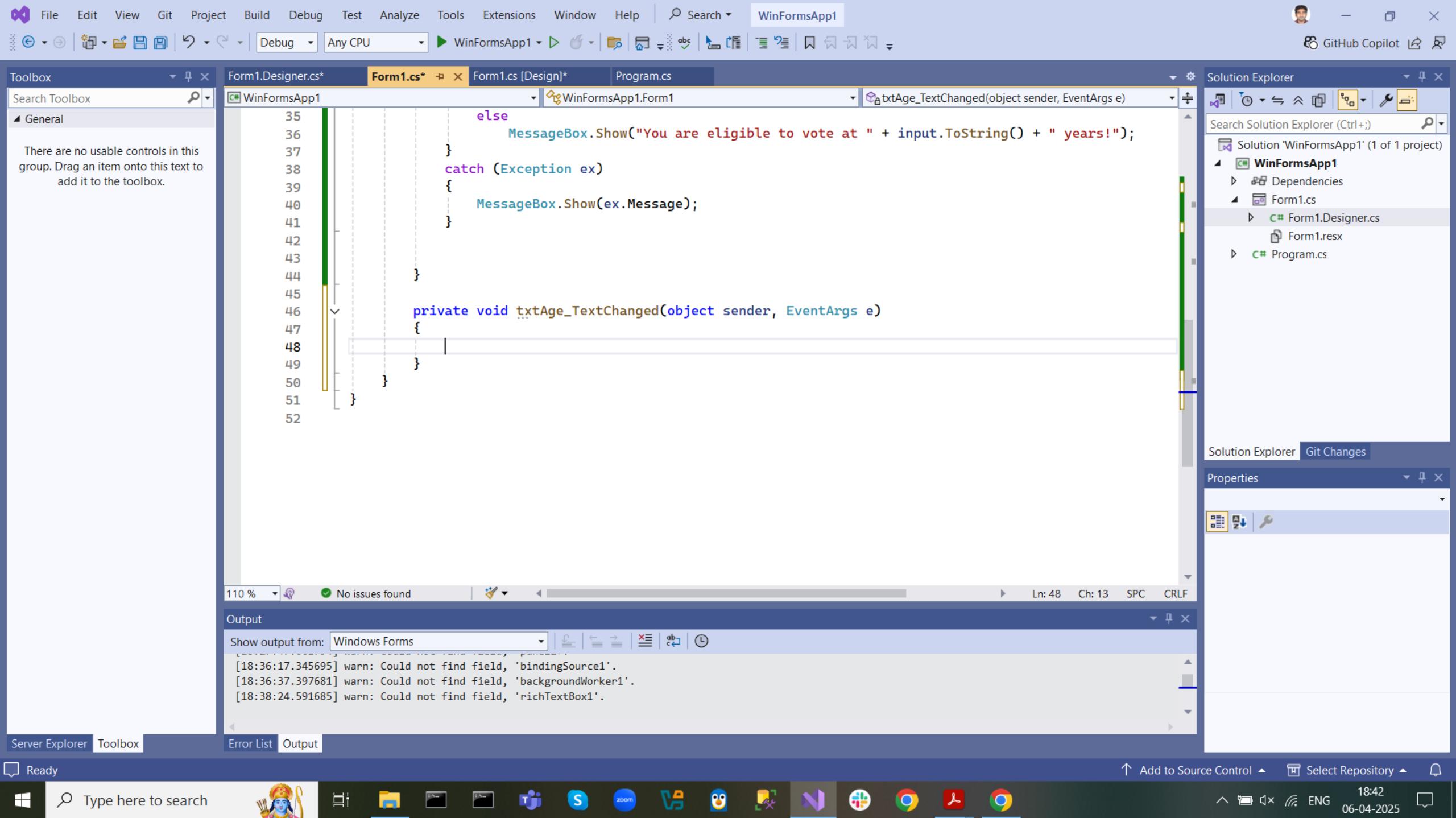
txtAge System.Windows.Forms.TextBox

ParentChanged
ReadOnlyChanged
RegionChanged
RightToLeftChanged
SizeChanged
TabIndexChanged
TabStopChanged
TextAlignChanged
TextChanged

Event raised when the value of the Text property is changed on Control.

Ready Type here to search

18:42 06-04-2025





GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs* Form1.cs [Design]* Program.cs

C# WinFormsApp1 WinFormsApp1.Form1 InitializeComponent()

```
154 #endregion
155
156 private Button button1;
157 private TextBox txtAge;
158 private Label label1;
159 private DateTimePicker dateTimePicker1;
160 private Label label2;
161 private RadioButton radioButton1;
162 private RadioButton radioButton2;
163 private GroupBox groupBox1;
164 private TextBox textBox1;
165 }
166 }
167 }
```

(field) TextBox Form1.textBox1

110% No issues found

Output

Show output from: Windows Forms

```
[18:36:17.345695] warn: Could not find field, 'bindingSource1'.
[18:36:37.397681] warn: Could not find field, 'backgroundWorker1'.
[18:38:24.591685] warn: Could not find field, 'richTextBox1'.
```

Solution Explorer

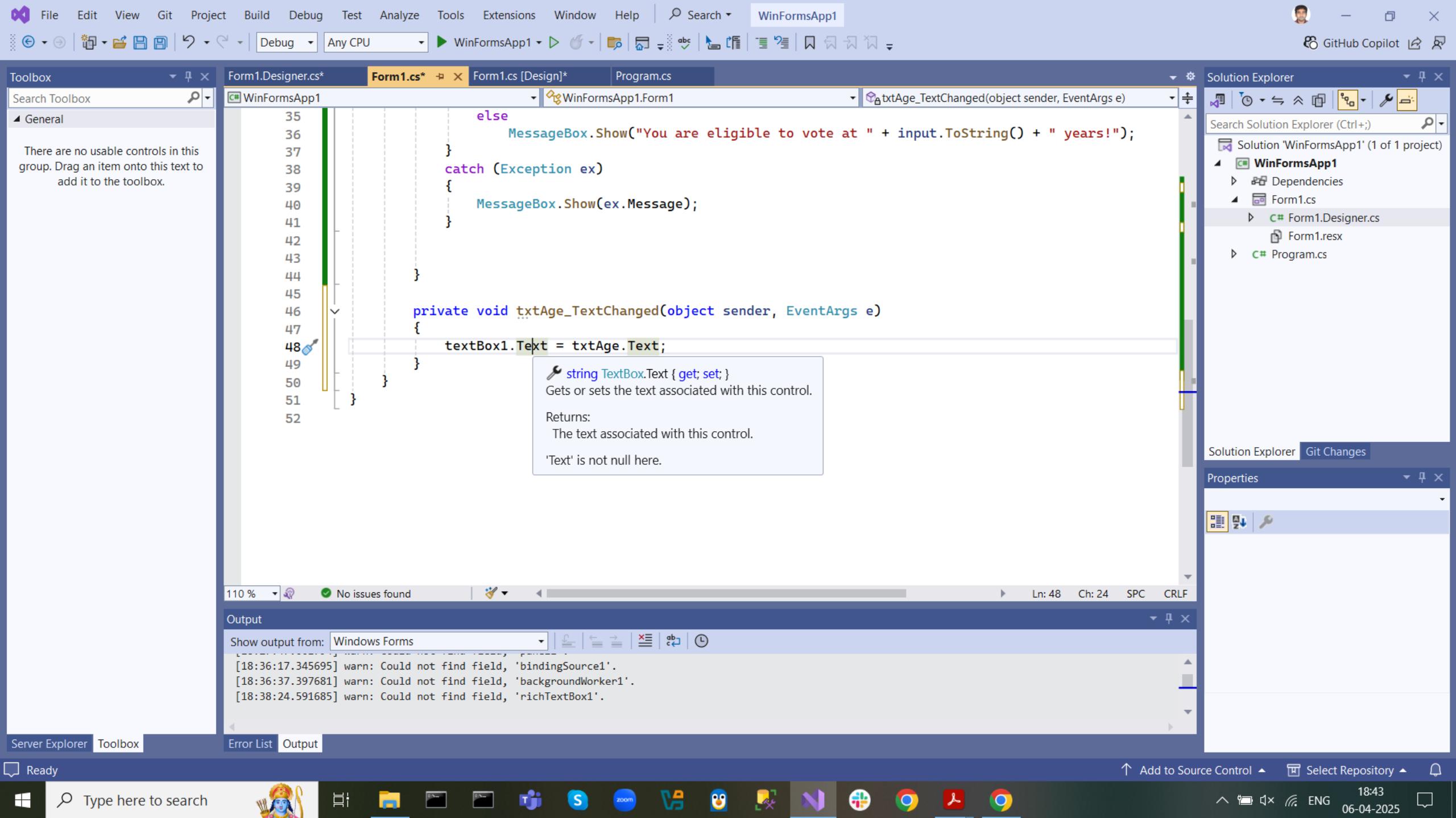
Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

- WinFormsApp1
 - Dependencies
 - Form1.cs
 - Form1.Designer.cs
 - Form1.resx
 - Program.cs

Solution Explorer Git Changes

Properties



Toolbox

VoterEligibilityTest

1.cs [Design] Program.cs

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox
1

Solution Explorer

Search Solution Explorer (Ctrl+;) Solution 'WinFormsApp1' (1 of 1 project) WinFormsApp1 Dependencies Form1.cs Form1.Designer.cs Form1.resx Program.cs

Output

Show output from: Build

1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll

===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====

===== Build completed at 18:43 and took 04.602 seconds =====

Properties

Form1 System.Windows.Forms.Form

BackgroundImage (none)

BackgroundImageLayout Tile

Cursor Default

Font Segoe UI, 9pt

ForeColor ControlText

FormBorderStyle Sizable

RightToLeft No

RightToLeftLayout False

Text VoterEligibilityTest

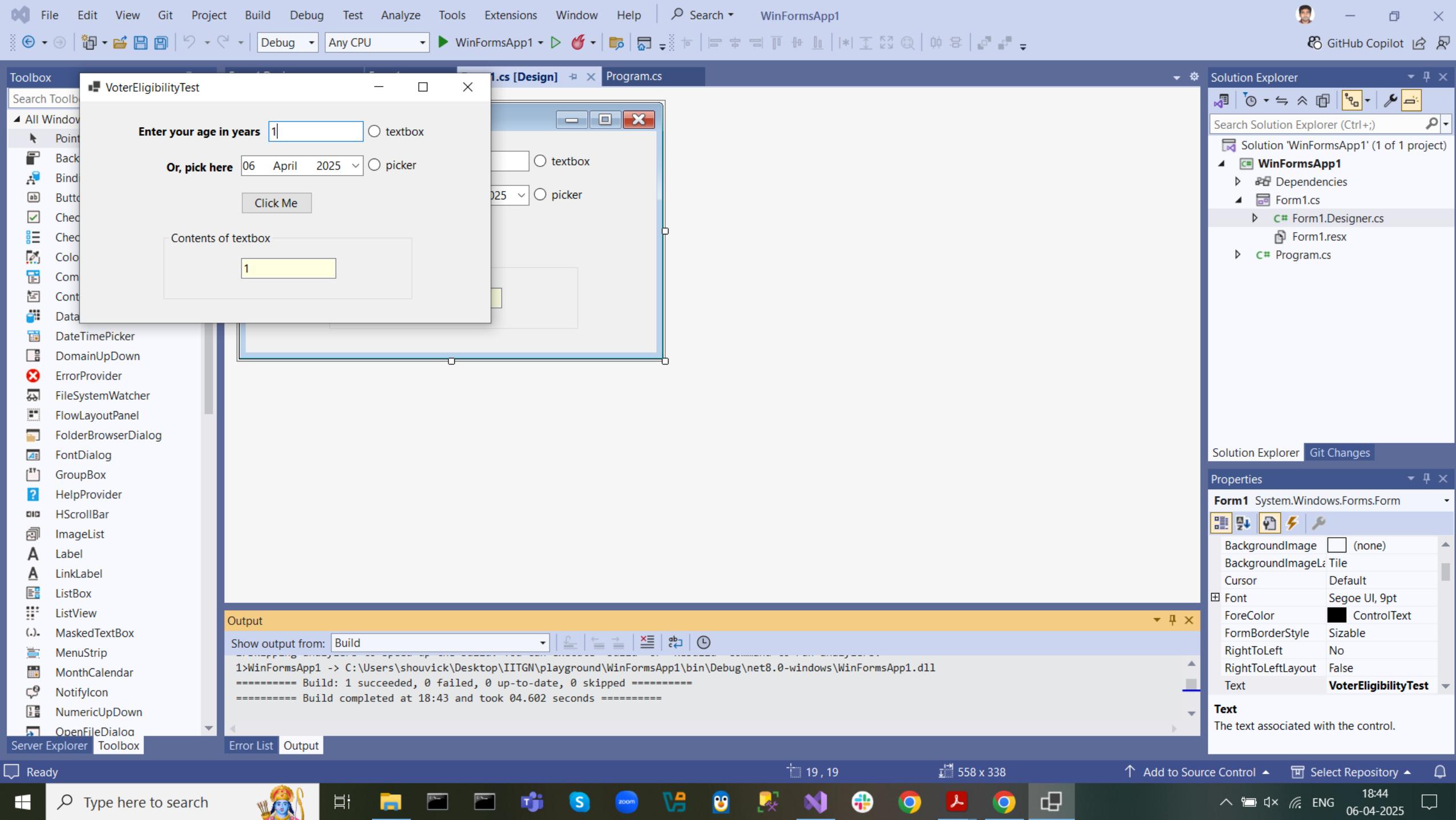
Text The text associated with the control.

Error List Output

Ready

19, 19 558 x 338 Add to Source Control Select Repository





Toolbox

VoterEligibilityTest

1.cs [Design] Program.cs

Enter your age in years 12 textbox

Or, pick here 06 April 2025 picker

Click Me

Contents of textbox
12

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

Dependencies

Form1.cs

Form1.Designer.cs

Form1.resx

Program.cs

Output

Show output from: Build

1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll

===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====

===== Build completed at 18:43 and took 04.602 seconds =====

Properties

Form1 System.Windows.Forms.Form

BackgroundImage (none)

BackgroundImageLayout Tile

Cursor Default

Font Segoe UI, 9pt

ForeColor ControlText

FormBorderStyle Sizable

RightToLeft No

RightToLeftLayout False

Text VoterEligibilityTest

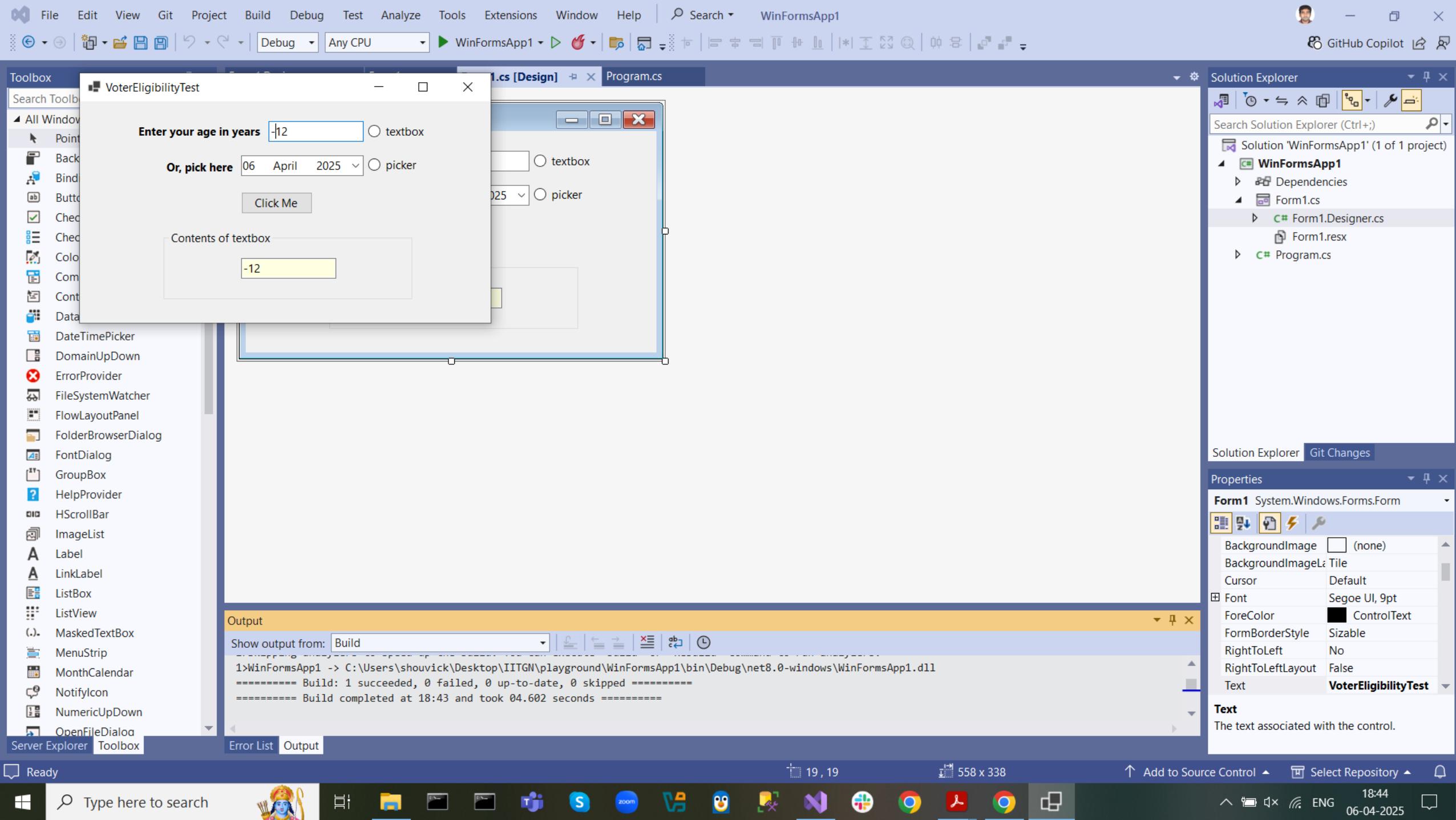
Text The text associated with the control.

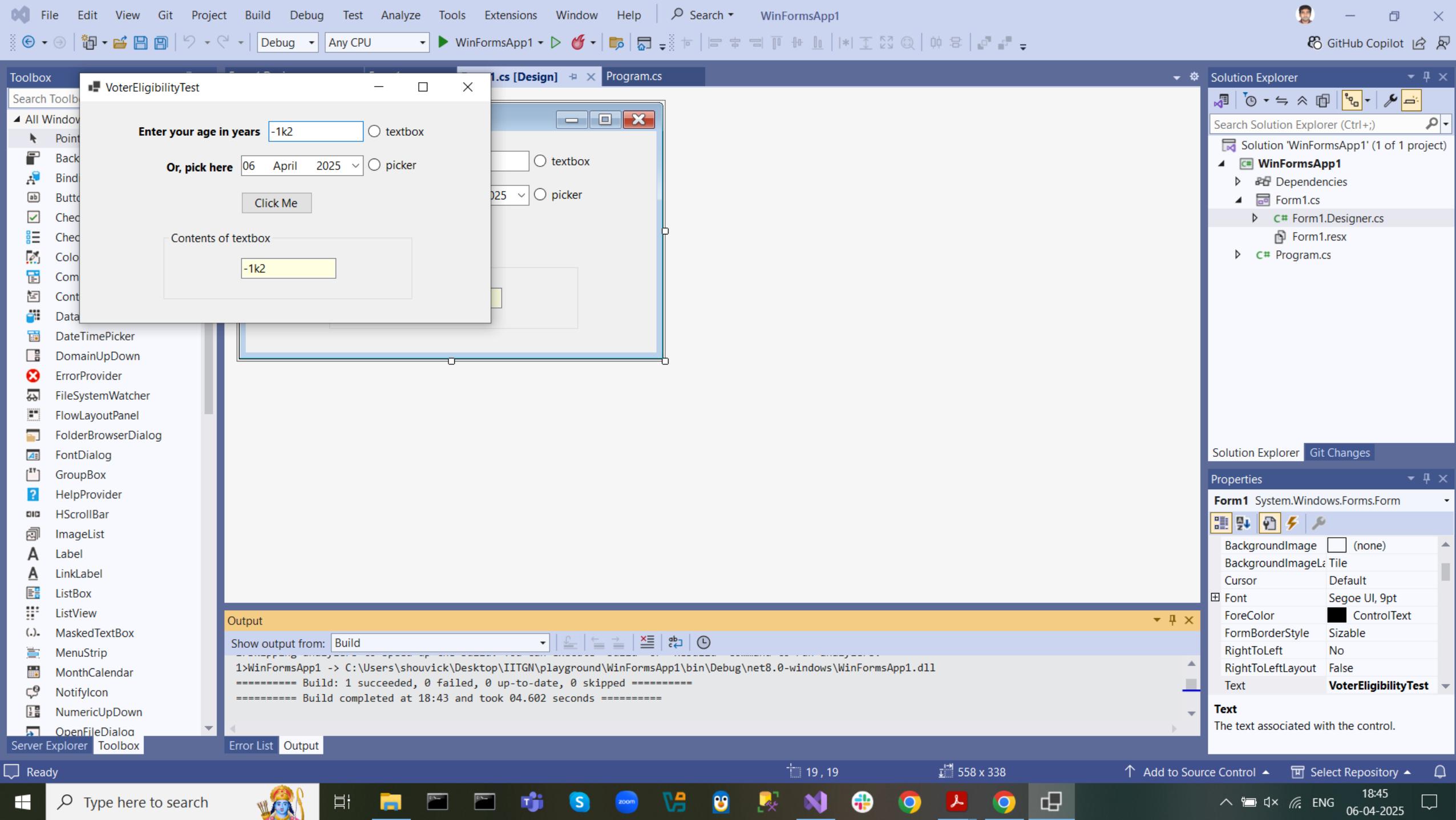
Error List Output

Ready

19, 19 558 x 338

Add to Source Control Select Repository





Toolbox

VoterEligibilityTest

1.cs [Design] Program.cs

Enter your age in years -1k2 textbox

Or, pick here 06 April 2025 picker

Click Me

Contents of textbox
-1k2

The input string '-1k2' was not in a correct format.

OK

Output

Show output from: Build

1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll

===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====

===== Build completed at 18:43 and took 04.602 seconds =====

Solution Explorer

Search Solution Explorer (Ctrl+;) Solution 'WinFormsApp1' (1 of 1 project) WinFormsApp1 Dependencies Form1.cs Form1.Designer.cs Form1.resx Program.cs

Properties

Form1 System.Windows.Forms.Form

BackgroundImage (none)

BackgroundImageLayout Tile

Cursor Default

Font Segoe UI, 9pt

ForeColor ControlText

FormBorderStyle Sizable

RightToLeft No

RightToLeftLayout False

Text VoterEligibilityTest

Text The text associated with the control.

Error List Output



GitHub Copilot

Toolbox ▾

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs ▾ Form1.cs Form1.cs [Design] Program.cs

C# WinFormsApp1

WinFormsApp1.Form1

InitializeComponent()

```
button1.Text = "Click Me";
button1.UseVisualStyleBackColor = true;
button1.Click += button1_Click;
// 
// txtAge
//
txtAge.Location = new Point(248, 26);
txtAge.Name = "txtAge";
txtAge.Size = new Size(125, 27);
txtAge.TabIndex = 1;
txtAge.TextChanged += txtAge_TextChanged;
// 
// label1
//
label1.AutoSize = true;
label1.Font = new Font("Segoe UI", 9F, FontStyle.Bold, GraphicsUnit.Point, 0);
label1.ForeColor = SystemColors.InfoText;
label1.Location = new Point(73, 29);
label1.Name = "label1";
label1.Size = new Size(169, 20);
label1.TabIndex = 2;
label1.Text = "Enter your age in years";
// 
// dateTimePicker1
//
dateTimePicker1.Location = new Point(212, 71);
dateTimePicker1.Name = "dateTimePicker1";
```

110% No issues found

Output

Show output from: Build

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

Dependencies

Form1.cs

C# Form1.Designer.cs

Form1.resx

C# Program.cs

Solution Explorer Git Changes

Properties

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

Server Explorer

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

checkBox1

Output

Show output from: Build

Error List Output

74, 40 101 x 24

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
- Form1.Designer.cs
- Form1.resx
- Program.cs

Solution Explorer Git Changes

Properties

checkBox1 System.Windows.Forms.CheckB

Font Segoe UI, 9pt

ForeColor ActiveCaptionTe

Image (none)

ImageAlign MiddleCenter

ImageIndex (none)

ImageKey (none)

ImageList (none)

RightToLeft No

Text checkBox1

The text associated with the control.

File Edit View Git Project Build Debug Format Test Analyze Tools Extensions Window Help | Search WinFormsApp1

GitHub Copilot

Toolbox

Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox
 on/off

Output

Show output from: Build

Properties

Form1 System.Windows.Forms.Form

BackgroundImage (none)

BackgroundImageLayout Tile

Cursor Default

Font Segoe UI, 9pt

ForeColor ControlText

FormBorderStyle Sizable

RightToLeft No

RightToLeftLayout False

Text VoterEligibilityTest

The text associated with the control.

Ready

Type here to search

19, 19 558 x 338 Add to Source Control Select Repository 18:48 06-04-2025



Toolbox ▾ X Form1.Designer.cs* Form1.cs* Form1.cs [Design]* Program.cs

Search Toolbox General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

```
C# WinFormsApp1
    40 }           MessageBox.Show(ex.Message);
    41 }
    42 }
    43 }
    44 }
    45 }
    46 private void txtAge_TextChanged(object sender, EventArgs e)
    47 {
    48     textBox1.Text = txtAge.Text;
    49 }
    50 }
    51 private void checkBox1_CheckedChanged(object sender, EventArgs e)
    52 {
    53 }
    54 }
    55 }
    56 }
    57 }
```

110% No issues found Output Show output from: Build

Solution Explorer ▾ X

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

- WinFormsApp1
 - Dependencies
 - Form1.cs
 - C# Form1.Designer.cs
 - Form1.resx
 - C# Program.cs

Solution Explorer Git Changes

Properties ▾ X

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help | Search WinFormsApp1 GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs* Form1.cs [Design]* Program.cs

C# WinFormsApp1 WinFormsApp1.Form1 InitializeComponent()

```
button1.Click += button1_Click;
//
// txtAge
//
txtAge.Location = new Point(248, 26);
txtAge.Name = "txtAge";
txtAge.Size = new Size(125, 27);
txtAge.TabIndex = 1;
txtAge.TextChanged += txtAge_TextChanged;
//
// label1
//
label1.AutoSize = true;
label1.Font = new Font("Segoe UI", 9F, FontStyle.Bold, GraphicsUnit.Point, 0);
label1.ForeColor = SystemColors.InfoText;
label1.Location = new Point(73, 29);
label1.Name = "label1";
label1.Size = new Size(169, 20);
label1.TabIndex = 2;
label1.Text = "Enter your age in years";
//
// dateTimePicker1
//
dateTimePicker1.Location = new Point(212, 71);
dateTimePicker1.Name = "dateTimePicker1";
dateTimePicker1.Size = new Size(161, 27);
dateTimePicker1.TabIndex = 3;
```

110% No issues found

Output

Show output from: Build

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'WinFormsApp1' (1 of 1 project)

- WinFormsApp1
 - Dependencies
 - Form1.cs
 - C# Form1.Designer.cs
 - Form1.resx
 - C# Program.cs

Properties

Ready

Type here to search

18:52 06-04-2025



Toolbox ▾ X Form1.Designer.cs Form1.cs [Design] Program.cs

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

```
C# WinFormsApp1
    35     else
    36         MessageBox.Show("You are eligible to vote at " + input.ToString() + " years old.");
    37     }
    38     catch (Exception ex)
    39     {
    40         MessageBox.Show(ex.Message);
    41     }
    42
    43
    44
    45
    46     private void txtAge_TextChanged(object sender, EventArgs e)
    47     {
    48         textBox1.Text = txtAge.Text;
    49     }
    50
    51     private void checkBox1_CheckedChanged(object sender, EventArgs e)
    52     {
    53         if (checkBox1.Checked == true)
    54             txtAge.TextChanged -= txtAge_TextChanged; //unsubscribe
    55         else
    56             txtAge.TextChanged += txtAge_TextChanged; //subscribe
    57
    58 }
```

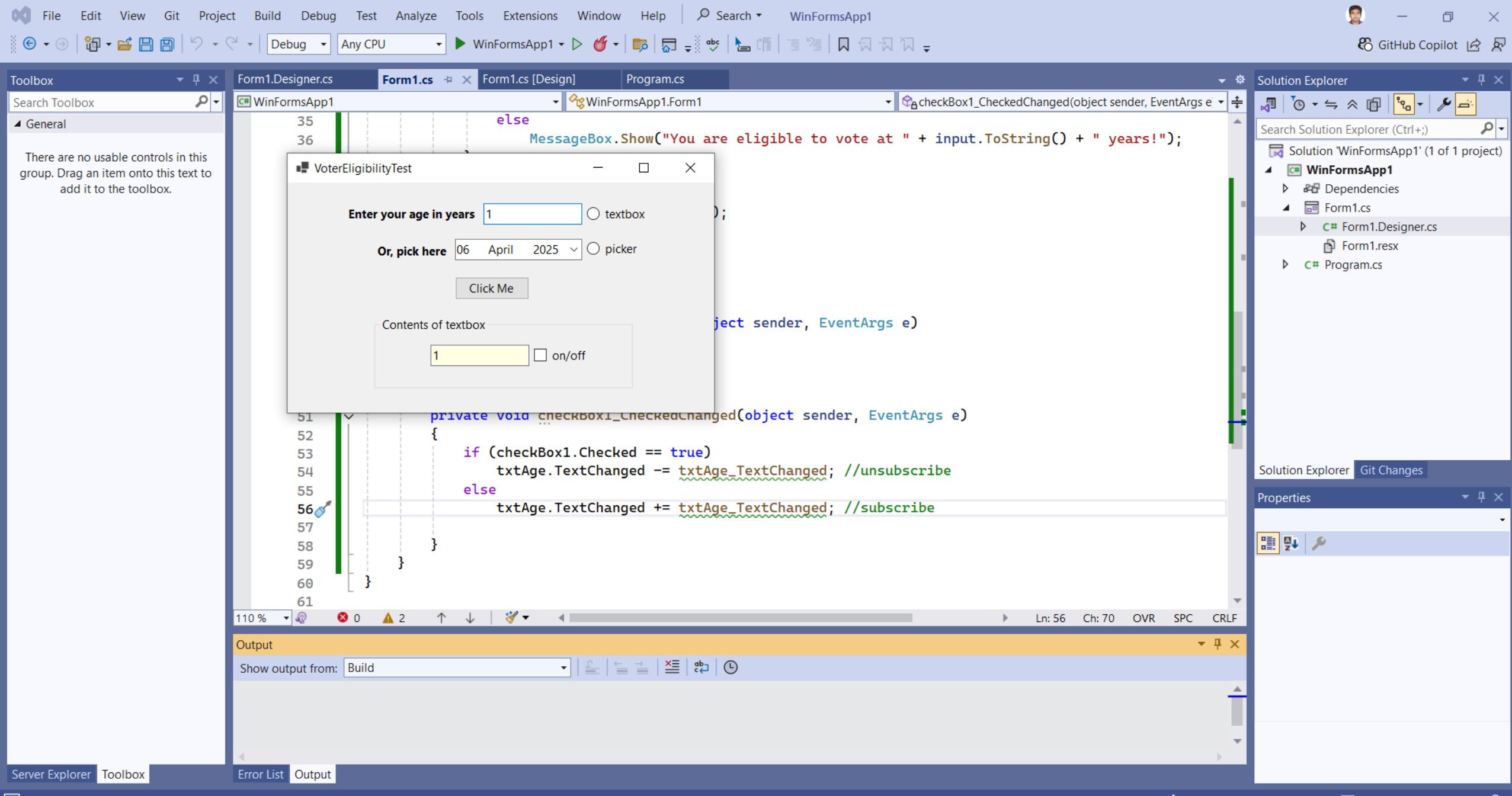
121% 0 2 Output

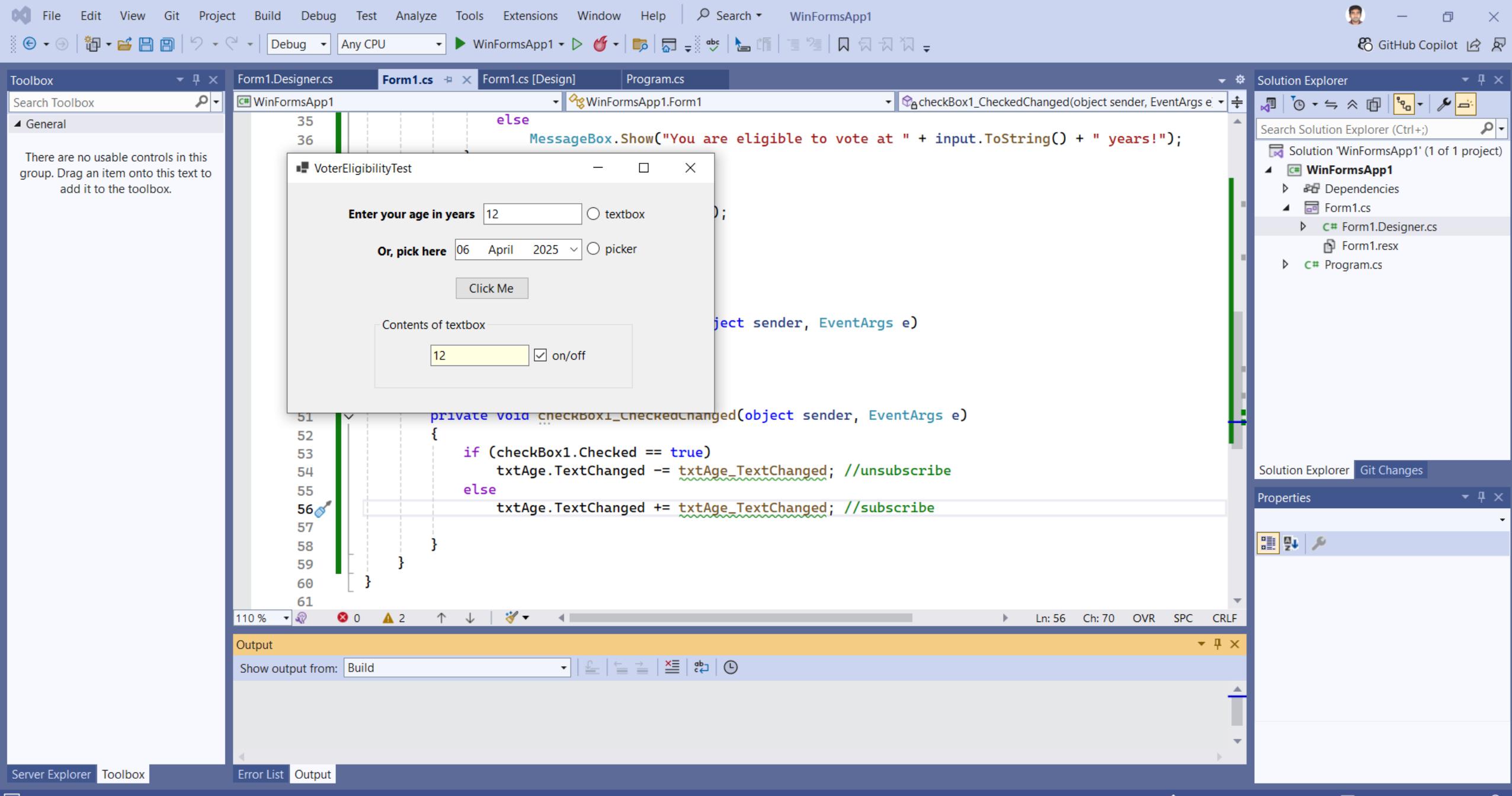
Show output from: Build

1>WinFormsApp1 -> C:\Users\shouvik\Desktop\IITGN\playground\WinFormsApp1\bin\Debug\net8.0-windows\WinFormsApp1.dll
===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped =====
===== Build completed at 18:55 and took 0.319 seconds =====

Server Explorer Toolbox Error List Output

Item(s) Saved Add to Source Control Select Repository







GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs Form1.cs [Design] Program.cs

```
C# WinFormsApp1 WinFormsApp1.Form1 checkBox1_CheckedChanged(object sender, EventArgs e)
else
    MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");
}
};

private void checkBox1_CheckedChanged(object sender, EventArgs e)
{
    if (checkBox1.Checked == true)
        txtAge.TextChanged -= txtAge_TextChanged; //unsubscribe
    else
        txtAge.TextChanged += txtAge_TextChanged; //subscribe
}

110% 0 2 Ln: 56 Ch: 70 OVR SPC CRLF
```

Output

Show output from: Build

Form1.cs [Design]

35 36 else MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");

37 };

38

39

40

41

42

43

44

45

46

47

48

49

50

51 private void checkBox1_CheckedChanged(object sender, EventArgs e)
52 {
53 if (checkBox1.Checked == true)
54 txtAge.TextChanged -= txtAge_TextChanged; //unsubscribe
55 else
56 txtAge.TextChanged += txtAge_TextChanged; //subscribe
57 }
58 }
59 }
60 }
61 }

VoterEligibilityTest

Enter your age in years 12333

Or, pick here 06 April 2025

Click Me

Contents of textbox

12

on/off

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
- Form1.Designer.cs
- Form1.resx
- Program.cs

Solution Explorer Git Changes

Properties

Server Explorer

Toolbox

Error List

Output

Add to Source Control Select Repository



Type here to search



Ready ENG 18:58 06-04-2025



GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs Form1.cs [Design] Program.cs

C# WinFormsApp1 WinFormsApp1.Form1 checkBox1_CheckedChanged(object sender, EventArgs e)

```
else
    MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");
};

private void checkBox1_CheckedChanged(object sender, EventArgs e)
{
    if (checkBox1.Checked == true)
        txtAge.TextChanged -= txtAge_TextChanged; //unsubscribe
    else
        txtAge.TextChanged += txtAge_TextChanged; //subscribe
}
```

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

12

on/off

Output

Show output from: Build

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

Dependencies

Form1.cs

Form1.Designer.cs

Form1.resx

Program.cs

Solution Explorer Git Changes

Properties



GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs Form1.cs [Design] Program.cs

C# WinFormsApp1 WinFormsApp1.Form1 checkBox1_CheckedChanged(object sender, EventArgs e)

```
else
    MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");

private void checkBox1_CheckedChanged(object sender, EventArgs e)
{
    if (checkBox1.Checked == true)
        txtAge.TextChanged -= txtAge_TextChanged; //unsubscribe
    else
        txtAge.TextChanged += txtAge_TextChanged; //subscribe
}
```

Form1.cs [Design]

VoterEligibilityTest

Enter your age in years textbox

Or, pick here picker

Click Me

Contents of textbox

12333a on/off

Output

Show output from: Build

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

- Dependencies
- Form1.cs
- Form1.Designer.cs
- Form1.resx
- Program.cs

Solution Explorer

Properties





GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs Form1.cs [Design] Program.cs

C# WinFormsApp1 WinFormsApp1.Form1 checkBox1_CheckedChanged(object sender, EventArgs e)

```
else
    MessageBox.Show("You are eligible to vote at " + input.ToString() + " years!");
};

private void checkBox1_CheckedChanged(object sender, EventArgs e)
{
    if (checkBox1.Checked == true)
        txtAge.TextChanged -= txtAge_TextChanged; //unsubscribe
    else
        txtAge.TextChanged += txtAge_TextChanged; //subscribe
}
```

VoterEligibilityTest

Enter your age in years 12333abcf

Or, pick here 06 April 2025

Click Me

Contents of textbox

12333abc

on/off

Output

Show output from: Build

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

WinFormsApp1

Dependencies

Form1.cs

Form1.Designer.cs

Form1.resx

Program.cs

Solution Explorer Git Changes

Properties



Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

Form1.Designer.cs Form1.cs [Design] Program.cs

C# WinFormsApp1 WinFormsApp1.Form1 Form1_Load(object sender, EventArgs e)

```
1  namespace WinFormsApp1
2  {
3      public partial class Form1 : Form
4      {
5          public Form1()
6          {
7              InitializeComponent();
8          }
9
10         private void Form1_Load(object sender, EventArgs e)
11         {
12         }
13
14         private void button1_Click(object sender, EventArgs e)
15         {
16             try
17             {
18                 int input = 0;
19                 if (radioButton2.Checked == true)
20                 {
21                     long date1 = dateTimePicker1.Value.Ticks;
22                     long date2 = DateTime.Today.Ticks;
23                     long diff = Math.Abs(date1 - date2);
24                     diff = diff / 3153600000000000;
25                     input = (int)diff;
26                 }
27             }
28         }
29     }
```

Output

Show output from: Build

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'WinFormsApp1' (1 of 1 project)

- WinFormsApp1
 - Dependencies
 - Form1.cs
 - C# Form1.Designer.cs
 - Form1.resx
 - Program.cs

Solution Explorer Git Changes

Properties

Let us Develop a Windows Forms application that accepts employee details including **Emp_Id**, **Emp_Salary**, and **Emp_Name**. Incorporate a **MenuStrip** into the form, offering four functionalities: **Add**, **Search**, **Delete**, and **Exit**. Ensure that ***no business logic is written directly in the form***. Instead, create two separate classes:

- **Employee** – This class should include three **private fields**: **_Id**, **_Salary**, and **_Name**, along with corresponding **public properties** to access and modify these fields.
- **EmployeeManager** – This class will manage a **collection** of employees using an **ArrayList**. It should provide four public methods: **AddEmployee**, **SearchEmployee**, **DeleteEmployee**, and **GetAllEmployees** (if needed).

When a user selects a menu item, the corresponding method in the EmployeeManager class should be invoked. Selecting the **Exit** option should close the application.

Note: Duplicate Employee IDs are not permitted.

Let us Develop a Windows Forms application that accepts employee details including `Emp_Id`, `Emp_Salary`, and `Emp_Name`. Incorporate a `MenuStrip` into the form, offering four functionalities: `Add`, `Search`, `Delete`, and `Exit`.

Ensure that ***no business logic is written directly in the form***. Instead, create two separate classes:

- **Employee** – This class should include three **private fields**: `_Id`, `_Salary`, and `_Name`, along with corresponding **public properties** to **access** and modify these fields.
- **EmployeeManager** – This class will manage a **collection** of employees using an **ArrayList**. It should provide four public methods: **AddEmployee**, **SearchEmployee**, **DeleteEmployee**, and **GetAllEmployees** (if needed).

When a user selects a menu item, the corresponding method in the `EmployeeManager` class should be invoked. Selecting the `Exit` option should close the application.

Note: Duplicate Employee IDs are not permitted.

Let us Develop a Windows Forms application that accepts employee details including **Emp_Id**, **Emp_Salary**, and **Emp_Name**. Incorporate a **MenuStrip** into the form, offering four functionalities: **Add**, **Search**, **Delete**, and **Exit**. Ensure that ***no business logic is written directly in the form***. Instead, create two separate classes:

- **Employee** – This class should include three **private fields**: **_Id**, **_Salary**, and **_Name**, along with corresponding **public properties** to access and modify these fields.
- **EmployeeManager** – This class will manage a **collection** of employees using an **ArrayList**. It should provide four public methods: **AddEmployee**, **SearchEmployee**, **DeleteEmployee**, and **GetAllEmployees** (if needed).

When a user selects a menu item, the corresponding method in the EmployeeManager class should be invoked. Selecting the **Exit** option should close the application.

Note: Duplicate Employee IDs are not permitted.

Let us Develop a Windows Forms application that accepts employee details including **Emp_Id**, **Emp_Salary**, and **Emp_Name**. Incorporate a **MenuStrip** into the form, offering four functionalities: **Add**, **Search**, **Delete**, and **Exit**. Ensure that ***no business logic is written directly in the form***. Instead, create two separate classes:

- **Employee** – This class should include three **private fields**: **_Id**, **_Salary**, and **_Name**, along with corresponding **public properties** to access and modify these fields.
- **EmployeeManager** – This class will manage a **collection** of employees using an **ArrayList**. It should provide four public methods: **AddEmployee**, **SearchEmployee**, **DeleteEmployee**, and **GetAllEmployees** (if needed).

When a user selects a menu item, the corresponding method in the EmployeeManager class should be invoked. Selecting the **Exit** option should close the application.

Note: Duplicate Employee IDs are not permitted.

Let us Develop a Windows Forms application that accepts employee details including **Emp_Id**, **Emp_Salary**, and **Emp_Name**. Incorporate a **MenuStrip** into the form, offering four functionalities: **Add**, **Search**, **Delete**, and **Exit**. Ensure that ***no business logic is written directly in the form***. Instead, create two separate classes:

- **Employee** – This class should include three **private fields**: **_Id**, **_Salary**, and **_Name**, along with corresponding **public properties** to access and modify these fields.
- **EmployeeManager** – This class will manage a **collection** of employees using an **ArrayList**. It should provide four public methods: **AddEmployee**, **SearchEmployee**, **DeleteEmployee**, and **GetAllEmployees** (if needed).

When a user selects a menu item, the corresponding method in the EmployeeManager class should be invoked. Selecting the **Exit** option should close the application.

Note: Duplicate Employee IDs are not permitted.

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

SQL Server... Server Expl... Toolbox

FormEmp.cs [Design] | EmployeeManager.cs

FormEmp

File Type Here

- Add
- Delete
- Search
- Earning
- Exit

Type Here

Empid

Ename

Empid

Emsal

Ename

menuStrip1

Output

Show output from:

Data Tools Operations Error List Output

8,3 46 x 24 ↑ Add to Source Control Select Repository 43 11:53 21-04-2025

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'EmpMan' (1 of 1 project)

- EmpMan
- Dependencies
- Employee.cs
- EmployeeManager.cs
- FormEmp
- FormEmp.Designer.cs
- FormEmp.resx
- Program.cs

Properties

fileToolStripMenuItem System.Windows.Fc

ForeColor ControlText

Image (none)

ImageAlign MiddleCenter

ImageScaling SizeToFit

ImageTransparentColor

RightToLeft No

RightToLeftAutoMin False

ShortcutKeyDisplay

Text File

Text

The text to display on the item.

Toolbox

Search Toolbox

All Windows Forms

- Pointer
- BackgroundWorker
- BindingSource
- Button
- CheckBox
- CheckedListBox
- ColorDialog
- ComboBox
- ContextMenuStrip
- DataGridView
- DateTimePicker
- DomainUpDown
- ErrorProvider
- FileSystemWatcher
- FlowLayoutPanel
- FolderBrowserDialog
- FontDialog
- GroupBox
- HelpProvider
- HScrollBar
- ImageList
- Label
- LinkLabel
- ListBox
- ListView
- MaskedTextBox
- MenuStrip
- MonthCalendar
- NotifyIcon
- NumericUpDown
- OpenFileDialog

SQL Server... Server Expl... Toolbox

EmployeeManager.cs Employee.cs FormEmp.cs FormEmp.cs [Design]

FormEmp

File Type Here

Items Collection Editor

Select item and add to list below:

MenuItem Add

Members:

menuStrip1 fileToolStripMenuItem

menuStrip1

Behavior

- AllowDrop False
- AllowItemReorder False
- AllowMerge True
- ContextMenuStrip (none)
- Enabled True
- ImeMode NoControl
- MdiWindowListItem (none)
- ShowItemToolTips False
- TabIndex 0
- TabStop False
- Visible True

Data

(DataBindings) (ControlBindings)

Tag

Design

(Name) menuStrip1

GenerateMember True

OK Cancel

Output

Show output from: Windows Forms

[12:18:58.797] warn: Could not find field, 'toolStripMenuItem1'.

[12:19:26.745897] warn: Could not find field, 'toolStripContainer1'.

Data Tools Operations Error List Output

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'EmpMan' (1 of 1 project)

EmpMan

- Dependencies
- Employee.cs
- EmployeeManager.cs
- FormEmp.cs
- FormEmp.Designer.cs
- FormEmp.resx

Program.cs

Program

Properties

menuStrip1 System.Windows.Forms.MenuStrip

Visible True

Data

(DataBindings) (ControlBindings)

Items (Collection)

Embed in ToolStripContainer, Insert Standard Items, Edit Items...

Items

Collection of items to display on the ToolStrip.

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search EmpMan

GitHub Copilot

Toolbox

FormEmp.cs [Design] EmployeeManager.cs

C# EmpMan WindowsFormsApplication1.FormEmp FormEmp_Load(object sender, EventArgs e)

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Windows.Forms;
9
10 namespace WindowsFormsApplication1
11 {
12     public partial class FormEmp : Form
13     {
14         int form_eid;
15         double form_sal;
16         string form_name;
17         EmployeeManager empoly = new EmployeeManager();
18
19         public FormEmp()
20         {
21             InitializeComponent();
22         }
23
24         private void FormEmp_Load(object sender, EventArgs e)
25         {
26     }
```

121 % No issues found Ln: 26 Ch: 13 SPC CRLF

Output

Show output from:

SQL Server... Server Expl... Toolbox Data Tools Operations Error List Output

Add to Source Control Select Repository 45 11:54 21-04-2025

Type here to search

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'EmpMan' (1 of 1 project)

- EmpMan
 - Dependencies
 - Employee.cs
 - EmployeeManager.cs
 - FormEmp.cs
 - FormEmp.Designer.cs
 - FormEmp.resx
 - Program.cs

Properties



Toolbox

Search Toolbox

FormEmp.cs [Design]

C# EmpMan

WindowsFormsApplication1.FormEmp

EmployeeManager.cs

EmployeeManager.cs

FormEmp.cs

Solution Explorer

```
25
26     {
27
28     }
29
30     private void addToolStripMenuItem_Click(object sender, EventArgs e)
31     {
32         label1.Text = "Enter ID";
33         label1.Enabled = true;
34         label3.Text = "Enter Salary";
35         label2.Enabled = true;
36         label2.Text = "Enter Name";
37         label3.Enabled = true;
38         form_eid =
39         form_sal =
40         form_name =
41
42         bool Control.Enabled { get; set; }
43         Gets or sets a value indicating whether the control can respond to user interaction.
44         Returns:
45         string s=e
46         true if the control can respond to user interaction; otherwise, false. The default is true.
47         MessageBox.Show(s);
48
49     }
50
51
52     private void searchToolStripMenuItem_Click(object sender, EventArgs e)
53     {
54         textBox1.Enabled = true;
55         label1.Text = "Enter ID";
56     }
```

121 % No issues found

Output

Show output from:

Properties

SQL Server... Server Expl... Toolbox

Data Tools Operations Error List Output

Add to Source Control Select Repository

46

11:55

21-04-2025



Type here to search



Screenshot of Microsoft Visual Studio IDE showing the Employee Management application (EmpMan) in design mode.

The main window displays the code for `FormEmp.cs` (Design). The code handles two menu item click events:

```
private void searchToolStripMenuItem_Click(object sender, EventArgs e)
{
    textBox1.Enabled = true;
    label1.Text = "Enter ID";
    textBox2.Enabled = true;
    textBox3.Enabled = true;

    form_eid = Convert.ToInt32(textBox1.Text);

    string s=empty.Search(form_eid);
    MessageBox.Show(s);
}

private void deleteToolStripMenuItem_Click(object sender, EventArgs e)
{
    textBox1.Enabled = true;
    label1.Text = "Enter ID";
    textBox2.Enabled = true;
    textBox3.Enabled = true;
    form_eid = Convert.ToInt32(textBox1.Text);

    string s = empty.delete(form_eid);
    MessageBox.Show(s);
}
```

The Solution Explorer shows the project structure:

- Solution 'EmpMan' (1 of 1 project)
 - EmpMan
 - Dependencies
 - Employee.cs
 - EmployeeManager.cs
 - FormEmp.cs
 - FormEmp.cs
 - FormEmp.Designer.cs
 - FormEmp.resx
 - Program.cs

The Properties window is visible on the right side of the interface.

Toolbars and menus at the top include: File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search, EmpMan, GitHub Copilot, and various icons for file operations like Open, Save, Print, etc.

Bottom status bar includes: Ready, Add to Source Control, Select Repository, 47, 11:55, ENG, 21-04-2025, and a search bar.

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search EmpMan

GitHub Copilot

Toolbox

FormEmp.cs [Design] EmployeeManager.cs

```
67     form_eid = Convert.ToInt32(textBox1.Text);
68
69     string s = emply.delete(form_eid);
70     MessageBox.Show(s);
71 }
72
73 private void earningToolStripMenuItem_Click(object sender, EventArgs e)
74 {
75     textBox1.Enabled = true;
76     label1.Text = "Enter ID";
77     textBox2.Enabled = true;
78     textBox3.Enabled = true;
79     form_eid = Convert.ToInt32(textBox1.Text);
80
81     string s = emply.earning(form_eid);
82     MessageBox.Show(s);
83 }
84
85 private void exitToolStripMenuItem_Click(object sender, EventArgs e)
86 {
87     Application.Exit();
88 }
89 }
90
91
```

121 % No issues found

Output

SQL Server... Server Expl... Toolbox Data Tools Operations Error List Output

Add to Source Control Select Repository 48 11:55 21-04-2025

Type here to search

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'EmpMan' (1 of 1 project)

- EmpMan
 - Dependencies
 - Employee.cs
 - EmployeeManager.cs
 - FormEmp.cs
 - FormEmp.cs
 - FormEmp.Designer.cs
 - FormEmp.resx
 - Program.cs

Properties

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

- Top Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search, EmpMan.
- Solution Explorer:** Shows the solution 'EmpMan' with one project 'EmpMan' containing files: Dependencies, Employee.cs, EmployeeManager.cs, FormEmp.cs, and Program.cs.
- Toolbox:** General group, which contains no usable controls.
- Code Editor:** The 'Program.cs' file is open, displaying the following C# code:

```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Windows.Forms;
5
6 namespace WindowsFormsApplication1
7 {
8     static class Program
9     {
10         /// <summary>
11         /// The main entry point for the application.
12         /// </summary>
13         [STAThread]
14         static void Main()
15         {
16             Application.EnableVisualStyles();
17             Application.SetCompatibleTextRenderingDefault(false);
18             Application.Run(new FormEmp());
19         }
20     }
21 }
22
```
- Status Bar:** Shows 'Ready' status, navigation icons, and system information like '49' and '11:55 21-04-2025'.

Let us Develop a Windows Forms application that accepts employee details including `Emp_Id`, `Emp_Salary`, and `Emp_Name`. Incorporate a `MenuStrip` into the form, offering four functionalities: `Add`, `Search`, `Delete`, and `Exit`.

Ensure that ***no business logic is written directly in the form***. Instead, create two separate classes:

- **Employee** – This class should include three **private fields**: `_Id`, `_Salary`, and `_Name`, along with corresponding **public properties** to **access** and modify these fields.
- **EmployeeManager** – This class will manage a **collection** of employees using an **ArrayList**. It should provide four public methods: **AddEmployee**, **SearchEmployee**, **DeleteEmployee**, and **GetAllEmployees** (if needed).

When a user selects a menu item, the corresponding method in the `EmployeeManager` class should be invoked. Selecting the `Exit` option should close the application.

Note: Duplicate Employee IDs are not permitted.

The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the code for `Employee.cs` in the `WindowsFormsApplication1` namespace. The code defines a class `Employee` with private fields `id`, `sal`, and `name`, and public properties `eid` and `esal` with their respective get and set methods. The `EmployeeManager.cs` file is also visible in the tabs at the top.

```
using System;
namespace WindowsFormsApplication1
{
    class Employee
    {
        private int id;
        private double sal;
        private string name;

        public int eid
        {
            set
            {
                id = value;
            }
            get
            {
                return id;
            }
        }

        public double esal
        {
            set
            {
                sal = value;
            }
        }
    }
}
```

The Solution Explorer on the right shows the project structure for `'EmpMan' (1 of 1 project)`. It contains the `EmpMan` folder with files: `Dependencies`, `Employee.cs`, `EmployeeManager.cs`, `FormEmp.cs`, and `Program.cs`.

Toolbars and menus include: File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search, EmpMan, GitHub Copilot, and various icons for file operations like Open, Save, Print, and Find.

Bottom status bar: Ready, Add to Source Control, Select Repository, 51, 11:56, ENG, 21-04-2025.

Screenshot of Microsoft Visual Studio IDE showing a C# project named 'EmpMan'.

The main window displays the code for the `Employee.cs` class:

```
19 }  
20 }  
21 public double esal  
22 {  
23     set  
24     {  
25         sal = value;  
26     }  
27     get  
28     {  
29         return sal;  
30     }  
31 }  
32 public string ename  
33 {  
34     set  
35     {  
36         name = value;  
37     }  
38     get  
39     {  
40         return name;  
41     }  
42 }  
43 }  
44 }
```

The Solution Explorer shows the project structure:

- Solution 'EmpMan' (1 of 1 project)- EmpMan
 - Dependencies
 - Employee.cs
 - EmployeeManager.cs
 - FormEmp.cs
 - Program.cs

The Properties window is visible on the right side of the interface.

Toolbars and menus at the top include: File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search, EmpMan, GitHub Copilot, and various icons for file operations like Open, Save, Print, etc.

Bottom navigation bar includes: SQL Server..., Server Expl..., Toolbox, Data Tools Operations, Error List, Output, Ready, Add to Source Control, Select Repository, and system status indicators like battery level, signal strength, and date/time (11:56, 21-04-2025).

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search EmpMan GitHub Copilot

EmployeeManager.cs Employee.cs Program.cs FormEmp.cs FormEmp.cs [Design]

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

```
using System;
using System.Collections;
namespace WindowsFormsApplication1
{
    class EmployeeManager : Employee
    {
        private ArrayList ar = new ArrayList();

        public ArrayList getar()
        {
            return ar;
        }

        public string earning(int form_eid)
        {
            int flag = 0;
            Employee a = null;

            for (int i = 0; i < ar.Count; i++)
            {
                a = (Employee)ar[i];
                if (a.eid == form_eid)
                {
                    flag = 1;
                    break;
                }
            }
        }
    }
}
```

Output

SQL Server... Server Expl... Toolbox Data Tools Operations Error List Output

Ready Add to Source Control Select Repository 53 11:56 21-04-2025

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search EmpMan

GitHub Copilot

EmployeeManager.cs Employee.cs Program.cs FormEmp.cs FormEmp.cs [Design]

Toolbox Search Toolbox General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

```
13
14     public string earning(int form_eid)
15     {
16         int flag = 0;
17         Employee a = null;
18
19         for (int i = 0; i < ar.Count; i++)
20         {
21             a = (Employee)ar[i];
22             if (a.eid == form_eid)
23             {
24                 flag = 1;
25                 break;
26             }
27         }
28         if (flag == 1)
29             return ("The earning is=" + a.esal);
30         else
31             return ("No such data exists");
32     }
33
34     public string Add(int form_eid,double form_sal,string form_ename)
35     {
36
37         Employee a = null;
38     }

```

Output

SQL Server... Server Expl... Toolbox Data Tools Operations Error List Output

Ready Add to Source Control Select Repository 54 11:56 21-04-2025

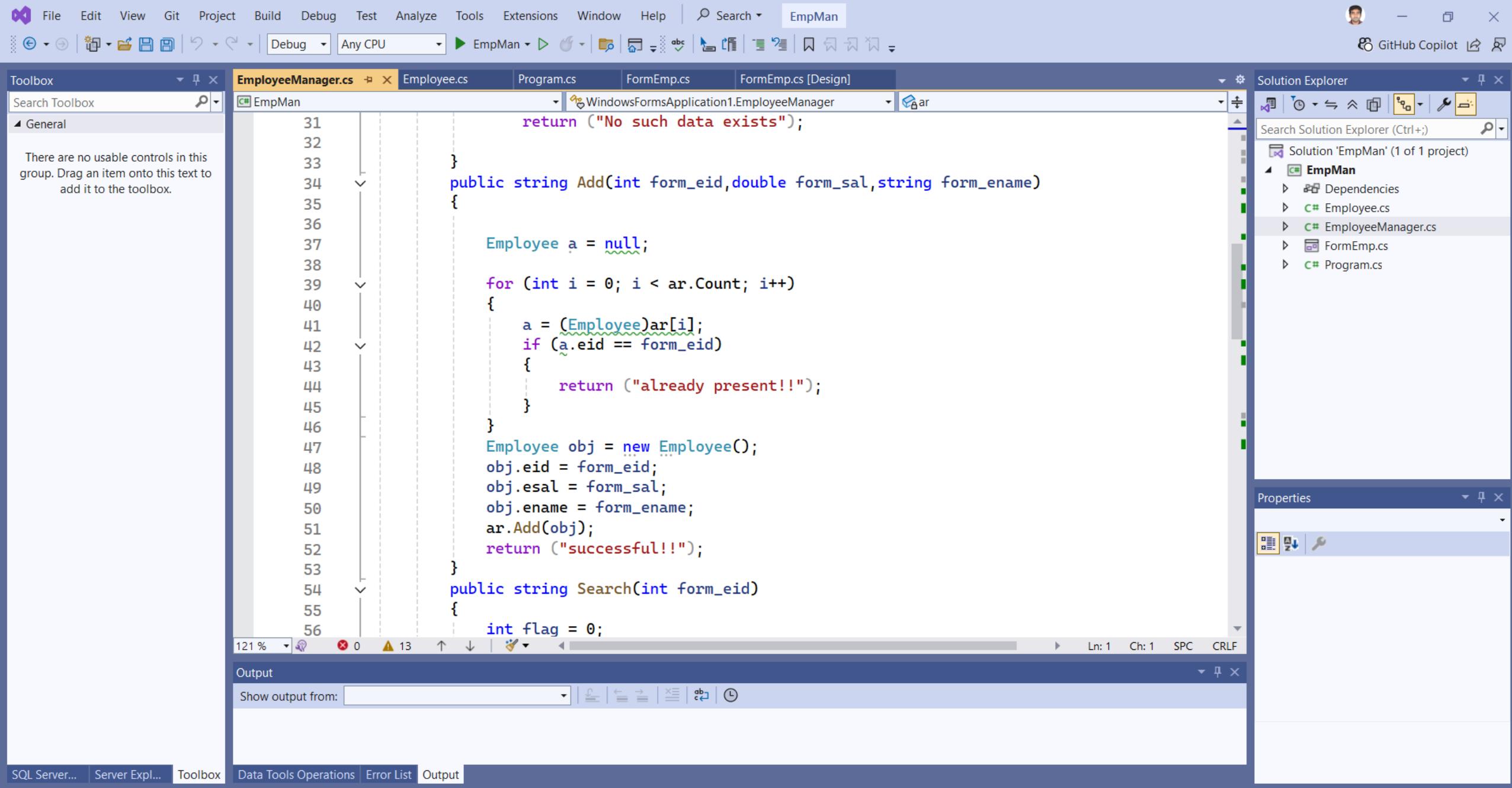
Windows Forms Application 1 Employee Manager

Solution Explorer

Search Solution Explorer (Ctrl+;) Solution 'EmpMan' (1 of 1 project) EmpMan Dependencies Employee.cs EmployeeManager.cs FormEmp.cs Program.cs

Properties

Type here to search



Screenshot of Microsoft Visual Studio IDE showing the EmployeeManager.cs file in the code editor.

The code implements a search function for employees based on their ID (eid). It iterates through an array of Employee objects and returns "Search Successful!!!" if a match is found, or "Search unsuccessful!!!" if no match is found.

```
EmployeeManager.cs
```

```
52     return ("successful!!!");
53 }
54 public string Search(int form_eid)
55 {
56     int flag = 0;
57     Employee a = null;
58
59     for (int i = 0; i < ar.Count; i++)
60     {
61         a = (Employee)ar[i];
62         if (a.eid == form_eid)
63         {
64             flag = 1;
65             break;
66         }
67     }
68     if (flag == 1)
69     {
70         return("Search Successful!!!");
71     }
72     else
73     {
74         return("Search unsuccessful!!!");
75     }
76     public string delete(int form_eid)
77 {
```

The Solution Explorer shows the project structure:

- Solution 'EmpMan' (1 of 1 project)
 - EmpMan
 - Dependencies
 - Employee.cs
 - EmployeeManager.cs**
 - FormEmp.cs
 - Program.cs

The Properties window is also visible on the right side of the interface.

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

- Top Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search, EmpMan.
- Solution Explorer:** Shows the solution 'EmpMan' with one project 'EmpMan' containing files: Dependencies, Employee.cs, EmployeeManager.cs (selected), FormEmp.cs, and Program.cs.
- Properties Window:** Shows basic properties for the selected file.
- Editor:** Displays the code for EmployeeManager.cs. The code implements a delete method that iterates through a list of employees to find a match by employee ID (eid). If found, it removes the employee from the list and returns a success message. If not found, it returns a message indicating no such data exists.
- Toolbox:** Shows the general toolbox with a note: "There are no usable controls in this group. Drag an item onto this text to add it to the toolbox."
- Bottom Bar:** SQL Server..., Server Expl..., Toolbox, Data Tools Operations, Error List, Output, Ready, Add to Source Control, Select Repository, 57, 11:56, ENG, 21-04-2025.

```
75 }  
76 public string delete(int form_eid)  
77 {  
78     Employee a = null;  
79     int flag = 0;  
80  
81     for (int i = ar.Count-1; i >= 0; i--)  
82     {  
83         a = (Employee)ar[i];  
84         if (a.eid == form_eid)  
85         {  
86             flag = 1;  
87             ar.RemoveAt(i);  
88             break;  
89         }  
90     }  
91     if (flag == 1)  
92     {  
93         return ("Delete Successful!!");  
94     }  
95     else  
96         return ("No such data exists!!");  
97 }  
98  
99 }
```

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search EmpMan

GitHub Copilot

Toolbox

Search Toolbox

General

There are no usable controls in this group. Drag an item onto this text to add it to the toolbox.

```
namespace WindowsFormsApplication1
{
    partial class FormEmp
    {
        /// <summary>
        /// Required designer variable.
        /// </summary>
        private System.ComponentModel.IContainer components = null;

        /// <summary>
        /// Clean up any resources being used.
        /// </summary>
        /// <param name="disposing">true if managed resources should be disposed; otherwise, false.
        protected override void Dispose(bool disposing)
        {
            if (disposing && (components != null))
            {
                components.Dispose();
            }
            base.Dispose(disposing);
        }

        Windows Form Designer generated code

        private System.Windows.Forms.MenuStrip menuStrip1;
        private System.Windows.Forms.ToolStripMenuItem fileToolStripMenuItem;
    }
}
```

121 % No issues found

Output

Show output from:

Solution Explorer

Properties

SQL Server... Server Expl... Toolbox Data Tools Operations Error List Output

Ready

Type here to search

Add to Source Control Select Repository

58 12:13 21-04-2025 ENG

The screenshot shows the Microsoft Visual Studio IDE interface. The title bar displays "File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search EmpMan". The toolbar includes icons for Undo, Redo, Save, and various project management tools. The menu bar has "Debug Any CPU EmpMan Employee.cs Program.cs FormEmp.cs FormEmp.cs [Design]".

The main workspace contains the "FormEmp.Designer.cs" code editor, which displays the following C# code:

```
16     if (disposing && (components != null))
17     {
18         components.Dispose();
19     }
20     base.Dispose(disposing);
21 }
22
23 > Windows Form Designer generated code
24
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174
175
176     private System.Windows.Forms.MenuStrip menuStrip1;
177     private System.Windows.Forms.ToolStripMenuItem fileToolStripMenuItem;
178     private System.Windows.Forms.ToolStripMenuItem addToolStripMenuItem;
179     private System.Windows.Forms.ToolStripMenuItem deleteToolStripMenuItem;
180     private System.Windows.Forms.ToolStripMenuItem searchToolStripMenuItem;
181     private System.Windows.Forms.ToolStripMenuItem earningToolStripMenuItem;
182     private System.Windows.Forms.ToolStripMenuItem exitToolStripMenuItem;
183     private System.Windows.Forms.Label label1;
184     private System.Windows.Forms.Label label2;
185     private System.Windows.Forms.Label label3;
186     private System.Windows.Forms.TextBox textBox1;
187     private System.Windows.Forms.TextBox textBox2;
188     private System.Windows.Forms.TextBox textBox3;
189
190
191 }
```

The Solution Explorer on the right shows the project structure:

- Solution 'EmpMan' (1 of 1 project)
 - EmpMan
 - Dependencies
 - Employee.cs
 - EmployeeManager.cs
 - FormEmp.cs
 - FormEmp.Designer.cs
 - FormEmp.resx
 - Program.cs
 - Program

The Properties window is also visible on the right.

At the bottom, the status bar shows "Ready", "Add to Source Control", "Select Repository", "59", "12:14", "ENG", "21-04-2025", and a search bar with placeholder "Type here to search".

Texts, References, and Acknowledgements

Textbook:

- Sharp, J. (2022). *Microsoft Visual C# Step by Step*, 10th edition, Microsoft Press.
- Watson, K., Nagel, C., Pedersen, J. H., Reid, J. D., & Skinner, M. (2008). *Beginning Microsoft Visual C# 2008*. John Wiley & Sons.
- Mark J. Price (2024). *C# 13 and .NET 9 – Modern Cross-Platform Development Fundamentals*, 9th edition, Packt Publishing Ltd.

Reference:

- <https://github.com/dotnet-presentations/home/tree/master/.NET%20Intro>
- Soni, M. (2016). *DevOps for Web Development*. Packt Publishing Ltd.
- Yusuf Sulistyo Nugroho, Hideaki Hata, and Kenichi Matsumoto. 2020. *How different are different diff algorithms in Git? Use --histogram for code changes*. Empirical Softw. Engg. 25, 1 (Jan 2020), 790–823.