



# Create A Simple Graphical C# Application

Visual Programming-CS411

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# Create A Simple Graphical C# App

- Visual Studio 2012 provides you with two views of a graphical application: the *design view* and the *code view*.
- You use the Code and Text Editor window to modify and maintain the code and program logic for a graphical application.
- You use the Design View window to lay out your user interface.
- You can switch between the two views whenever you want.

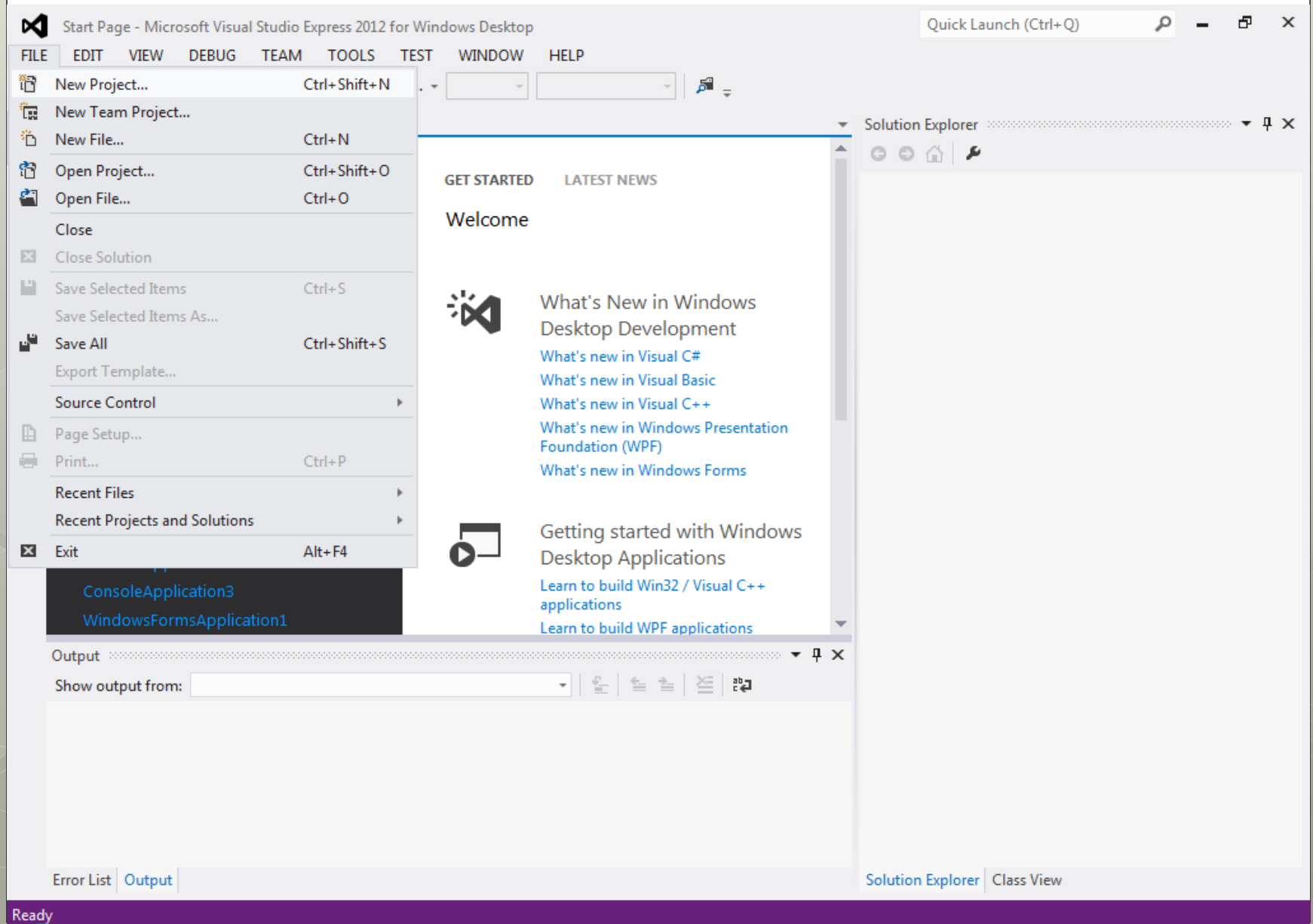
# Create A Simple Graphical C# App

- Visual Studio 2012 provides two templates for building graphical applications:
  - Windows Forms Application template
  - WPF Application template
- Windows Forms is a technology that first appeared with the .NET Framework version 1.0.
- WPF, or Windows Presentation Foundation, is an enhanced technology that first appeared with the .NET Framework version 3.0. It provides many additional features and capabilities over Windows Forms,

# Create A Simple Graphical C# App

- In the following set of exercises, you'll learn how to create a graphical application using Visual Studio 2012.
- The program will display a simple form containing a text box where you can enter your name and a button that when clicked displays a personalized greeting.

FILE → New Project



# Visual C# → WPF App

New Project

Recent

Installed

Templates





- Visual Basic
- Visual C#
  - Windows
  - Test
- Visual C++
- Visual Studio Solutions

Samples

- Visual C#

Online

Sort by: Default

	Windows Forms Application	Visual C#
	WPF Application	Visual C#
	Console Application	Visual C#
	Class Library	Visual C#

Search Installed Templates (Ctrl+E)

Type: Visual C#

Windows Presentation Foundation client application

Name: Hello

Location: c:\users\laila.anjum\documents\visual studio 2012\Projects

Browse...

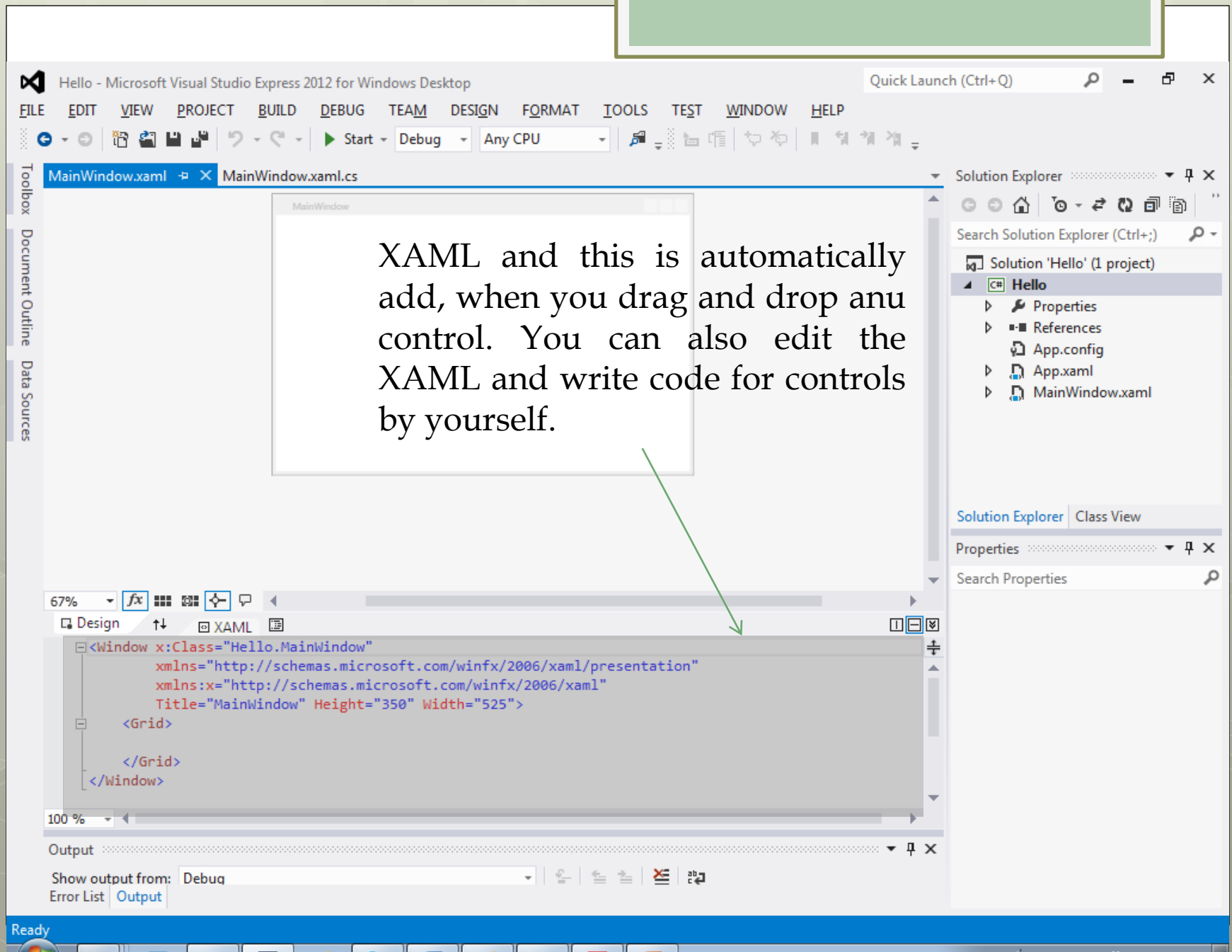
Solution: Create new solution

Solution name: Hello

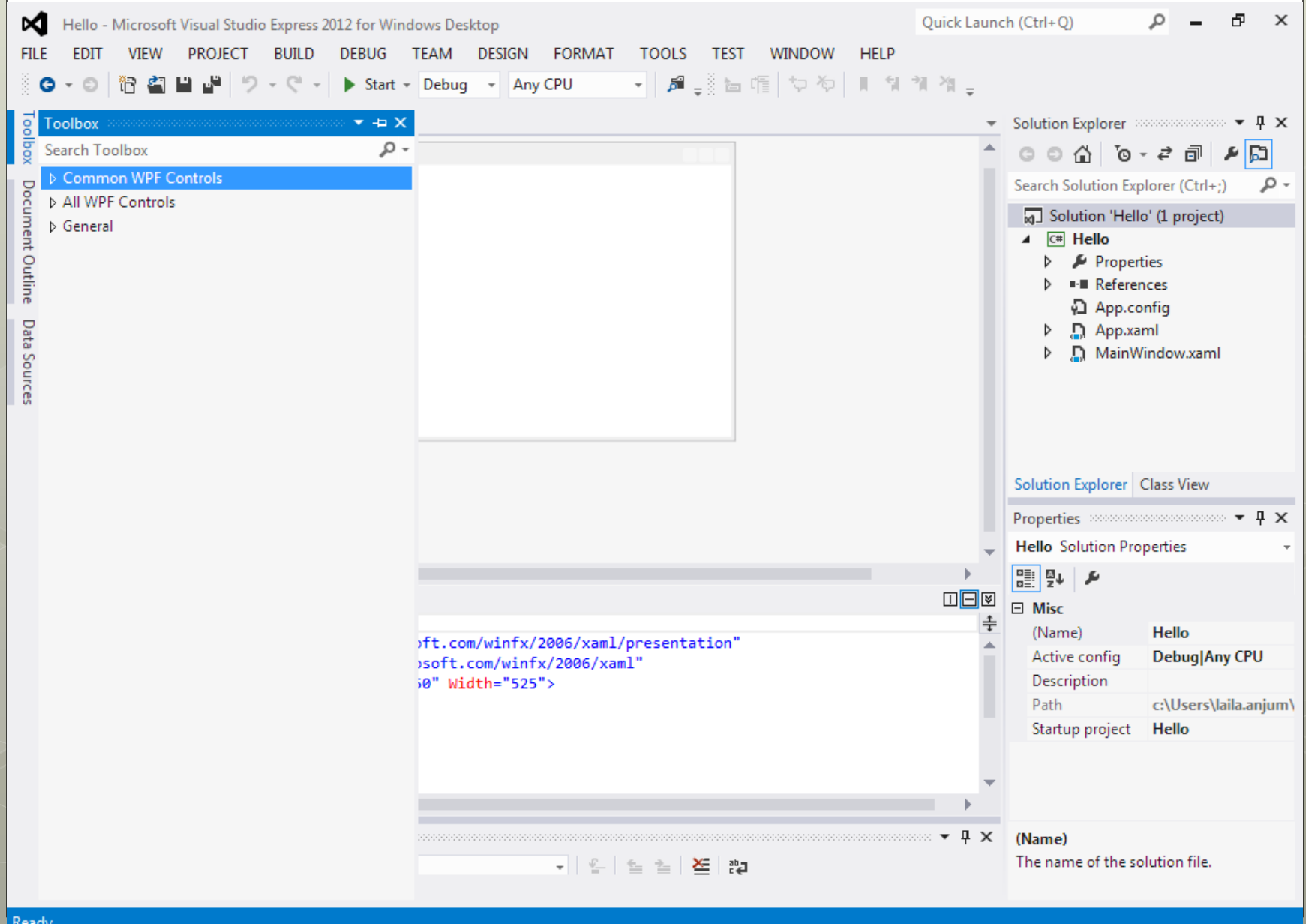
☒ Create directory for solution

☐ Add to source control

OK Cancel

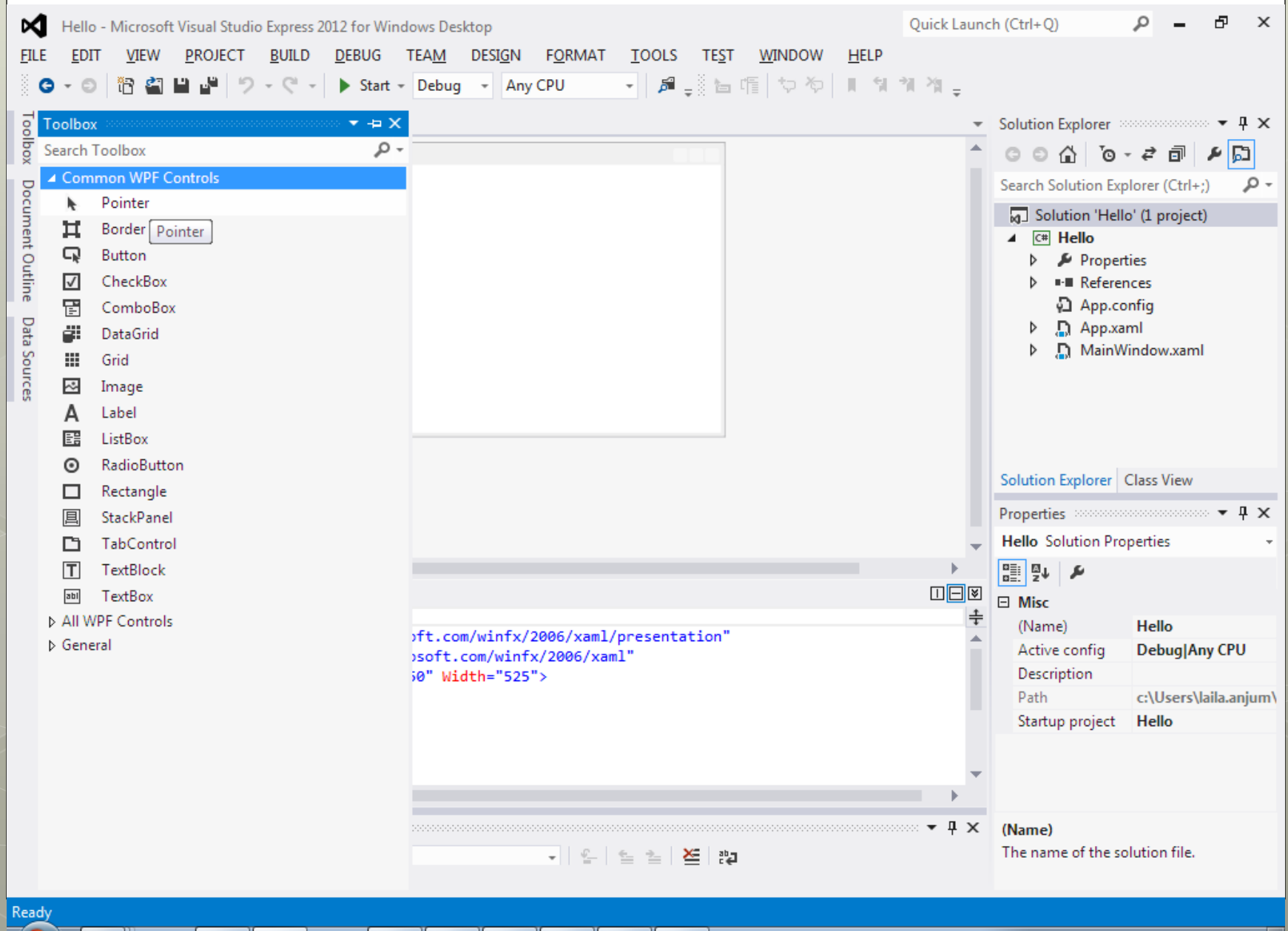


Click The Toolbox Tab





# Expand The Common WPF Controls Section



# Click TextBox

Microsoft Visual Studio Express 2012 for Windows Desktop

Quick Launch (Ctrl+Q)

FILE EDIT VIEW PROJECT BUILD DEBUG TEAM DESIGN FORMAT TOOLS TEST WINDOW HELP

Start Debug Any CPU

Toolbox

Search Toolbox

Common WPF Controls

- Pointer
- Border
- Button
- CheckBox
- ComboBox
- DataGrid
- Grid
- Image
- Label
- ListBox
- RadioButton
- Rectangle
- StackPanel
- TabControl
- TextBlock
- TextBlock

Document Outline

Data Sources

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'Hello' (1 project)

- C# Hello
  - Properties
  - References
  - App.config
  - App.xaml
  - MainWindow.xaml

Solution Explorer Class View

Properties

Hello Solution Properties

Misc

(Name)	Hello
Active config	Debug Any CPU
Description	
Path	c:\Users\laila.anjum\
Startup project	Hello

(Name)

The name of the solution file.

Ready

# Drag The *Textblock* Control Onto The Form

The screenshot displays the Microsoft Visual Studio 2012 interface for a Windows Desktop application named 'Hello'. The main workspace is split into two views: Design and XAML.

**Design View:** Shows a visual representation of the application window. A **TextBlock** control is positioned in the center of the window. Dimension lines indicate its placement: a horizontal distance of 224 from the left edge and a vertical distance of 129 from the top edge. The window title bar reads 'MainWindow.xaml\*'.

**XAML View:** Displays the XAML code for the application. The code defines a **Window** with a **Grid** containing a **TextBlock**.

```
xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
Title="MainWindow" Height="350" Width="525"
<Grid>
  <TextBlock HorizontalAlignment="Left" Margin="224,129,0,0" TextWrapping="Wrap" Text="TextBlo
</Grid>
</Window>
```

**Solution Explorer:** Located on the right, it shows the project structure for 'Solution 'Hello' (1 project)'. The files listed are:

- Properties
- References
- App.config
- App.xaml
- MainWindow.xaml

**Properties Window:** Also on the right, it shows the properties for the selected **TextBlock** control. The 'Name' property is set to '<No Name>' and the 'Type' is 'TextBlock'. Other properties like 'Text', 'Cursor', 'DataContext', 'IsEnabled', and 'ToolTip' are also visible.

The status bar at the bottom indicates the application is 'Ready'.

# Adjust The Size And Position of Textblock Control Onto The Form

The screenshot displays the Microsoft Visual Studio Express 2012 for Windows Desktop interface. The main window shows the design view of a WPF application named 'Hello'. The design view shows a `MainWindow` containing a `TextBlock` control. The `TextBlock` is positioned at (106, 66) with a width of 350 and a height of 525. The XAML view shows the following code:

```
<?xml version="1.0" encoding="utf-8" ?>
<xaml xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
      xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
      Title="MainWindow" Height="350" Width="525">
  <Grid>
    <TextBlock HorizontalAlignment="Left" Margin="106,66,0,0" TextWrapping="Wrap" Text="TextBlock" />
  </Grid>
</Window>
```

The Properties window is open, showing the `TextBlock` control's properties. The `Name` property is set to `<No Name>`. The `Type` property is set to `TextBlock`. The `Text` property is set to `TextBlock`. The `Cursor` property is set to `Default`. The `DataContext` property is set to `Default`. The `IsEnabled` property is checked. The `ToolTip` property is set to `Default`.

Expand the *Text* property &  
Change the *FontSize* property to 20 px

Visual Studio Express 2012 for Windows Desktop interface showing a WPF application named "Hello".

**MainWindow.xaml** (XAML):

```
<Window xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
        xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
        Title="MainWindow" Height="350" Width="525">
    <Grid>
        <TextBlock HorizontalAlignment="Left" Margin="106,66,0,0" TextWrapping="Wr"
        </TextBlock>
    </Grid>
</Window>
```

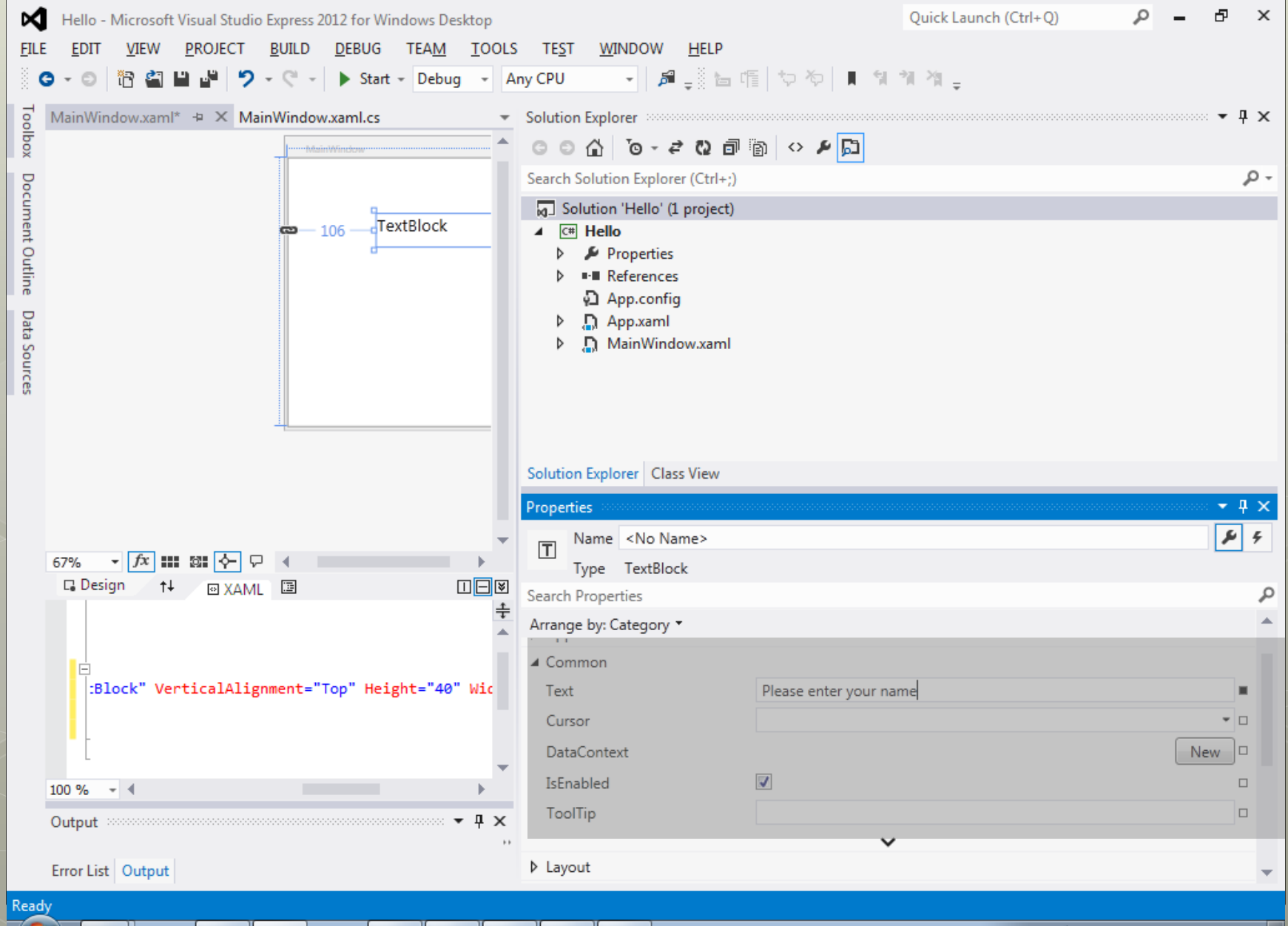
**Properties Window:**

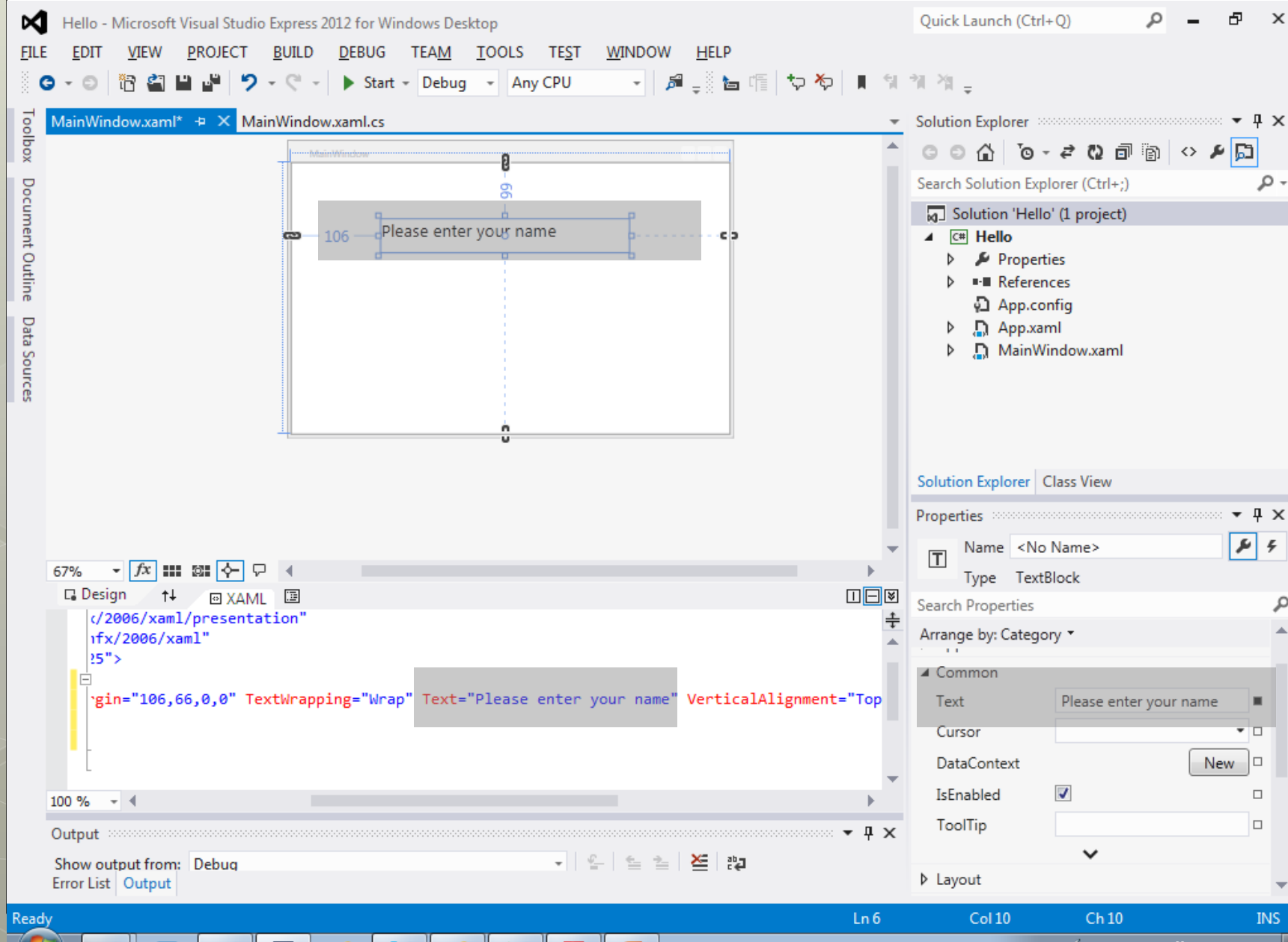
- Name: <No Name>
- Type: TextBlock
- Layout
- Text: Segoe UI, 20 px
- Transform
- Miscellaneous

**Output Window:**

Show output from: Debug

Change the value of the *Text* property to **Please enter your name**





# Add *TextBox* control , Edit Name and Text property

The screenshot displays the Microsoft Visual Studio Express 2012 for Windows Desktop interface. The main window shows the design view of a WPF application named "Hello". The design view displays a window titled "Main Window" with a text label "Please enter your name" and a text box control. The text box is highlighted, and its properties are visible in the Properties window on the right. The Properties window shows the text box's name as "userName" and its type as "TextBox". The XAML view at the bottom shows the XAML code for the window, including the text box control.

**Visual Studio Interface:**

- Menu Bar:** FILE, EDIT, VIEW, PROJECT, BUILD, DEBUG, TEAM, DESIGN, FORMAT, TOOLS, TEST, WINDOW, HELP
- Toolbar:** Includes buttons for Start, Debug, and Any CPU.
- Toolbox:** Located on the left, showing Document Outline and Data Sources.
- Solution Explorer:** Located on the right, showing the project structure for "Hello".
- Properties Window:** Located on the right, showing the properties of the selected text box control.
- XAML View:** Located at the bottom, showing the XAML code for the window.

**Design View Details:**

- Window Title: Main Window
- Text Label: Please enter your name
- Text Box Control: Highlighted, showing a margin of 106, 66, 0, 0.

**Properties Window Details:**

- Name: userName
- Type: TextBox
- Search Properties: Arrange by: Category
- Appearance: SelectionOpacity 0.4, SpellCheck.IsE... (checked)
- Common: Text (selected), UndoLimit 100, Cursor, DataContext (New)

**XAML View Details:**

```
<?xml version="1.0" encoding="utf-8" ?>
<xaml xmlns="http://schemas.microsoft.com/winfx/2006/xaml"
      title="Main Window" Height="350" Width="525">
  <TextBlock HorizontalAlignment="Left" Margin="106,66,0,0" TextWrapping="Wrap" Text="Please
  <TextBox x:Name="userName" HorizontalAlignment="Left" Height="32" Margin="106,175,0,0" Tex
  </xaml>
```



# Add *Button* control , Edit Name and Content property

The screenshot displays the Microsoft Visual Studio Express 2012 for Windows Desktop interface. The main window shows the design view of a WPF application named "Hello". The design view displays a window titled "Please enter your name" with a text box and an "OK" button. The text box has a width of 323 and a height of 175. The button is positioned to the right of the text box. The XAML view at the bottom shows the following code:

```
<Title="MainWindow" Height="350" Width="525">
<Grid>
  <TextBlock HorizontalAlignment="Left" Margin="106,66,0,0" TextWrapping="Wrap" Text="Pl
  <TextBox x:Name="userName" HorizontalAlignment="Left" Height="32" Margin="106,175,0,0"
  <Button x:Name="ok" Content="OK" HorizontalAlignment="Left" Margin="323,175,0,0" Verti
</Grid>
</window>
```

The Solution Explorer on the right shows the project structure for "Hello", including Properties, References, App.config, App.xaml, and MainWindow.xaml. The Properties window at the bottom right shows the properties for the selected "ok" button, including Name, Type, Content, IsCancel, IsDefault, Cursor, DataContext, and IsEnabled.

Change the *Title* property of the title bar of the form

Visual Studio Express 2012 for Windows Desktop interface showing a WPF application named "Hello".

The main window is in Design view, displaying a dialog box with the text "Please enter your name", a text input field, and an "OK" button. The title bar of the window is labeled "Hello".

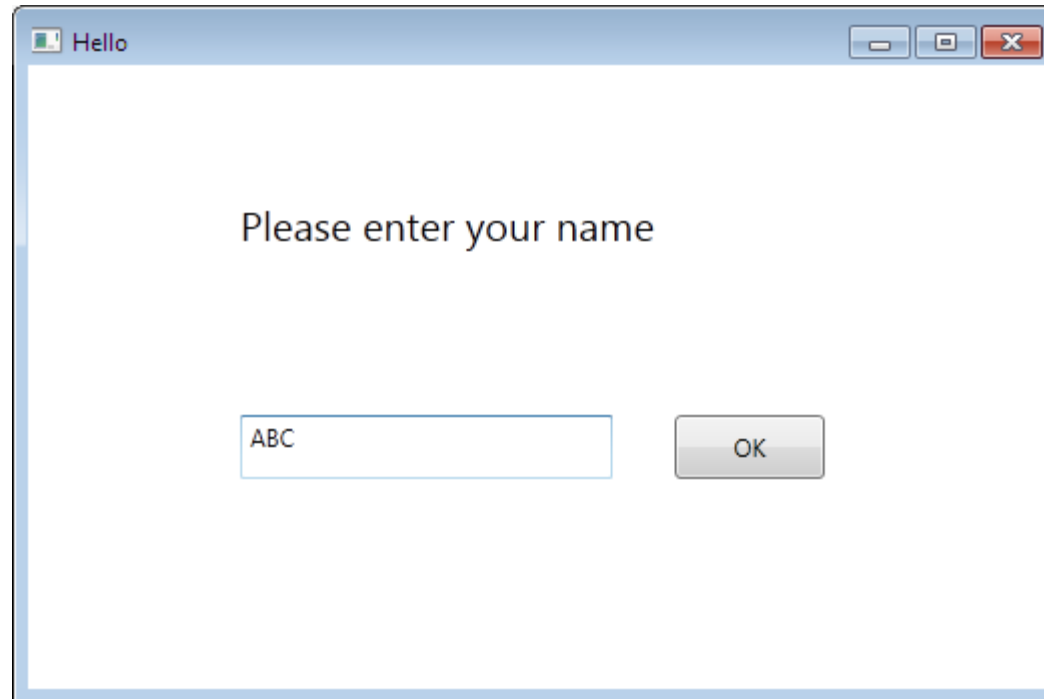
The Solution Explorer on the right shows the project structure with "Hello" as the main project.

The Properties window at the bottom right shows the "Title" property set to "Hello".

The XAML code at the bottom shows the window definition with the Title property set to "Hello":

```
<Window x:Class="Hello.MainWindow"
        xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
        xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
        Title="Hello" Height="350" Width="525">
    <Grid>
        <TextBlock HorizontalAlignment="Left" Margin="106,66,0,0" TextWrapping="Wrap" Text=
        <TextBox x:Name="userName" HorizontalAlignment="Left" Height="32" Margin="106,175,
        <Button x:Name="ok" Content="OK" HorizontalAlignment="Left" Margin="323,175,0,0" V
```

# Output



# Add Event to OK button

Visual Studio Express 2012 for Windows Desktop interface showing the design and XAML views of a 'Hello' application.

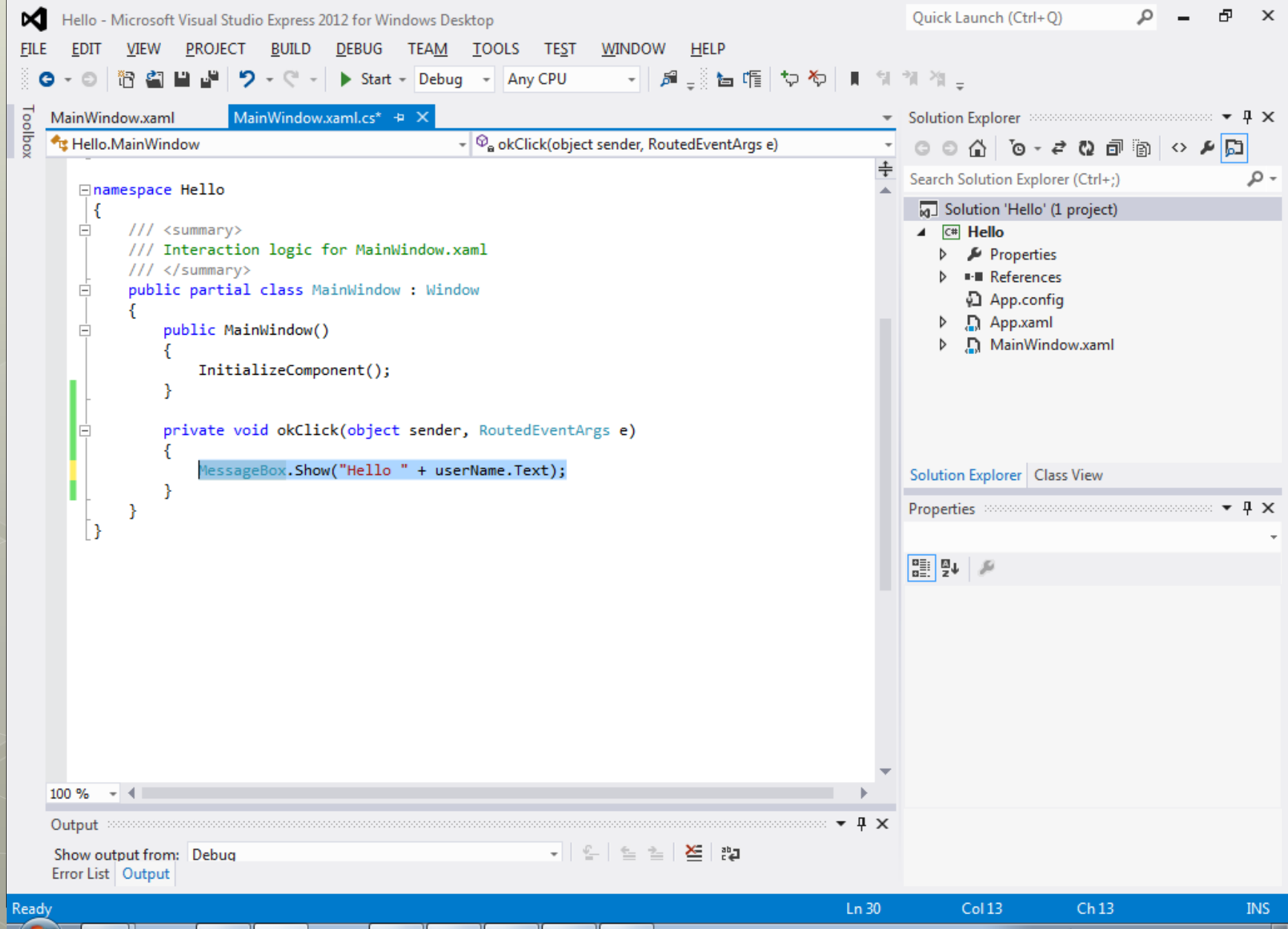
**Design View:** The window titled 'Hello' contains a text box labeled 'Please enter your name' and an 'OK' button. Dimensions are shown: 323 for the text box width and 175 for the button height.

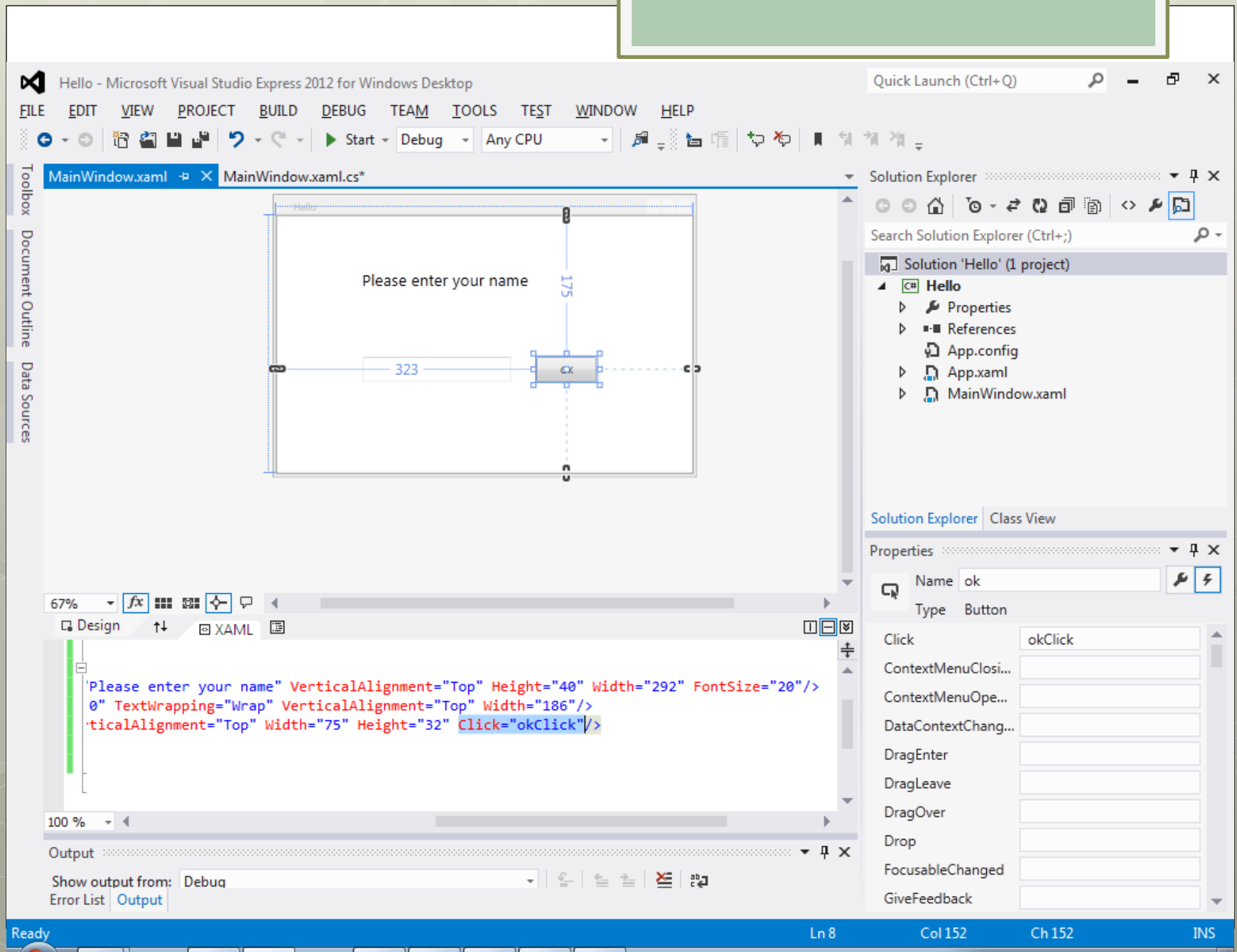
**XAML View:** The XAML code defines the window and its controls:

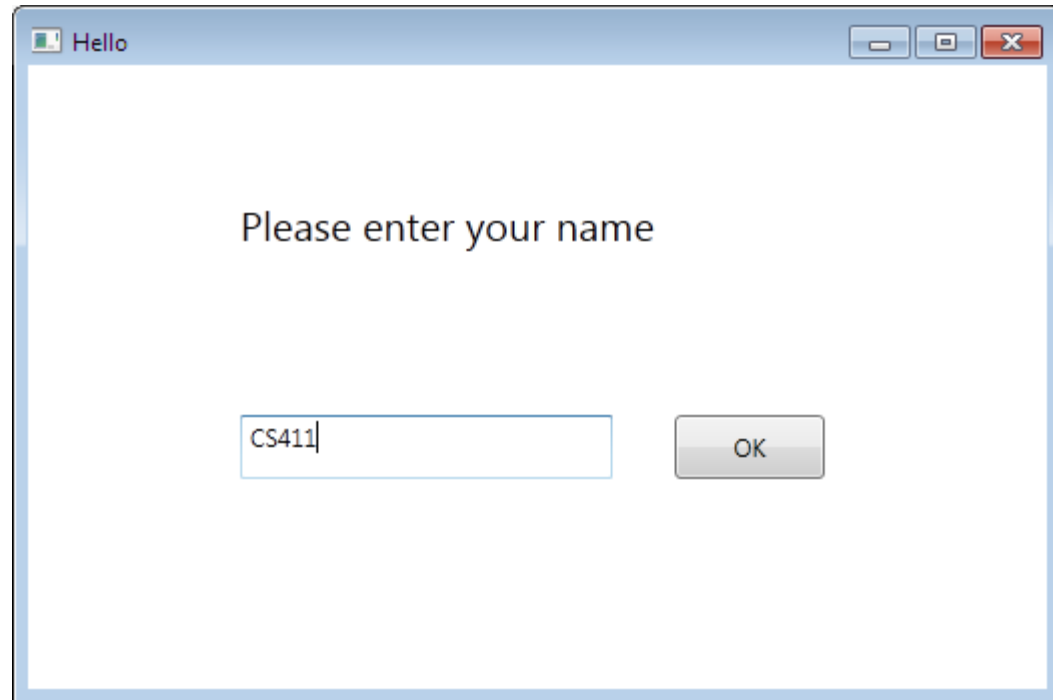
```
<Window Title="Hello" Height="350" Width="525">
  <Grid>
    <TextBlock HorizontalAlignment="Left" Margin="106,66,0,0" TextWrapping="Wrap" Text="Please enter your name" />
    <TextBox x:Name="userName" HorizontalAlignment="Left" Height="32" Margin="106,175,0,0" />
    <Button x:Name="ok" Content="OK" HorizontalAlignment="Left" Margin="323,175,0,0" />
  </Grid>
</Window>
```

**Solution Explorer:** Shows the project 'Hello' with files: Properties, References, App.config, App.xaml, and MainWindow.xaml.

**Properties Window:** Shows the 'Click' event for the 'ok' button, with the event handler 'okClick' selected.







Hello

Please enter your name

CS411

OK

