WinForm

Tips & Tricks

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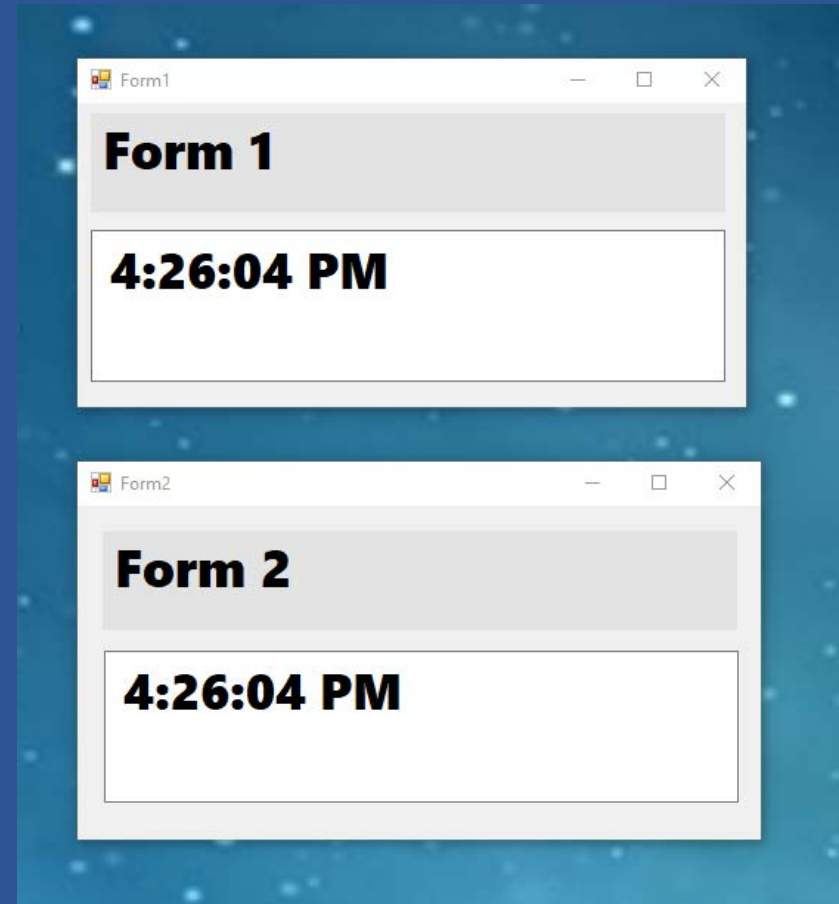
Example 00100: Cross Thread UI

- Form1 runs in thread A
- Form2 runs in thread B
- Form1 update Form2 UI
- How to prevent System.InvalidOperationException: 'Cross-thread operation not valid: in WinForm UI multi-thread conflict

How to fix Cross-Thread error 00100

This line will generate InvalidOperationException

```
myForm2.textBox1.Text = DateTime.Now.ToLongTimeString();
```

This line will fix InvalidOperationException

```
myForm2.textBox1.Invoke(new MethodInvoker(delegate
{
    myForm2.textBox1.Text = DateTime.Now.ToLongTimeString();
}));
```
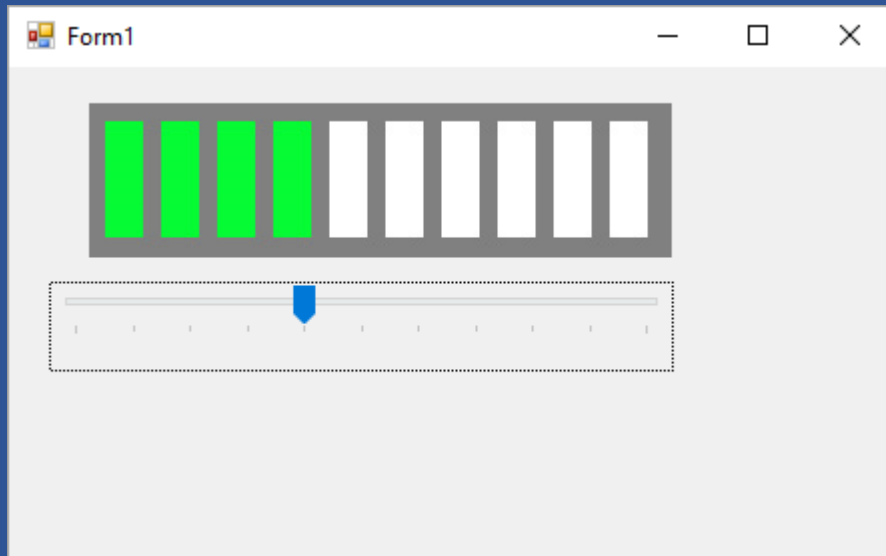
Thread B Object

Make a delegate

This is what we want to do

Example 00110: Track Bar and 10 Segments LED Bar

- Add a resource file Resource1
- Add a PictureBox
- Set property image to Resource1._00led10segment
- Set property SizeMode to Auto
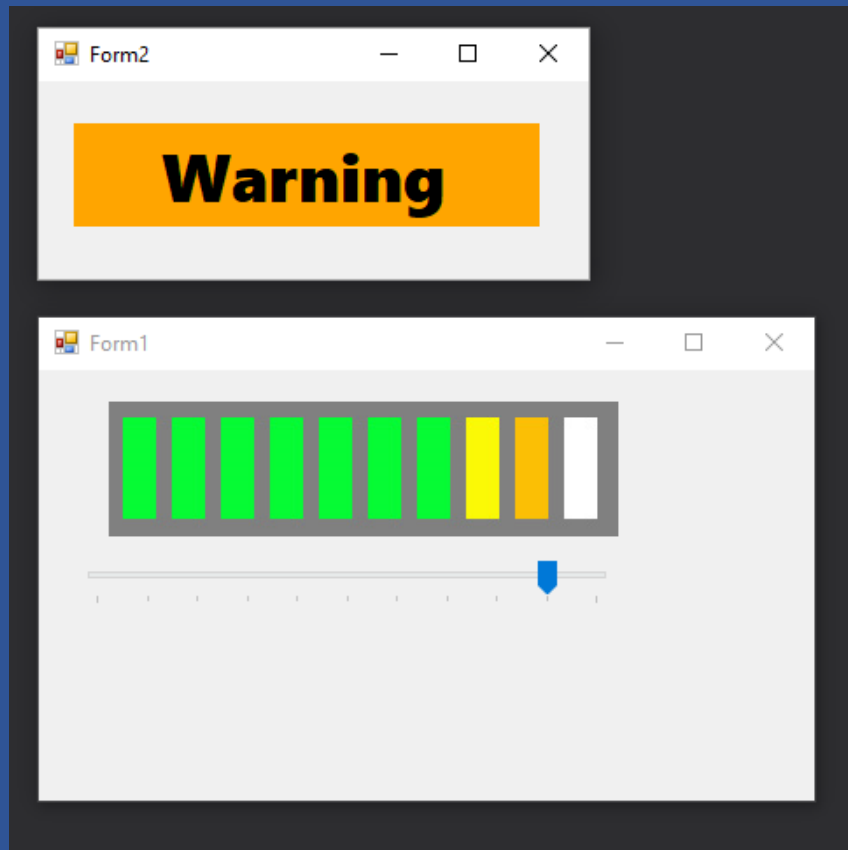- Add a trackBar / set max to 11

led10segment Bitmap made in paint program

trackBar1 Scroll event

```csharp
private void trackBar1_Scroll(object sender, EventArgs e)
{
    var rm = new System.Resources.ResourceManager
                (
                    "_00110_WinForm.Resource1",
                    System.Reflection.Assembly.GetExecutingAssembly()
                );
    Image image = (Image)rm.GetObject(imageArray[trackBar1.Value]);
    pictureBox1.Image = image;
}
```
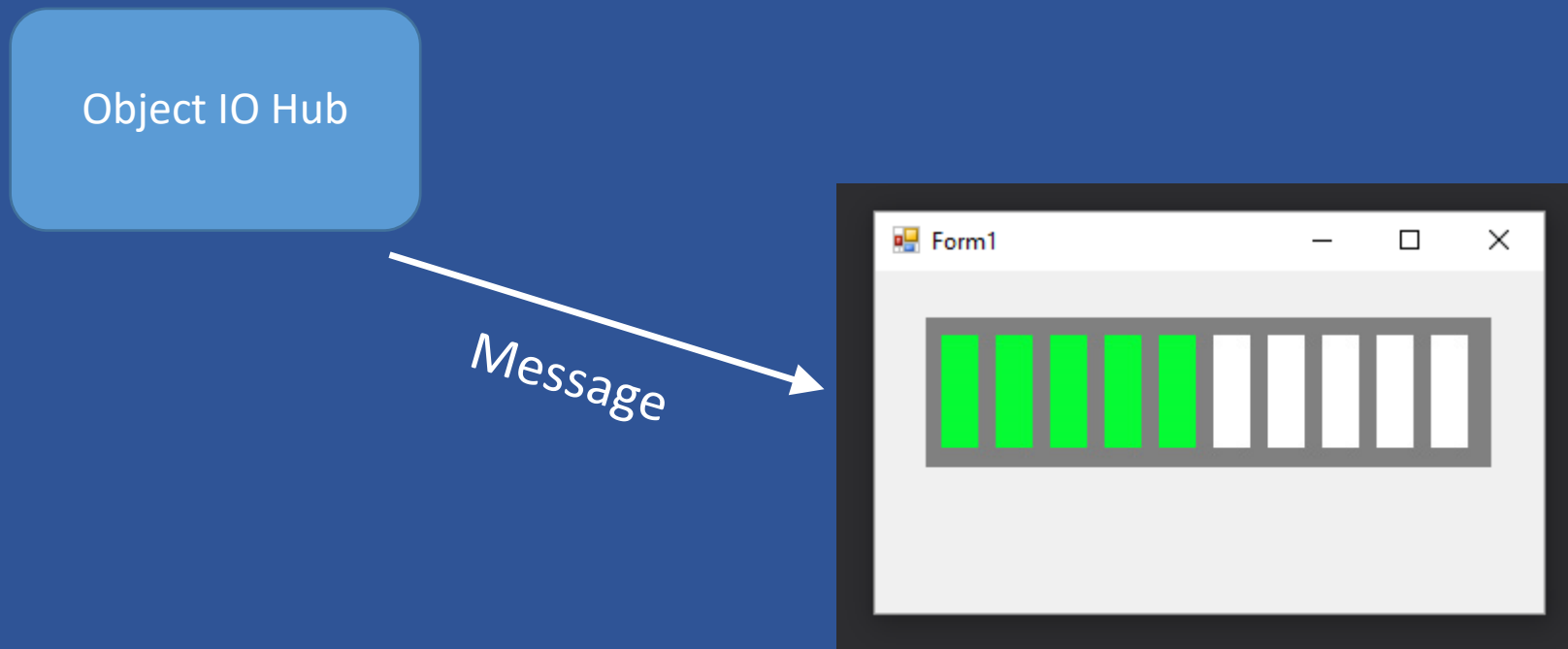
Example 00120: Sending value from one Winform to other

- Form2 show "Yellow" when value = 8
- Form2 show "Warning" when value = 9
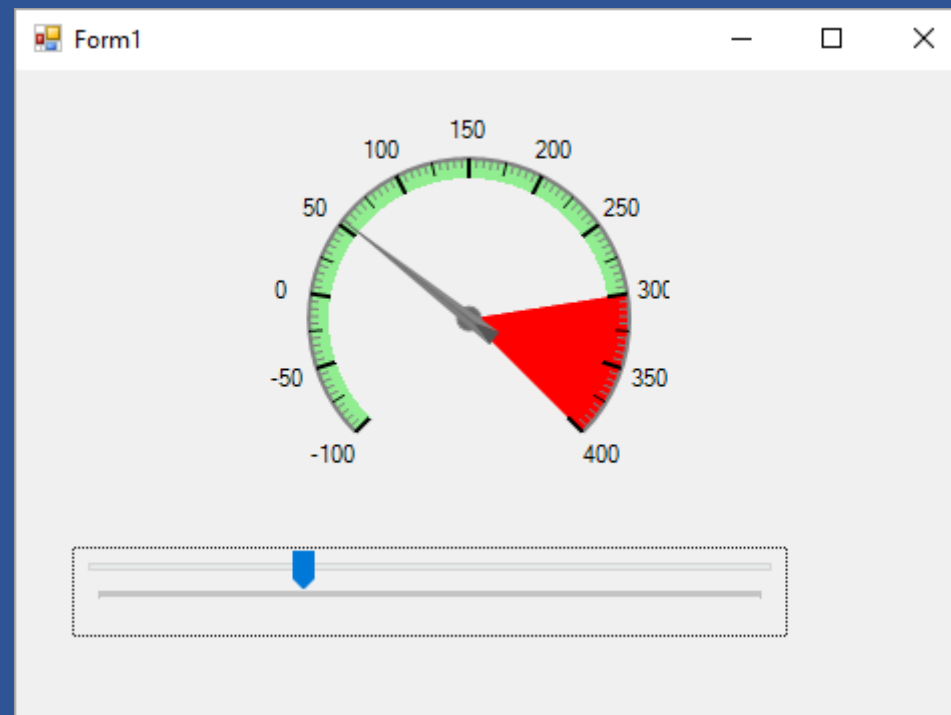- Form2 show "Alarm" when value = 10

Example 00130: Event / Delegate
Send message from object to WinForm
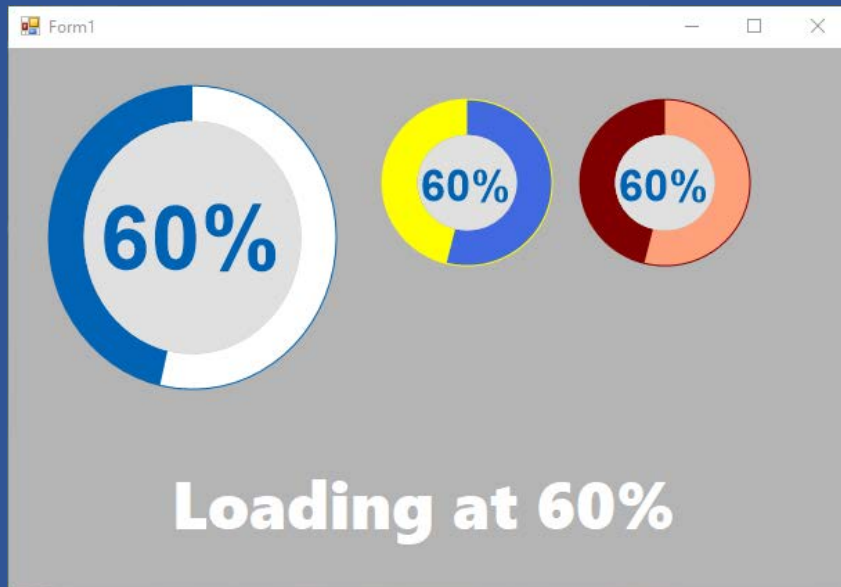
Example 00140: aGage

draw and update aGage user control on track bar change

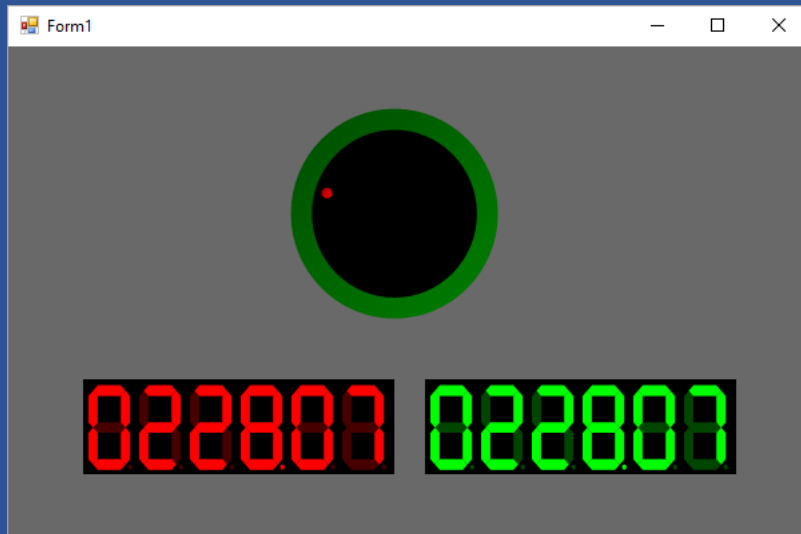# Example 00150: AquaGauge

Example 00160: Circular Progress Bar

1. copy following files to project folder;
   - CircularProgressBar.dll
   - WinFormAnimation.dll
2. Add reference to both file
3. Add CircularProgressBar.dll to VS tool bar
4. Drag control to WinForm
5. Set up control properties
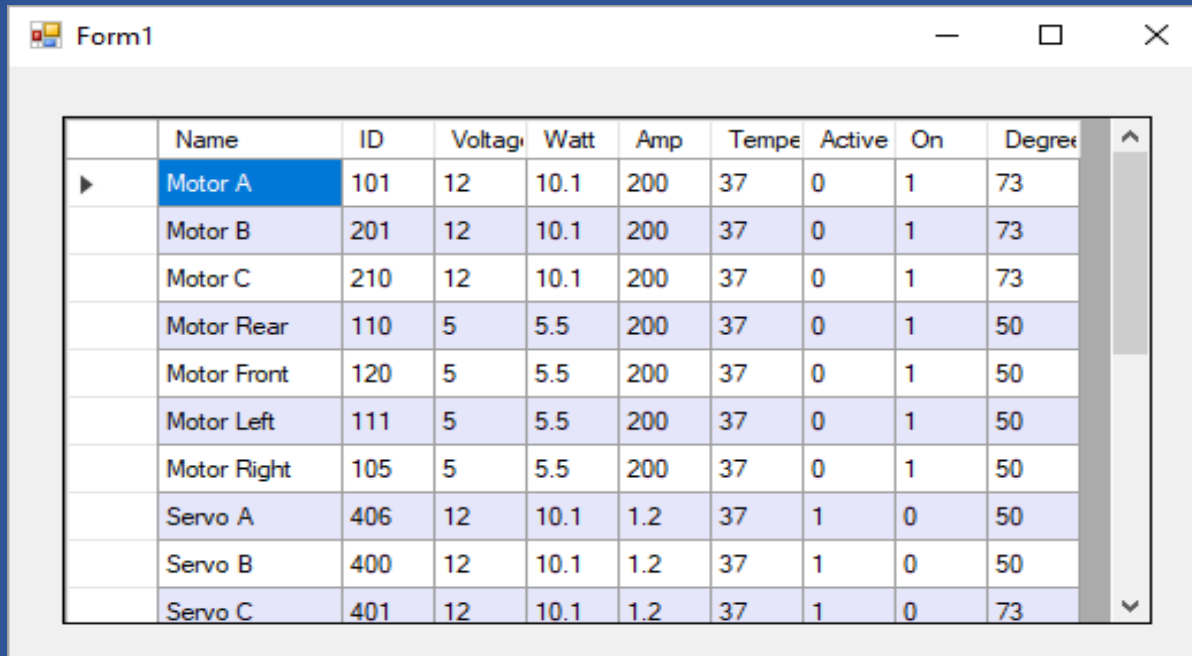6. Enter code

Example 00170: Industrial Controls 2

1. Copy file LBIndustrialCtrls.dll to project folder
2. Add reference to the file
3. Add controls to VS tool bar
4. Drag control to WinForm
5. Set up control properties
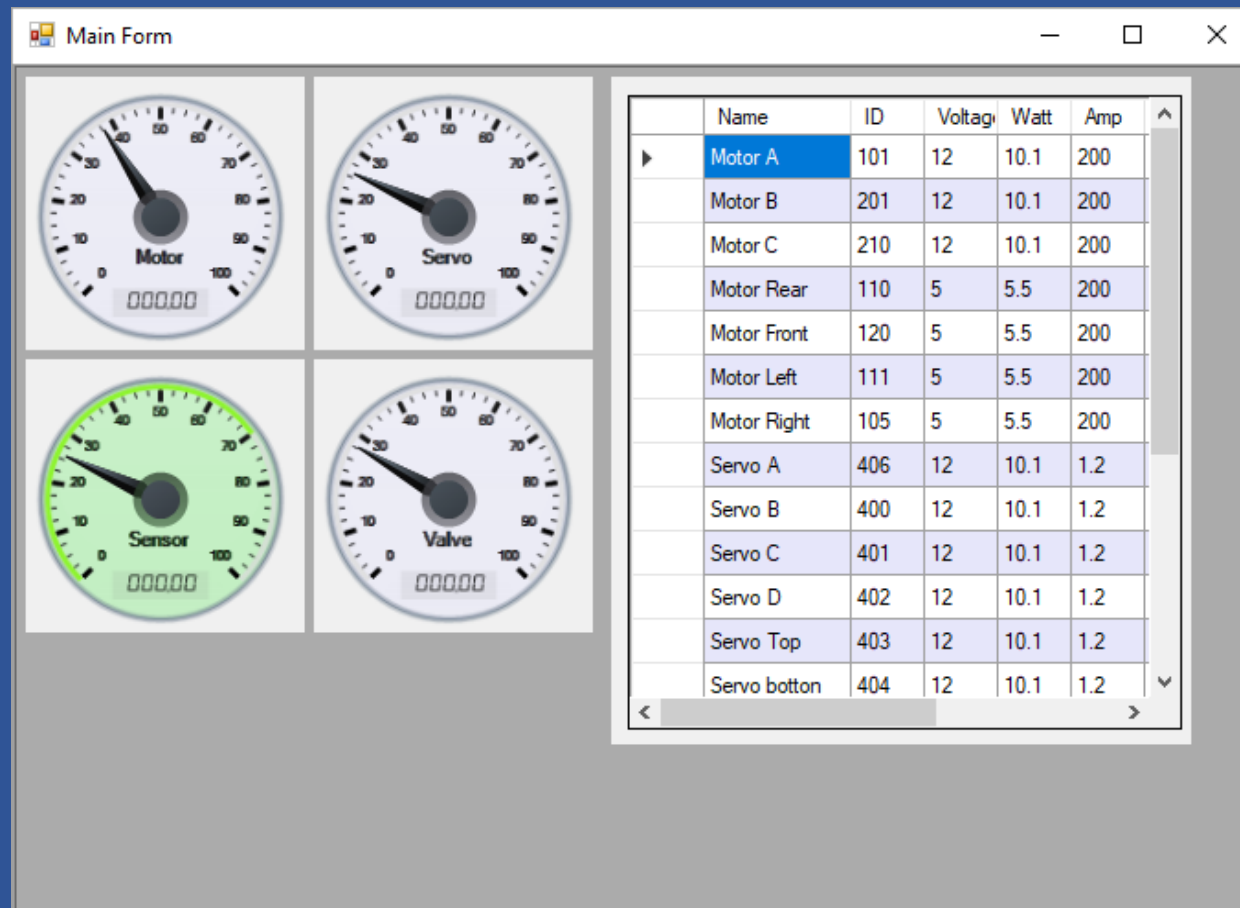6. Enter code

Example 00180: DataGridView

Read CSV to Table and bind DataGridView to table

1. Read CSV to Table
2. Bind to DataGridView
3. Set Column Name
4. Set Column wieth
5. Set Row color

Example 00190: Multiple-Document Interface (MDI) Applications

1. Create Project
2. Change From1 to MainForm
3. Set properties IsMdiContainer to true
4. Add New Form "SubForm"
5. Set FormBorderStyle = FixedToolWindow
6. Copy file to project folder
   - AquaGauge.cs
   - AquaGauge.Designer.cs
   - AquaGauge.resx
7. Add AquaGauge.cs to project
8. Build
9. Drag from tool bar AquaGauge to SubForm
10. Set properties Modifers of AquaGauge to Public
11. Add New Form "GridForm"