

To serialize/deserialize the `Datagrid`, you can add a property for it in your `XMLExample` Class and add the `Serializable` attribute to both classes.

```
[Serializable]
public class XMLExample : INotifyPropertyChanged
{
    public event PropertyChangedEventHandler PropertyChanged;

    public XMLExample()
    {
        ID = "Spaghetti";
        Initial = "Linguini";
        Details = new List<Detail>();
    }

    public string ID { get; set; } // Textbox
    public string Initial { get; set; } // Textbox
    public List<Detail> Details { get; set; } // Datagrid
}

[Serializable]
public class Detail
{
    public Detail()
    {
        // default values, if appropriate.
        FirstName = "John";
        LastName = "Shaw";
    }

    [XmlElement("FirstName")]
    public string FirstName { get; set; }
    [XmlElement("LastName")]
    public string LastName { get; set; }
}
```

After deserializing, in your `Button1` handler, you can populate your user interface controls appropriately. Before serializing the class, in your `Button2` handler, you'll need to populate the properties in your class appropriately.

```
XmlSerializer _serializer = new XmlSerializer(typeof(XMLExample));
XMLExample _example = new XMLExample();

// Read file.
using (TextReader textReader = new StreamReader(@"C:\test\testserialization.xml"))
{
    _example = (XMLExample)_serializer.Deserialize(textReader);
    textReader.Close();
}

// Populate user interface from the class.
textBox1.Text = _example.ID;
textBox2.Text = _example.Initial;
// etc...

// Update class from user interface
_example.Details.Add(new Detail() { FirstName = "John", LastName = "Doe" });
_example.Details.Add(new Detail() { FirstName = "Jane", LastName = "Doe" });

// Write file.
using (TextWriter textWriter = new StreamWriter(@"C:\test\testserialization.xml"))
{
    _serializer.Serialize(textWriter, _example);
    textWriter.Close();
}
```

testserialization.xml

```
<?xml version="1.0" encoding="utf-8"?>
<XMLExample xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <ID>Spaghetti</ID>
  <Initial>Linguini</Initial>
  <Details>
    <Detail>
      <FirstName>John</FirstName>
      <LastName>Doe</LastName>
    </Detail>
    <Detail>
      <FirstName>Jane</FirstName>
      <LastName>Doe</LastName>
    </Detail>
  </Details>
</XMLExample>
```