### WinFBE – Visual Designer

The visual designer is still a major work in progress so please do not assume that all functionality is available and/or working correctly. The purpose of this release to show the progress of the visual designer to date and to allow input from users regarding its direction and whether changes in basic design philosophy should occur at this point.

NOTE: Code may fail, GPF's may occur in the editor. Do not rely on this version of the designer for any production quality code. Treat this mainly as a demo.

The following areas of the visual designer are not working:

- Menu Editor
- Toolbar Editor
- Statusbar Editor
- Images/Pictures/Icons. Any control property that relies on these types has not been implemented yet. Need to create an interface between the editor and resource file.
- Guidelines and snap to lines on the design form

There are only a few controls that have been implemented. More to come as the core structure of the designer itself matures.

- Forms
- Label
- Button (Jose Roca's CXpButton class)
- TextBox
- CheckBox
- ListBox
- OptionButton
- Frame
- StatusBar (only through code at this time)

The forms and controls are being implemented via the WinFormsX library that I am writing and maintaining on GitHub.

The rest of this document will give you a bare bones introduction to the use of the visual designer and code to perform various tasks.

#### **GENERAL OVERVIEW**

The visual designer will automatically generate code whenever something changes related to a form or control. The generated code is based on the syntax of the WinFormsX library.

When the code is first generated, the visual designer will output an additional line:

```
Application.Run(Form1)
```

That line essentially bootstraps the form so that it will display. Obviously you don't need a line like this for every form that is generated. You can safely move that line to a main source file so that it only runs once at program startup. Any subsequent similar generated lines for other forms can be safely deleted.

WinFBE generates a TYPE structure for every form in the application. That TYPE extends a bass class called wfxForm which contains the core functionality of a form. You can find the wfxForm source code and all other source code for other controls such as wfxLabel, wfxTextBox in the WinFormsX include folder. A global shared variable is generated for each form TYPE. For example, if your form is named *Form1* then the shared variable is also named Form1.

```
Dim Shared Form1 as Form1Type
```

If you have controls on your form then you access them via dot syntax. For example, if you have a button called *Button1* located on the form called *Form1* then you access the button via *Form1.Button1* 

Resource file – All WinFBE visual designer created applications need to have a resource file and manifest file. If you are using WinFBE's project management to create your program then the resource file and manifest file will be created automatically. If you are creating your application outside of a project then you need to manually provide a resource file that includes a reference to a manifest file. Failing to do this will result in your application not being theme aware. It will look ugly. If manually specifying a resource file then you can use WinFBE's built-in statement to identify the resource filename.

<sup>&#</sup>x27;#RESOURCE "resource.rc"

#### **EVENT HANDLERS**

```
Declare Function frmMain_Click( byref sender as wfxForm, byref e as EventArgs ) as LRESULT
```

This is a declaration for an Event Handler. Event handlers are functions that are called in response to something occurring within the operating system or in response to an action by the user. For example, if the user clicks on a button or moves their mouse cursor over an area of the form or a control then an event is triggered. In Windows API language this is actually a message or notification generated by the operating system that then flows through the application's message pump eventually finding its way to the procedure handler for the application. If you have ever seen Win32 API style programs then you will recognize functions containing large SELECT CASE statements having such things as WM\_COMMAND, WM\_NOTIFY, WM\_PAINT, WM\_SIZE, etc. The visual designer hides all of the complexity of message pumps and that SELECT CASE from you by instead redirecting the message to an Event Handler that you define yourself.

Every Event Handler has the exact same format and is comprised of two parameters that must be defined as BYREF.

frmMain\_Click: The portion before the underscore is the form name and the portion afterwards is the name of the event being responded to. In this case, the function is in response to someone clicking on an area of the form. The first parameter, \*sender\*, is a variable representing the form where the click occurred (eg. frmMain and is of the wfxForm class). You can interact with that variable and manipulate properties of the form:

```
sender.Text = "My new caption for the form's title bar!"
```

This is actually equivalent to using the form's explicitly defined shared variable and both are acceptable.

```
frmMain.Text = "My new caption for the form's title bar!"
```

When dealing with controls on a form, the syntax is only slightly different and pretty self-explanatory.

```
Declare Function frmMain_cmdOK_Click( byref sender as wfxButton, byref e as EventArgs) as LRESULT
```

Of note is that \*sender\* is now of type \*wfxButton\* rather than \*wfxForm\*. This is because the function is in response to the user clicking on the OK button rather than the form itself.

The second parameter, \*EventArgs\*, is short for Event Arguments and is a variable that contains additional information related to the event being handled. For example, when handling mouse movement the EventArgs variable will contain the client coordinates of the mouse cursor and which (if any) mouse buttons are pressed. Likewise, responding to a KeyPress event the EventArgs variable would contain the character that was pressed and whether any Alt, Shift, or Ctrl keys are pressed. Get to know EventArgs because it is extremely convenient.

```
Type wfxEventArgs Extends Object
  private:
  public:
    Message As UINT ' Windows value of message being sent (WM_COMMAND,
WM_NOTIFY, etc)
    wParam as WPARAM ' the wParam of the raw message
    lParam as LPARAM ' the lParam of the raw message
```

```
Handled as Boolean
Cancel as boolean
Ctrl as Boolean
Ctrl as Boolean
Alt as Boolean
Shift as Boolean
KeyChar as long
LButton as boolean
MButton as boolean
RButton as boolean
x as long
y as long
PanelClickIndex as long
hDrop as HDROP

Handled as Boolean
I indicates whether the event is handled by the user
set to True to cancel closing of Form
I the user
I set to True to cancel closing of Form
I the CTRL key is pressed
I the Alt key is pressed
I the SHIFT key is pressed
I stores the character corresponding to the key pressed
I stores the keyboard code for the event
I the left mouse button pressed
I the middle mouse button pressed
I the right mouse button pressed
I the right mouse button pressed
I the y-coordinate of the mouse click
I the y-coordinate of the y-coordinate of the y-coordinate of the y-coordinate of the y-co
```

# **Application**

There is a global/shared variable called *Application* that contains functionality that is available to the user from anywhere within the project.

# **Properties**

**CommonAppDataPath** - Gets the special Windows common folder location associated with CSIDL APPDATA.

**CommonAppDataPath** - Gets the special Windows local folder location associated with CSIDL LOCAL APPDATA.

**ExecutablePath** – Gets the full path and exe name for this running application.

**StartupPath** - Gets the path for the executable file that started the application, not including the executable name. (no trailing backspace).

### Methods

**DoEvents** – Processes all Windows messages currently in the message queue.

**Run** – Begins running the application message loop and makes the specified form visible.

#### **Colors**

```
TYPE wfxColors
   SystemActiveBorder
                               As COLORREF = GetSysColor(COLOR ACTIVEBORDER)
   SystemActiveCaption As COLORREF = GetSysColor(COLOR ACTIVECAPTION)
   SystemActiveCaptionText As COLORREF = GetSysColor(COLOR CAPTIONTEXT)
   SystemAppWorkspace As COLORREF = GetSysColor(COLOR_APPWORKSPACE)
                                As COLORREF = GetSysColor(COLOR_BTNFACE)
   SystemButtonFace
   SystemButtonHighlight As COLORREF = GetSysColor(COLOR_BTNHILIGHT)
   SystemButtonShadow As COLORREF = GetSysColor(COLOR_BTNSHADOW)
SystemControl As COLORREF = GetSysColor(COLOR_3DFACE)
   SystemControlDark
                                As COLORREF = GetSysColor(COLOR 3DSHADOW)
   SystemControlDarkDark As COLORREF = GetSysColor(COLOR 3DDKSHADOW)
   SystemControlLight As COLORREF = GetSysColor(COLOR 3DLIGHT)
   SystemControlLightLight As COLORREF = GetSysColor(COLOR_3DHILIGHT)
   SystemControlText As COLORREF = GetSysColor(COLOR BINTEXT)
                                As COLORREF = GetSysColor(COLOR DESKTOP)
   SystemDesktop
   SystemGradientActiveCaption As COLORREF =
GetSysColor(COLOR GRADIENTACTIVECAPTION)
   SystemGradientInactiveCaption as COLORREF =
GetSysColor(COLOR GRADIENTINACTIVECAPTION)
   SystemGrayText As COLORREF = GetSysColor(COLOR_GRAYTEXT)
SystemHighlight As COLORREF = GetSysColor(COLOR_HIGHLIGHT)
SystemHotTrack As COLORREF = GetSysColor(COLOR_HIGHLIGHTTEXT)
   SystemHotTrack
                               As COLORREF = GetSysColor(COLOR HOTLIGHT)
   SystemInactiveBorder As COLORREF = GetSysColor(COLOR INACTIVEBORDER)
   SystemInactiveCaption As COLORREF = GetSysColor(COLOR INACTIVECAPTION)
   SystemInactiveCaptionText As COLORREF = GetSysColor(COLOR INACTIVECAPTIONTEXT)
                                As COLORREF = GetSysColor(COLOR INFOBK)
   SystemInfo
                               As COLORREF = GetSysColor(COLOR_INFOTEXT)
   SystemInfoText
   As COLORREF = GetSysColor(COLOR_MENU)
   SystemWindowFrame As COLORREF = GetSysColor(COLOR_WINDOWFRAME)
SystemWindowText As COLORREF = GetSysColor(COLOR_WINDOWTEXT)
   AliceBlue
                            As COLORREF = BGR(240, 248, 255)
   AntiqueWhite
                           as COLORREF = BGR(250, 235, 215)
   Aqua
                            as COLORREF = BGR(0,255,255)
   Aquamarine as COLORREF = BGR(127, 255, 212)
Azure as COLORREF = BGR(240, 255, 255)
                           as COLORREF = BGR(245,245,220)
as COLORREF = BGR(255,228,196)
   Beige
   Bisque
   Black as COLORREF = BGR( 0, 0, 0)
BlanchedAlmond as COLORREF = BGR(255,255,205)
  as COLORREF = BGR (255,255,205)

Blue as COLORREF = BGR (0, 0,255)

BlueViolet as COLORREF = BGR (138, 43,226)

Brown as COLORREF = BGR (165, 42, 42)

Burlywood as COLORREF = BGR (222,184,135)

CadetBlue as COLORREF = BGR (95,158,160)

Chartreuse as COLORREF = BGR (127,255, 0)

Chocolate as COLORREF = BGR (210,105, 30)

Coral as COLORREF = BGR (255,127, 80)

CornflowerBlue as COLORREF = BGR (100,149,237)

Cornsilk as COLORREF = BGR (255,248.220)
```

```
as COLORREF = BGR(220, 20, 60)
 Crimson
                                                 as COLORREF = BGR(0,255,255)
 Cyan
                                            as COLORREF = BGR( 0, 0,139)
as COLORREF = BGR( 0,139,139)
as COLORREF = BGR(184,134, 11)
 DarkBlue
 DarkCyan
 DarkGoldenRod
                                                as COLORREF = BGR(169,169,169)
 DarkGray

        DarkGreen
        as COLORREF = BGR( 0,100, 0)

        DarkKhaki
        as COLORREF = BGR(189,183,107)

        DarkMagenta
        as COLORREF = BGR(139, 0,139)

        DarkOliveGreen
        as COLORREF = BGR(85,107, 47)

        DarkOrange
        as COLORREF = BGR(255,140, 0)

        DarkOrchid
        as COLORREF = BGR(153, 50,204)

        DarkRed
        as COLORREF = BGR(139, 0, 0)

        DarkSalmon
        as COLORREF = BGR(233,150,122)

        DarkSeaGreen
        as COLORREF = BGR(143,188,143)

        DarkSlateBlue
        as COLORREF = BGR(72,61,139)

        DarkSlateGray
        as COLORREF = BGR(47,79,79)

        DarkTurquoise
        as COLORREF = BGR(0,206,209)

        DarkViolet
        as COLORREF = BGR(255,20,147)

        DeepPink
        as COLORREF = BGR(0,191,255)

                                               as COLORREF = BGR( 0,100, 0)
 DarkGreen
                                          as COLORREF = BGR( 0,191,255)
as COLORREF = BGR(105,105,105)
 DeepSkyBlue
 DimGray
                                              as COLORREF = BGR( 30,144,255)
as COLORREF = BGR(178, 34, 34)
 DodgerBlue
 FireBrick
                                             as COLORREF = BGR(255,250,240)
as COLORREF = BGR(34,139, 34)
as COLORREF = BGR(255, 0,255)
 FloralWhite
 ForestGreen
 Fuchsia
                                      as COLORREF = BGR (220,220,220)
as COLORREF = BGR (248,248,255)
 Gainsboro

        GhostWhite
        as COLORREF = BGR (248,248,255)

        Gold
        as COLORREF = BGR (255,215, 0)

        GoldenRod
        as COLORREF = BGR (218,165, 32)

        Gray
        as COLORREF = BGR (127,127,127)

        Green
        as COLORREF = BGR (0,128, 0)

        GreenYellow
        as COLORREF = BGR (173,255, 47)

        HoneyDew
        as COLORREF = BGR (240,255,240)

        HotPink
        as COLORREF = BGR (255,105,180)

        IndianRed
        as COLORREF = BGR (205, 92, 92)

        Indigo
        as COLORREF = BGR (255,255,250,240)

        Ivory
        as COLORREF = BGR (255,255,250,240)

        Khaki
        as COLORREF = BGR (230,230,230,250)

        Lavender
        as COLORREF = BGR (255,240,245)

        Lawngreen
        as COLORREF = BGR (255,250,205)

 GhostWhite
                                              as COLORREF = BGR(255,250,205)
 LemonChiffon
                                                as COLORREF = BGR(173, 216, 230)
 LightBlue
                                                as COLORREF = BGR(240, 128, 128)
 LightCoral
                                 as COLORREF = BGR(224, 255, 255)
 LightCyan
 LightGoldenRodYellow as COLORREF = BGR(250,250,210)
 LightGreen as COLORREF = BGR(144, 238, 144)
                                                as COLORREF = BGR(211, 211, 211)
 LightGrey
                                                as COLORREF = BGR(255, 182, 193)
 LightPink
 LightSalmon
                                                as COLORREF = BGR(255, 160, 122)
 LightSeaGreen
                                                as COLORREF = BGR(32,178,170)
                                                 as COLORREF = BGR(135, 206, 250)
 LightSkyBlue
                                                as COLORREF = BGR(119, 136, 153)
 LightSlateGray
                                                as COLORREF = BGR(176, 196, 222)
 LightSteelBlue
 LightYellow
                                                 as COLORREF = BGR(255, 255, 224)
 Lime
                                                  as COLORREF = BGR(0,255,0)
```

```
as COLORREF = BGR(50,205,50)
 LimeGreen
                                           as COLORREF = BGR(250, 240, 230)
 Linen
                                          as COLORREF = BGR (255, 0, 255)
 Magenta
                                            as COLORREF = BGR(128, 0, 0)
Maroon
MediumAquamarine as COLORREF = BGR(122, 205, 170)
MediumBlue as COLORREF = BGR( 0, 0,205)
MediumOrchid as COLORREF = BGR(186, 85,211)
MediumPurple as COLORREF = BGR (147,112,219)
MediumSeaGreen as COLORREF = BGR (60,179,113)
MediumSlateBlue as COLORREF = BGR (123,104,238)
 MediumSpringGreen as COLORREF = BGR( 0,250,154)
MediumSpringGreen as COLORREF = BGR ( 0,250,154)

MediumTurquoise as COLORREF = BGR ( 72,209,204)

MediumVioletRed as COLORREF = BGR (199, 21,133)

MidnightBlue as COLORREF = BGR (25, 25,112)

MintCream as COLORREF = BGR (245,255,250)

MistyRose as COLORREF = BGR (255,228,225)

Moccasin as COLORREF = BGR (255,228,181)

NavajoWhite as COLORREF = BGR (255,222,173)

Navy as COLORREF = BGR (159,175,223)
                             as COLORREF = BGR ( 0, 0,120)

as COLORREF = BGR (159,175,223)

as COLORREF = BGR (253,245,230)

as COLORREF = BGR (128,128, 0)

as COLORREF = BGR (107,142, 35)

as COLORREF = BGR (255,165, 0)

as COLORREF = BGR (255, 69, 0)

as COLORREF = BGR (218,112,214)
Navyblue
 OldLace
 Olive
 OliveDrab
 Orange
 OrangeRed
 Orchid
PaleGoldenRod as COLORREF = BGR (218,112,214)
PaleGoldenRod as COLORREF = BGR (238,232,170)
PaleGreen as COLORREF = BGR (152,251,152)
PaleTurquoise as COLORREF = BGR (175,238,238)
PaleVioletRed as COLORREF = BGR (219,112,147)
 PapayaWhip
                                          as COLORREF = BGR(255, 239, 213)
                                         as COLORREF = BGR(255, 218, 185)
 PeachPuff
                                         as COLORREF = BGR(205,133, 63)
as COLORREF = BGR(255,192,203)
 Peru
 Pink
                                   as COLORREF = BGR (233,192,203)
as COLORREF = BGR (221,160,221)
as COLORREF = BGR (176,224,230)
as COLORREF = BGR (128, 0,128)
as COLORREF = BGR (255, 0, 0)
as COLORREF = BGR (188,143,143)
as COLORREF = BGR (65,105,225)
as COLORREF = BGR (139, 69, 19)
as COLORREF = BGR (250,128,114)
as COLORREF = BGR (244,164, 96)
 Plum
 PowderBlue
 Purple
 Red
 RosyBrown
RoyalBlue
 SaddleBrown
 Salmon
                                      as COLORREF = BGR (250,128,114)

as COLORREF = BGR (244,164, 96)

as COLORREF = BGR (46,139, 87)

as COLORREF = BGR (255,245,238)

as COLORREF = BGR (160, 82, 45)

as COLORREF = BGR (192,192,192)

as COLORREF = BGR (135,206,235)

as COLORREF = BGR (106, 90,205)

as COLORREF = BGR (255,250,250)
 SandyBrown
 SeaGreen
 SeaShell
Sienna
 Silver
 SkyBlue
 SlateBlue
 SlateGray
                                           as COLORREF = BGR(255, 250, 250)
 Snow
                                         as COLORREF = BGR( 0,255,127)
 SpringGreen
                                             as COLORREF = BGR(70, 130, 180)
 SteelBlue
                                           as COLORREF = BGR(210,180,140)
 Tan
                                   as COLORREF = BGR( 0,128,128)
as COLORREF = BGR(216,191,216)
as COLORREF = BGR(255, 99, 71)
as COLORREF = BGR( 64,224,208)
 Teal
 Thistle
 Tomato
 Turquoise
```

```
Violet

As COLORREF = BGR(238,130,238)

Wheat

As COLORREF = BGR(245,222,179)

White

As COLORREF = BGR(255,255,255)

WhiteSmoke

As COLORREF = BGR(245,245,245)

Yellow

As COLORREF = BGR(255,255,0)

YellowGreen

As COLORREF = BGR(139,205,50)

end Type

''

Create system wide access to this colors class

Dim Shared Colors as wfxColors
```

### **FONTS**

# Creating and assigning a new font

```
this.CheckBox1.Font = New wfxFont("Segoe UI", 9, FontStyles.Bold, FontCharset.Ansi)
```

#### **Parameters**

```
FontSize

FontStyle (use Or to combine multiple styles)

FontStyles.Normal
FontStyles.Bold
FontStyles.Italic
FontStyles.Strikeout
FontStyles.Underline
```

### CharacterSet

FontCharset.Default FontCharset.Ansi FontCharset.Arabic FontCharset.Baltic FontCharset.ChineseBig5 FontCharset.EastEurope FontCharset.GB2312 FontCharset.Greek FontCharset.Hangul FontCharset.Hebrew FontCharset.Johab FontCharset.Mac FontCharset.OEM FontCharset.Russian FontCharset.Shiftjis FontCharset.Symbol FontCharset.Thai FontCharset.Turkish FontCharset.Vietnamese

### **ENUMS**

FormWindowState.Maximized FormWindowState.Minimized FormWindowState.Normal

FormStartPosition.CenterParent FormStartPosition.CenterScreen FormStartPosition.Manual FormStartPosition.WindowsDefaultLocation

FormBorderStyle.None
FormBorderStyle.Sizable
FormBorderStyle.Fixed3D
FormBorderStyle.FixedSingle
FormBorderStyle.FixedDialog
FormBorderStyle.FixedToolWindow
FormBorderStyle.SizableToolWindow

ControlBorderStyle.None ControlBorderStyle.FixedSingle ControlBorderStyle.Fixed3D

ImageLayout.None
ImageLayout.Tile
ImageLayout.Center
ImageLayout.Stretch
ImageLayout.Zoom

ButtonAlignment.BottomCenter ButtonAlignment.BottomLeft ButtonAlignment.BottomRight ButtonAlignment.MiddleCenter ButtonAlignment.MiddleLeft ButtonAlignment.MiddleRight ButtonAlignment.TopCenter ButtonAlignment.TopLeft ButtonAlignment.TopLeft ButtonAlignment.TopRight

LabelAlignment.MiddleCenter LabelAlignment.MiddleEft LabelAlignment.MiddleRight LabelAlignment.TopCenter LabelAlignment.TopLeft LabelAlignment.TopRight

CharacterCase.Normal CharacterCase.Upper CharacterCase.Lower

ScrollBars.None ScrollBars.Horizontal ScrollBars.Vertical ScrollBars.Both

CheckBoxState.Checked CheckBoxState.Unchecked CheckBoxState.Indeterminate TextAlignment.Left
TextAlignment.Right
TextAlignment.Center

ListSelectionMode.None
ListSelectionMode.MultiSimple
ListSelectionMode.MultiExtended

#### **FORMS**

# **Properties**

**AcceptButton** - Gets or sets a reference to the button that receives a click message when Enter key is pressed.

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the form. Refer to the Colors object.

**BackgroundImage** – Gets or set the image to display in the background.

**BackgroundImageLayout** – Gets or sets the layout position of the background image. Refer to the ImageLayout enum.

BorderStyle - Gets or sets the border style of the form. Refer to the FormBorderStyle enum.

**CancelButton** - Gets or sets a reference to the button that receives a click message when Escape key is pressed.

**ClientSize** - Gets or sets the client area of the form. The client area of the form is the size of the form excluding the borders and the title bar. Get: returns wfxSize object. Set: (width, height)

**ControlBox** - Gets or sets value (true/false) indicating whether a control box is displayed in the caption bar of the form.

**CtrlType** - Gets or sets the control type value. Always ControlType.Form and used when adding form to the application's form collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the form can respond to user interaction.

Height - Gets or sets the height of the form.

**hWindow** - Gets the Windows handle (hwnd) of the form.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Icon** – Gets or sets the icon to display in the form's system menu box.

**IsMainForm** - Gets or sets a value (true/false) indicating the form is main and will display when application starts. When the form is closed the application also ends.

**IsModal** - Gets a value (true/false) indicating whether the form is displayed modally.

**KeyPreview** - *G*ets or sets a value (true/false) indicating whether the form will receive key events before the event is passed to the control that has focus.

**Left** - Gets or sets the distance, in pixels, between the left edge of the form and the left edge of its container's client area (normally the screen).

**Location** - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

**Locked** - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

**MaximizeBox** - Gets or sets a value (true/false) indicating whether the maximize button is displayed in the caption bar of the form.

**MaximumHeight** – Gets or sets the maximum height of the form.

**MaximumWidth** – Gets or sets the maximum width of the form.

**MinimizeBox** - Gets or sets a value (true/false) indicating whether the minimize button is displayed in the caption bar of the form.

**MinimumHeight** - Gets or sets the minimum height of the form.

MinimumWidth- Gets or sets the minimum width of the form.

**Parent** - Gets or sets the parent container of the form.

ShowInTaskbar – Gets or sets a vaue (true/false) indicating whether the form appears in the Windows

Taskbar.

Size - Gets or sets the size of the form. Get: returns wfxSize object. Set: (width, height)

**StartPosition** - Gets or sets the starting position of the form at run time. Refer to FormStartPosition enum.

Tag – Gets or sets user defined text associated with the form.

Text - Gets or sets the text (caption) associated with this form.

**Top** - Gets or sets the distance, in pixels, between the top edge of the form and the top edge of its container's client area (normally the screen).

Visible - Gets or sets a value (true/false) indicating whether the form is displayed.

**Width** - Gets or sets the width of the form.

**WindowState** - Gets or sets a value that indicates whether form is minimized, maximized, or normal. Refer to the FormWindowState enum.

### **Methods**

**Close** - Closes the form.

Hide - Conceals the form from the user.

**Refresh** - Forces the form to invalidate its client area and immediately redraw itself and any child controls.

**SetBounds** - Sets the bounds of the form to the specified location and size. (left, top, width, height).

**Show** – Creates and displays the form to the user.

**ShowDialog** – Creates and shows the form as a modal dialog box.

### **Events**

**Activated** - Occurs when the form is activated in code or by the user.

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and IParam parameters. Set the \*Handled\* element of \*EventArgs\* to \*true\* if you handle a message and do not want Windows to perform any further processing on the message.

**Click** - Occurs when the client area of the form is clicked.

**Deactivate** - Occurs when the form loses focus and is no longer the active form.

FormClosed - Occurs after the form is closed.

**FormClosing** - Occurs before the form is closed.

**KeyDown** - Occurs when a key is pressed while the form has focus.

**KeyPress** - Occurs when a character, space or backspace key is pressed while the form has focus.

**KeyUp** - Occurs when a key is released while the form has focus.

**Load** - Occurs before a form is displayed for the first time.

**MouseDoubleClick** - Occurs when the form is double clicked by the mouse.

MouseDown - Occurs when the mouse pointer is over the form and a mouse button is pressed.

MouseEnter - Occurs when the mouse pointer enters the form.

**MouseHover** - Occurs when the mouse pointer rests on the form.

MouseLeave - Occurs when the mouse pointer leaves the form.

**MouseMove** - Occurs when the mouse pointer is moved over the form.

**MouseUp** - Occurs when the mouse pointer is over the form and a mouse button is released.

Move - Occurs when the form is moved.

**Resize** - Occurs when the form is resized.

**Shown** - Occurs whenever the form is first displayed.

**DropFiles** – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

Form events in a specific order every time a form is created and shown.

During form creation:

**FormLoad**: The form handle and all child controls exist however the form and controls are not yet visible. Respond to this event to reposition controls or to add data to controls. For example, add rows to a Listbox or Combobox.

FormActivated: The form has gained input focus (similar to the GotFocus event of a control).

**Shown**: This event is only raised the first time a form is displayed; subsequently minimizing, maximizing, restoring, hiding, showing, or invalidating and repainting will not raise this event.

During form destruction:

**FormClosing**: Event occurs as the form is closing. If you cancel this event, then the form remains open. To cancel, simply set the Cancel element of the EventArgs structure to True.

**Deactivate**: Occurs when the form loses focus and is no longer the active form (similar to the LostFocus event of a control).

FormClosed: Occurs after the form has closed (similar to the Destroy event of a control).

#### **Properties**

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the control. Refer to the Colors object.

BorderStyle - Gets or sets the border style of the label. Refer to the ControlBorderStyle enum.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.Label and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

**Font** - Gets or sets the font for the control. Refer to the Font object.

ForeColor - Gets or sets the background color of the control. Refer to the Colors object.

**Height** - Gets or sets the height of the control.

hWindow - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

Location - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

Locked - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

Parent - Gets or sets the parent container of the control.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**Tag** – Gets or sets user defined text associated with the control.

**Text** - Gets or sets the text (caption) associated with this control.

**TextAlign** - Gets or sets a value indicating the alignment of the text on a control. Refer to LabelAlignment enum.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its container's client area (normally the form).

**UseMnemonic** – Gets or sets a value (true/false) indicating whether the first character preceded by an ampersand (&) character will be used as the control's accelerator key.

Visible - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

### Methods

**Hide** - Conceals the control from the user.

**Refresh** - Forces the control to invalidate its client area and immediately redraw itself.

**SelectNextControl** – Moves the input control to the next (True) or previous (False) control in the tab order.

**SetBounds** - Sets the bounds of the control to the specified location and size. (left, top, width, height).

**Show** – Creates and makes the control visible to the user.

# **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and IParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the message.

Click - Occurs when the client area of the control is clicked.

**OnDestroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

**MouseDoubleClick** - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

**MouseUp** - Occurs when the mouse pointer is over the control and a mouse button is released.

**DropFiles** – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

### **Properties**

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the control. Refer to the Colors object. ThemeSupport property must be set to False.

**BackColorDown** - Gets or sets the background color of the control when pressed. Refer to the Colors object. ThemeSupport property must be set to False.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.Button and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

Focused - Gets or sets a value (true/false) indicating whether the control has input focus.

Font - Gets or sets the font for the control. Refer to the Font object.

**ForeColor** - Gets or sets the background color of the control. Refer to the Colors object. ThemeSupport property must be set to False.

Height - Gets or sets the height of the control.

**hWindow** - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Image** – Gets or set the image to display.

**ImageLayout** – Gets or sets the layout position of the image. Refer to the ImageLayout enum.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

**Location** - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

**Locked** - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

**Parent** - Gets or sets the parent container of the control.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**TabIndex** - Gets or sets the position that the control occupies in the TAB position.

**TabStop** - Gets or sets a value (true/false) indicating whether the user can use the TAB key to give focus to the control.

**Tag** – Gets or sets user defined text associated with the control.

**Text** - Gets or sets the text (caption) associated with this control.

**TextAlign** - Gets or sets a value indicating the alignment of the text on a control. Refer to ButtonAlignment enum.

**TextBackColor** – Gets or sets the background color of the control. ThemeSupport property must be set to False.

**TextBackColorDown** - Gets or sets the background color of the control when the button is pressed.

ThemeSupport property must be set to False.

**TextForeColor** - Gets or sets the foreground color of the control. ThemeSupport property must be set to False.

**TextForeColorDown** - Gets or sets the foreground color of the control when the button is pressed. ThemeSupport property must be set to False.

**TextMargin** – Gets or sets a value indicating the margin in pixels to the text of a button control.

**ThemeSupport** - Gets or sets a value (true/false) indicating whether Windows Theme will be applied to the control.

**ToggleMode** - Gets or sets a value (true/false) indicating whether the button allows dual states to toggle between On and Off.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its container's client area (normally the form).

**UseMnemonic** – Gets or sets a value (true/false) indicating whether the first character preceded by an ampersand (&) character will be used as the control's accelerator key.

Visible - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

### Methods

**Hide** - Conceals the control from the user.

Refresh - Forces the control to invalidate its client area and immediately redraw itself.

**SelectNextControl** – Moves the input control to the next (True) or previous (False) control in the tab order.

**SetBounds** - Sets the bounds of the control to the specified location and size. (left, top, width, height). **Show** – Creates and makes the control visible to the user.

#### **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and lParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the message.

**Click** - Occurs when the client area of the control is clicked.

**Destroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

GotFocus - Occurs when the control receives focus.

LostFocus - Occurs when the control loses focus.

**KeyDown** - Occurs when a key is pressed while the control has focus.

**KeyPress** - Occurs when a character, space or backspace key is pressed while the control has focus.

**KeyUp** - Occurs when a key is released while the control has focus.

**MouseDoubleClick** - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

MouseUp - Occurs when the mouse pointer is over the control and a mouse button is released.

DropFiles – Occurs when an object is dragged and dropped onto the control and the AllowDrop property

of the control is set to True.

### **Properties**

**AcceptsReturn** - Gets or sets a value (true/false) indicating whether the multiline textbox will accept the Enter character as input.

**AcceptsTab** - Gets or sets a value (true/false) indicating whether the multiline textbox will accept the Tab character as input.

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the control. Refer to the Colors object.

BorderStyle - Gets or sets the border style of the control. Refer to the ControlBorderStyle enum.

**CharacterCasing -** Gets or sets a value indicating the case of the text. Refer to the CharacterCasing enum.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.TextBox and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

Focused - Gets or sets a value (true/false) indicating whether the control has input focus.

**Font** - Gets or sets the font for the control. Refer to the Font object.

ForeColor - Gets or sets the background color of the control. Refer to the Colors object.

**Height** - Gets or sets the height of the control.

**HideSelection** - Gets or sets a value (true/false) indicating whether the selection should be hidden when the control loses focus.

**hWindow** - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

**Location** - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

**Locked** - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

**MaxLength** - Gets or sets a value indicating the maximum number of characters that can be entered into the control.

**MultiLine** - Gets or sets a value (true/false) indicating whether the text in the edit control can span more than one line.

**Parent** - Gets or sets the parent container of the control.

**PasswordChar** - Gets or sets a character to display for password input in a single line edit control.

**ReadOnly** - Gets or sets a value (true/false) indicating whether the text can be edited.

**SelectionStart** - Gets or sets a value indicating the start of the selected text.

**SelectionLength** - Gets or sets a value indicating the length of the selected text.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**TabIndex** - Gets or sets the position that the control occupies in the TAB position.

**TabStop** - Gets or sets a value (true/false) indicating whether the user can use the TAB key to give focus to the control.

**Tag** – Gets or sets user defined text associated with the control.

**Text** - Gets or sets the text (caption) associated with this control.

**TextAlign** - Gets or sets a value indicating the alignment of the text on a control. Refer to TextAlignment enum.

**TextScrollBars** – Gets or sets the value to indicate what scrollbars to display. Refer to the ScrollBars enum.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its container's client area (normally the form).

Visible - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

**WordWrap** - Gets or sets a value (true/false) indicating whether text is automatically word wrapped for multiline controls.

### Methods

**Hide** - Conceals the control from the user.

**Refresh** - Forces the control to invalidate its client area and immediately redraw itself.

**SelectNextControl** – Moves the input control to the next (True) or previous (False) control in the tab order.

**SetBounds** - Sets the bounds of the control to the specified location and size. (left, top, width, height). **Show** – Creates and makes the control visible to the user.

#### **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and lParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the message.

**Click** - Occurs when the client area of the control is clicked.

**Destroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

GotFocus - Occurs when the control receives focus.

LostFocus - Occurs when the control loses focus.

**KeyDown** - Occurs when a key is pressed while the control has focus.

**KeyPress** - Occurs when a character, space or backspace key is pressed while the control has focus.

**KeyUp** - Occurs when a key is released while the control has focus.

**MouseDoubleClick** - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

**MouseUp** - Occurs when the mouse pointer is over the control and a mouse button is released.

**TextChanged** - Occurs when the Text property is changed by either a programmatic modification or user interaction.

<b>DropFiles</b> – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

#### **CHECKBOX**

### **Properties**

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the control. Refer to the Colors object.

CheckState - Gets or sets the state of the control. Refer to the CheckBoxState enum.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.CheckBox and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

**Font** - Gets or sets the font for the control. Refer to the Font object.

**Height** - Gets or sets the height of the control.

**hWindow** - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

Location - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

**Locked** - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

**Parent** - Gets or sets the parent container of the control.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**TabIndex** - Gets or sets the position that the control occupies in the TAB position.

**TabStop** - Gets or sets a value (true/false) indicating whether the user can use the TAB key to give focus to the control.

**Tag** – Gets or sets user defined text associated with the control.

**Text** - Gets or sets the text (caption) associated with this control.

**TextAlign** - Gets or sets a value indicating the alignment of the text on a control. Refer to ButtonAlignment enum.

**ThreeState** - Gets or sets a value (true/false) indicating whether the control will allow three check states rather than two.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its container's client area (normally the form).

**UseMnemonic** – Gets or sets a value (true/false) indicating whether the first character preceded by an ampersand (&) character will be used as the control's accelerator key.

**Visible** - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

### Methods

**Hide** - Conceals the control from the user.

Refresh - Forces the control to invalidate its client area and immediately redraw itself.

**SelectNextControl** – Moves the input control to the next (True) or previous (False) control in the tab order.

**SetBounds** - Sets the bounds of the control to the specified location and size. (left, top, width, height). **Show** – Creates and makes the control visible to the user.

# **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and lParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the message.

Click - Occurs when the client area of the control is clicked.

**Destroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

GotFocus - Occurs when the control receives focus.

LostFocus - Occurs when the control loses focus.

**KeyDown** - Occurs when a key is pressed while the control has focus.

**KeyPress** - Occurs when a character, space or backspace key is pressed while the control has focus.

**KeyUp** - Occurs when a key is released while the control has focus.

**MouseDoubleClick** - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

**MouseUp** - Occurs when the mouse pointer is over the control and a mouse button is released.

**DropFiles** – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

#### **OPTIONBUTTON**

#### **Properties**

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the control. Refer to the Colors object.

**Checked** - Gets or sets the value (true/false) indicating whether the control is checked.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.CheckBox and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

**Font** - Gets or sets the font for the control. Refer to the Font object.

**GroupName -** Controls with the same GroupName form part of the same OptionButton group.

**Height** - Gets or sets the height of the control.

hWindow - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

Location - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

Locked - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

Parent - Gets or sets the parent container of the control.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**TabIndex** - Gets or sets the position that the control occupies in the TAB position.

**TabStop** - Gets or sets a value (true/false) indicating whether the user can use the TAB key to give focus to the control.

**Tag** – Gets or sets user defined text associated with the control.

**Text** - Gets or sets the text (caption) associated with this control.

**TextAlign** - Gets or sets a value indicating the alignment of the text on a control. Refer to ButtonAlignment enum.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its container's client area (normally the form).

**UseMnemonic** – Gets or sets a value (true/false) indicating whether the first character preceded by an ampersand (&) character will be used as the control's accelerator key.

Visible - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

#### Methods

Hide - Conceals the control from the user.

**Refresh** - Forces the control to invalidate its client area and immediately redraw itself.

**SelectNextControl** – Moves the input control to the next (True) or previous (False) control in the tab order.

**SetBounds** - Sets the bounds of the control to the specified location and size. (left, top, width, height). **Show** – Creates and makes the control visible to the user.

# **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and lParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the message.

Click - Occurs when the client area of the control is clicked.

**Destroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

GotFocus - Occurs when the control receives focus.

LostFocus - Occurs when the control loses focus.

**KeyDown** - Occurs when a key is pressed while the control has focus.

**KeyPress** - Occurs when a character, space or backspace key is pressed while the control has focus.

**KeyUp** - Occurs when a key is released while the control has focus.

**MouseDoubleClick** - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

**MouseUp** - Occurs when the mouse pointer is over the control and a mouse button is released.

**DropFiles** – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

#### **FRAMES**

#### **Properties**

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

**BackColor** - Gets or sets the background color of the control. Refer to the Colors object.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.Frame and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

**Font** - Gets or sets the font for the control. Refer to the Font object.

Height - Gets or sets the height of the control.

**hWindow** - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

Location - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

Locked - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

Parent - Gets or sets the parent container of the control.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**Tag** – Gets or sets user defined text associated with the control.

**Text** - Gets or sets the text (caption) associated with this control.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its container's client area (normally the form).

**UseMnemonic** – Gets or sets a value (true/false) indicating whether the first character preceded by an ampersand (&) character will be used as the control's accelerator key.

**Visible** - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

### Methods

Hide - Conceals the control from the user.

Refresh - Forces the control to invalidate its client area and immediately redraw itself.

**SelectNextControl** – Moves the input control to the next (True) or previous (False) control in the tab order.

**SetBounds** - Sets the bounds of the control to the specified location and size. (left, top, width, height). **Show** – Creates and makes the control visible to the user.

#### **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and IParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the

message.

**Click** - Occurs when the client area of the control is clicked.

**OnDestroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

**MouseDoubleClick** - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

**MouseUp** - Occurs when the mouse pointer is over the control and a mouse button is released.

**DropFiles** – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

#### **LISTBOX**

### **Properties**

**AllowDrop** - Gets or sets a value (true/false) indicating whether the control will accept data that is dragged onto it.

AllowSelection - Gets a value (true/false) indicating whether the control will allow items to be selected.

BackColor - Gets or sets the background color of the control. Refer to the Colors object.

BorderStyle - Gets or sets the border style of the control. Refer to the ControlBorderStyle enum.

**ColumnWidth** – Gets or sets a value indicating how wide (in pixels) each column should be in a multicolumn listbox.

**CtrlID** – Gets or sets a value indicating the control ID of the control.

**CtrlType** - Gets or sets the control type value. Always ControlType.CheckBox and used when adding control to its form's controls collection.

**Enabled** - Gets or sets a value (true/false) indicating whether the control can respond to user interaction.

Font - Gets or sets the font for the control. Refer to the Font object.

ForeColor - Gets or sets the background color of the control. Refer to the Colors object.

Height - Gets or sets the height of the control.

**HorizontalExtent** – Gets or sets the width (in pixels) by which a listbox can be scrolled horizontally. Only valid if the HorizontalScrollBars property is True.

**IntegralHeight** – Gets or sets a value (true/false) indicating whether the list can contain only complete items.

**hWindow** - Gets the Windows handle (hwnd) of the control.

hWindowParent - Gets or sets the Windows handle (hwnd) of the parent control or form.

**Left** - Gets or sets the distance, in pixels, between the left edge of the control and the left edge of its container's client area (normally the form).

Location - Gets or sets the top and left position of the form. Get: returns wfxPoint object. Set: (left, top).

Locked - Gets or sets a value (true/false) indicating whether the control can be moved or resized.

**MultiColumn** - Gets or sets a value (true/false) indicating if values should be displayed in columns horizontally.

**Parent** - Gets or sets the parent container of the control.

**ScrollAlwaysVisible** - Gets or sets a value (true/false) indicating if the listbox should always have a scrollbar present regardless of how many items are in it.

**SelectedItem** - Gets or sets the selected item in thelistbox (using a wfxListBoxItem object).

**Selected Index** - Gets or sets the index value of the selected item in the listbox.

**SelectionMode** – Gets or sets how the listbox handles selection of items. Refer to the ListSelectionMode enum.

Size - Gets or sets the size of the control. Get: returns wfxSize object. Set: (width, height).

**Sorted** - Gets or sets a value (true/false) indicating if the listbox should be sorted.

**TabIndex** - Gets or sets the position that the control occupies in the TAB position.

**TabStop** - Gets or sets a value (true/false) indicating whether the user can use the TAB key to give focus to the control.

Tag – Gets or sets user defined text associated with the control.

**Top** - Gets or sets the distance, in pixels, between the top edge of the control and the top edge of its

container's client area (normally the form).

**TopIndex** - Gets or sets the item index of the first visible item in the displayed list.

**UseTabStops** – Gets or sets a value (true/false) indicating whether the TAB character should be expanded into full spacing.

Visible - Gets or sets a value (true/false) indicating whether the control is displayed.

Width - Gets or sets the width of the control.

### Methods

Hide - Conceals the control from the user.

Refresh - Forces the control to invalidate its client area and immediately redraw itself.

SetBounds - Sets the bounds of the control to the specified location and size. (left, top, width, height).

**Show** – Creates and makes the control visible to the user.

### **Events**

**AllEvents** - Special handler where all events are routed through. Use this handler if you prefer to use the Win32 api style messages and wParam and IParam parameters. Set the Handled element of EventArgs to True if you handle a message and do not want Windows to perform any further processing on the message.

Click - Occurs when the client area of the control is clicked.

**Destroy** - Occurs immediately before the control is about to be destroyed and all resources associated with it released.

GotFocus - Occurs when the control receives focus.

LostFocus - Occurs when the control loses focus.

**KeyDown** - Occurs when a key is pressed while the control has focus.

**KeyPress** - Occurs when a character, space or backspace key is pressed while the control has focus.

**KeyUp** - Occurs when a key is released while the control has focus.

MouseDoubleClick - Occurs when the control is double clicked by the mouse.

**MouseDown** - Occurs when the mouse pointer is over the control and a mouse button is pressed.

**MouseEnter** - Occurs when the mouse pointer enters the control.

**MouseHover** - Occurs when the mouse pointer rests on the control.

**MouseLeave** - Occurs when the mouse pointer leaves the control.

**MouseMove** - Occurs when the mouse pointer is moved over the control.

**MouseUp** - Occurs when the mouse pointer is over the control and a mouse button is released.

**DropFiles** – Occurs when an object is dragged and dropped onto the control and the AllowDrop property of the control is set to True.

### Items Collection (wfxListBoxItemsCollection)

Add – Add a new item (and optional 32bit value) to the listbox.

**ByIndex** – Return the wfxListBoxItem object related to the specified listbox item index.

Clear – Removes all items from the listbox.

**Count** – Returns the total number of items in the listbox.

**Remove** – Remove/delete the item identified by the index value. **SelectedCount** – Returns the total number of selected items in the listbox.

# Item object (wfxListBoxItem)

**Index** – The index value related to the listbox item.

**Text** – The text associated with this listbox item.

**Data32** – The optional 32bit value associated with this listbox item.

Refer to the WinFBE\_VisualDesigner-Tips.pdf for examples on how to use the listbox.