How-To Guide

InfoPath Image Demo

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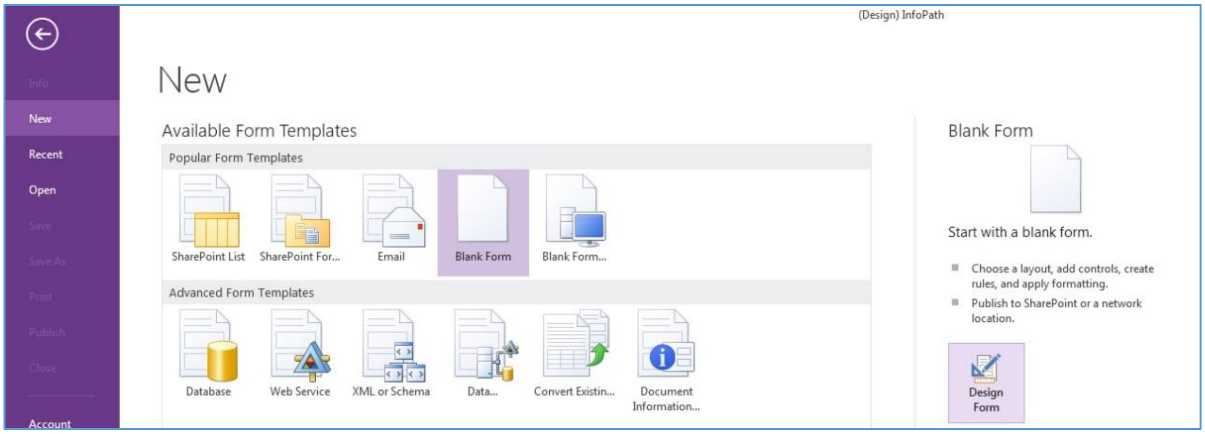
Overview

This demonstration of the InfoPath Image Demo captures a signature and saves it to file as a JPEG image. This image is then imported into the InfoPath document. Because this demo will not create a biometric or an encrypted signature, but instead creates a JPEG image, the document is not legally binding. This is a demo only and should be used as a blueprint for creating your own signed InfoPath documents. It is not intended as a “plug-in” for InfoPath.

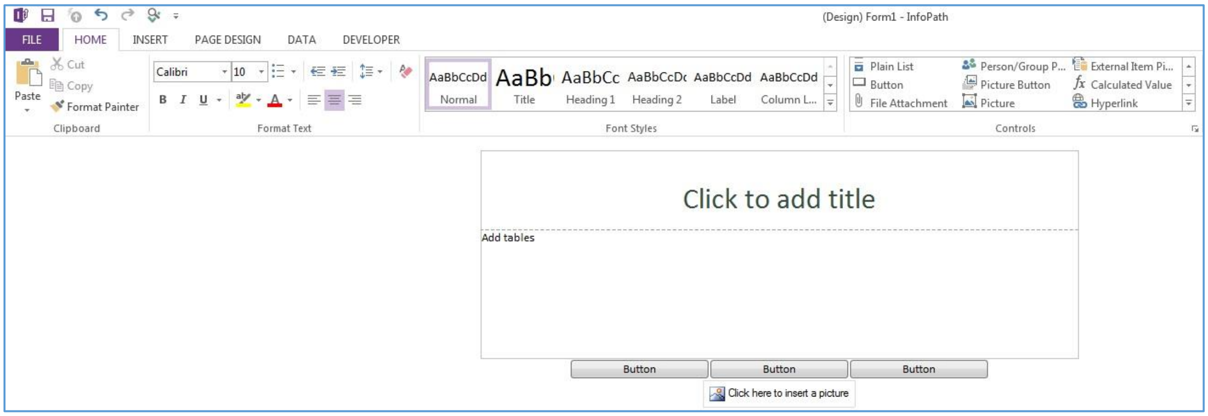
Steps

1. The SDK used in this demo is SigPlusNET. Download the SDK from the following link: www.topazsystems.com/sigplusnet.html.

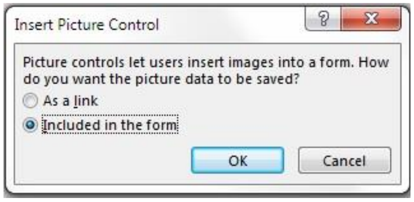
2. Open Infopath Designer. Choose “Blank Form” and click “Design Form”.



3. For the purposes of this example, add 3 buttons to the form, drop-down a line, and add a picture (see the Home tab in the Controls section).



4. When adding the picture, choose "Included in the form".



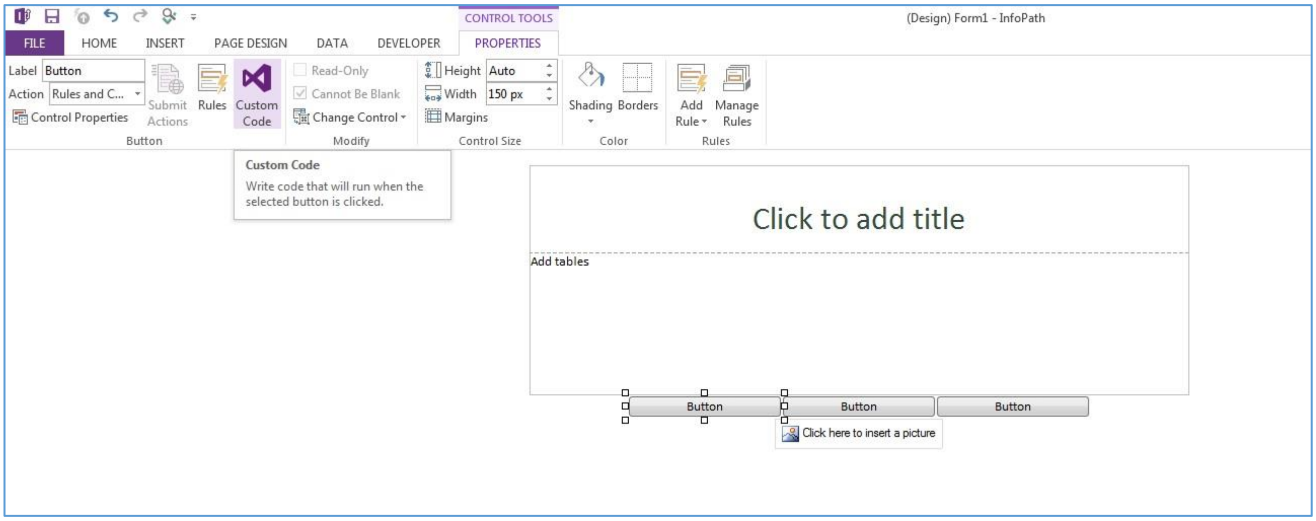
Insert Picture Control

Picture controls let users insert images into a form. How do you want the picture data to be saved?

○ As a link

● Included in the form

5. Click the first button you added. Select the “Properties” tab, and click “Custom Code”.



Label: Button

Action: Rules and C...

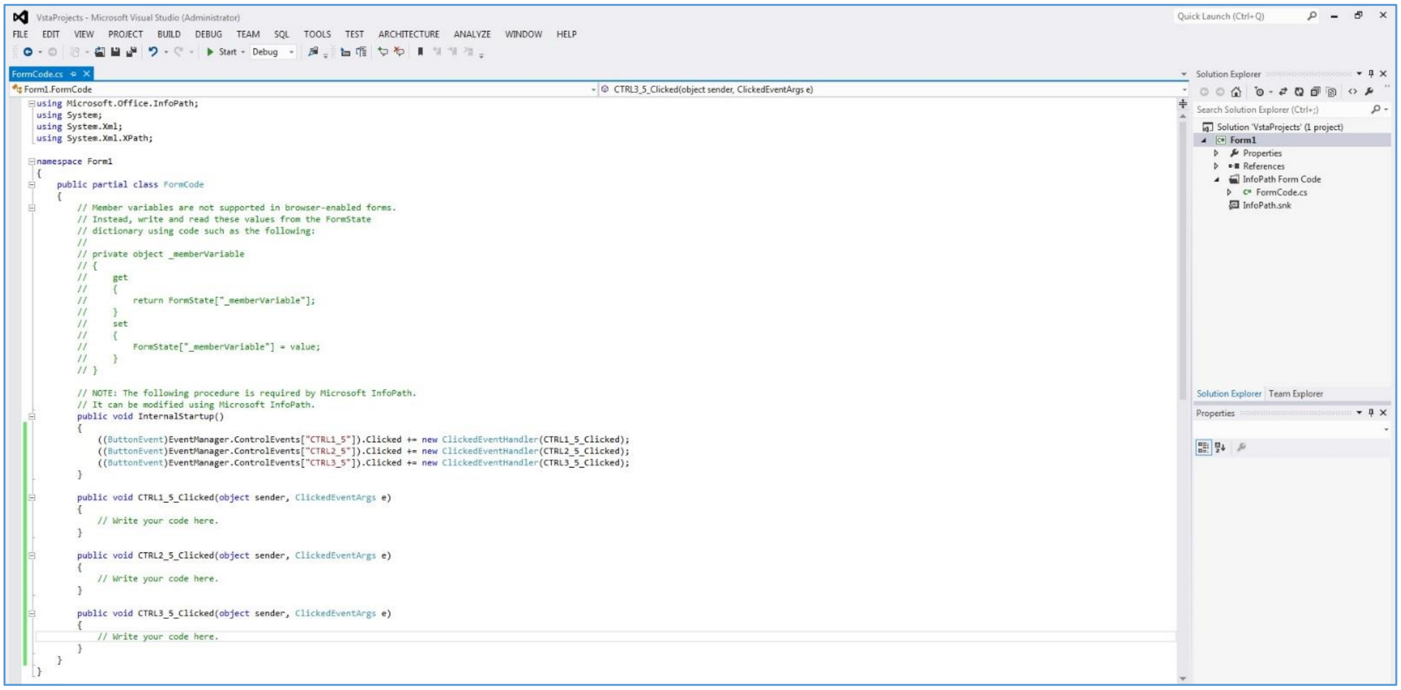
Height: Auto

Width: 150 px

Custom Code

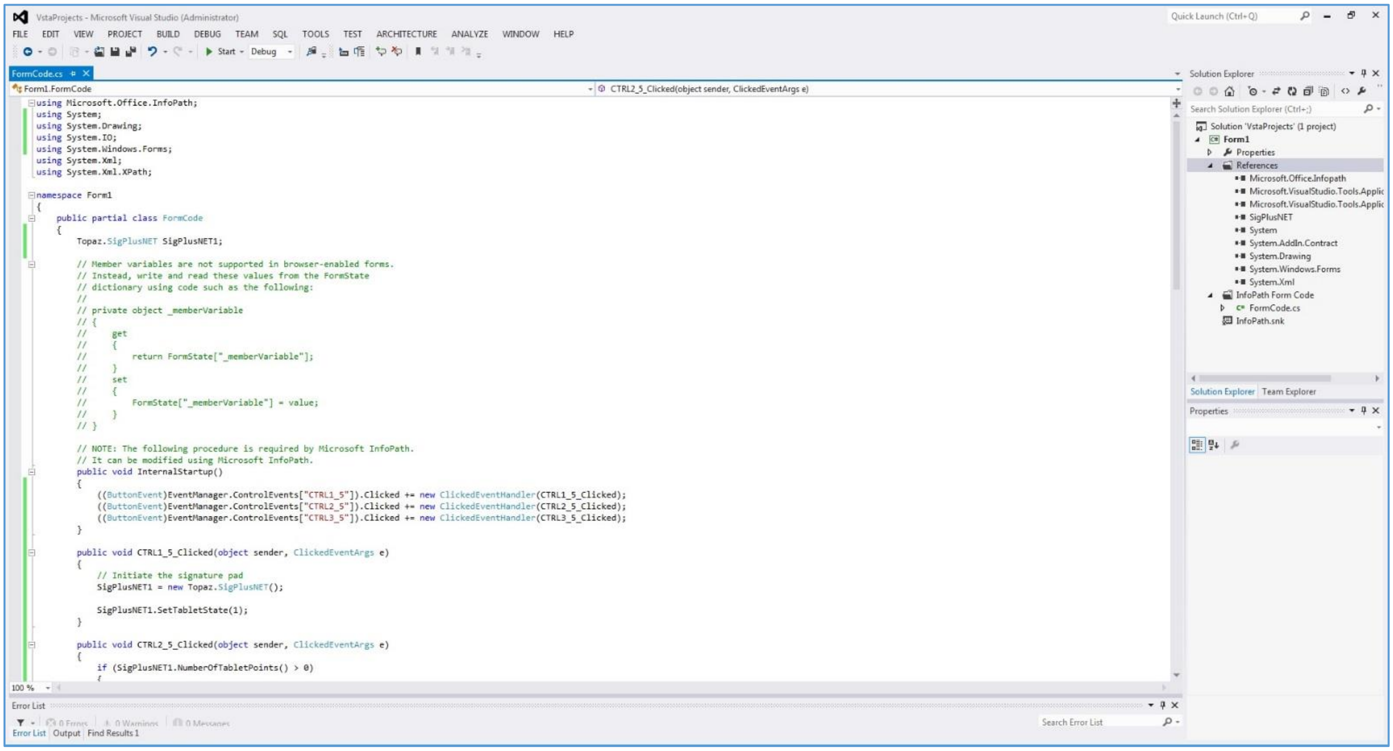
Write code that will run when the selected button is clicked.

6. This will open the Visual Studio editor. Do the same for the other 2 buttons in order to generate the complete framework for adding the final code.



```
using Microsoft.Office.InfoPath;
using System;
using System.Xml;
using System.Xml.XPath;

namespace Form1
{
    public partial class FormCode
    {
        // Member variables are not supported in browser-enabled forms.
        // Instead, write and read these values from the FormState
        // dictionary using code such as the following:
        //
        // private object _memberVariable
        // {
        //     get
        //     {
        //         return FormState["_memberVariable"];
        //     }
        //     set
        //     {
        //         FormState["_memberVariable"] = value;
        //     }
        // }

        // NOTE: The following procedure is required by Microsoft InfoPath.
        // It can be modified using Microsoft InfoPath.
        public void InternalStartup()
        {
            ((ButtonEvent)EventManager.ControlEvents["CTRL1_5"]).Clicked += new ClickedEventHandler(CTRL1_5_Clicked);
            ((ButtonEvent)EventManager.ControlEvents["CTRL2_5"]).Clicked += new ClickedEventHandler(CTRL2_5_Clicked);
            ((ButtonEvent)EventManager.ControlEvents["CTRL3_5"]).Clicked += new ClickedEventHandler(CTRL3_5_Clicked);
        }

        public void CTRL1_5_Clicked(object sender, ClickedEventArgs e)
        {
            // Write your code here.
        }

        public void CTRL2_5_Clicked(object sender, ClickedEventArgs e)
        {
            // Write your code here.
        }

        public void CTRL3_5_Clicked(object sender, ClickedEventArgs e)
        {
            // Write your code here.
        }
    }
}
```

7. Add references to SigPlusNET (C:\Windows\SigPlus\NET), System.Drawing, and System.Windows.Forms. Then fill in the rest of the code, available from the following link: www.topazsystems.com/software/download/infopath_code.docx, or as seen in the screens below.


VstaProjects - Microsoft Visual Studio (Administrator)
FILE EDIT VIEW PROJECT BUILD DEBUG TEAM SQL TOOLS TEST ARCHITECTURE ANALYZE WINDOW HELP
Start Debug
FormCode.cs
Form1.FormCode
CTRL2_5_Clicked(object sender, ClickedEventArgs e)
Quick Launch (Ctrl+Q)
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'VstaProjects' (1 project)
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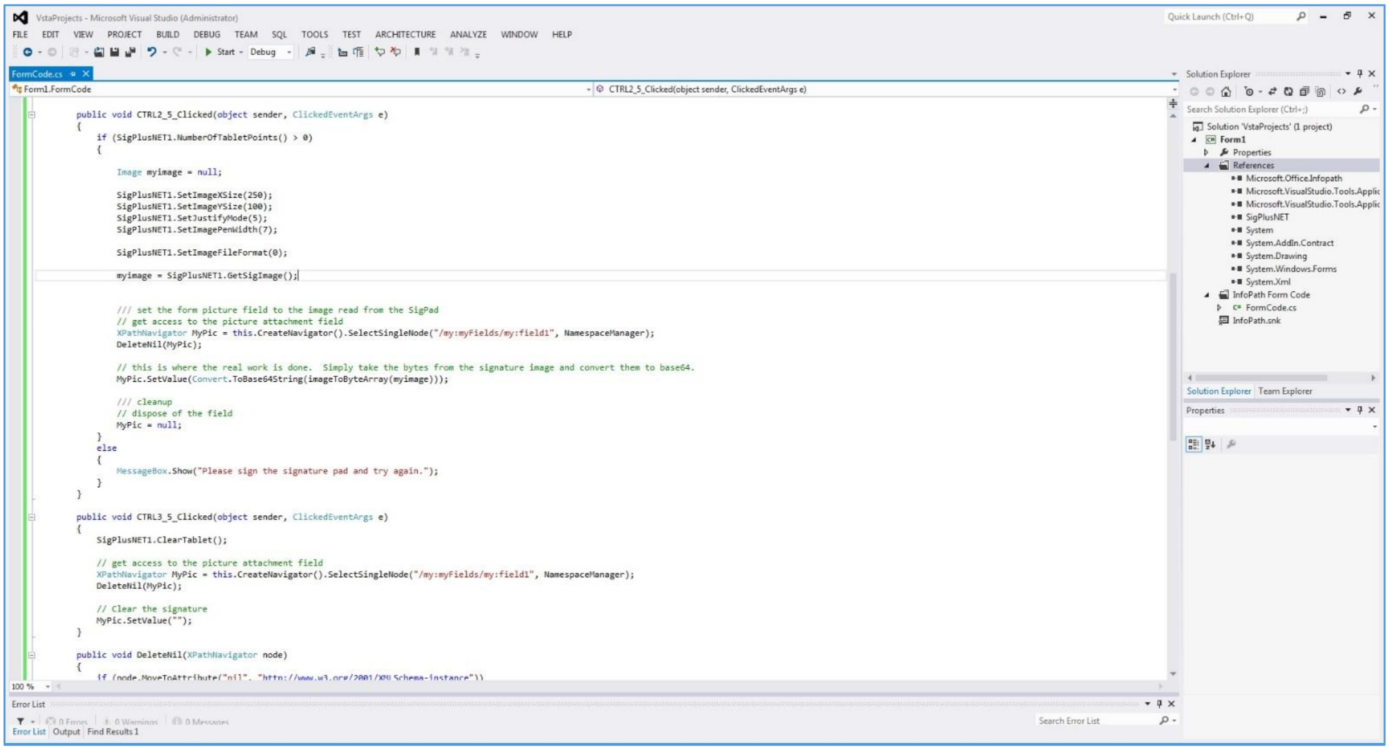
Microsoft.VisualStudio.Tools.Applic
Microsoft.VisualStudio.Tools.Applic
SigPlusNET
System
System.AddIn.Contract
System.Drawing
System.Windows.Forms
System.Xml
InfoPath Form Code
FormCode.cs
InfoPath.snk
Solution Explorer Team Explorer
Properties
100 %
Error List
0 Errors 0 Warnings 0 Messages
Search Error List
Error List Output Find Results 1

```
using Microsoft.Office.InfoPath;
using System;
using System.Drawing;
using System.IO;
using System.Windows.Forms;
using System.Xml;
using System.Xml.XPath;

namespace Form1
{
    public partial class FormCode
    {
        Topaz.SigPlusNET SigPlusNET1;

        // Member variables are not supported in browser-enabled forms.
        // Instead, write and read these values from the FormState
        // dictionary using code such as the following:
        //
        // private object _memberVariable
        // {
        //     get
        //     {
        //         return FormState["_memberVariable"];
        //     }
        //     set
        //     {
        //         FormState["_memberVariable"] = value;
        //     }
        // }

        // NOTE: The following procedure is required by Microsoft InfoPath.
        // It can be modified using Microsoft InfoPath.
        public void InternalStartup()
        {
            ((ButtonEvent)EventManager.ControlEvents["CTRL1_5"]).Clicked += new ClickedEventHandler(CTRL1_5_Clicked);
            ((ButtonEvent)EventManager.ControlEvents["CTRL2_5"]).Clicked += new ClickedEventHandler(CTRL2_5_Clicked);
            ((ButtonEvent)EventManager.ControlEvents["CTRL3_5"]).Clicked += new ClickedEventHandler(CTRL3_5_Clicked);
        }

        public void CTRL1_5_Clicked(object sender, ClickedEventArgs e)
        {
            // Initiate the signature pad
            SigPlusNET1 = new Topaz.SigPlusNET();

            SigPlusNET1.SetTabletState(1);
        }

        public void CTRL2_5_Clicked(object sender, ClickedEventArgs e)
        {
            if (SigPlusNET1.NumberOfTabletPoints() > 0)
            {
```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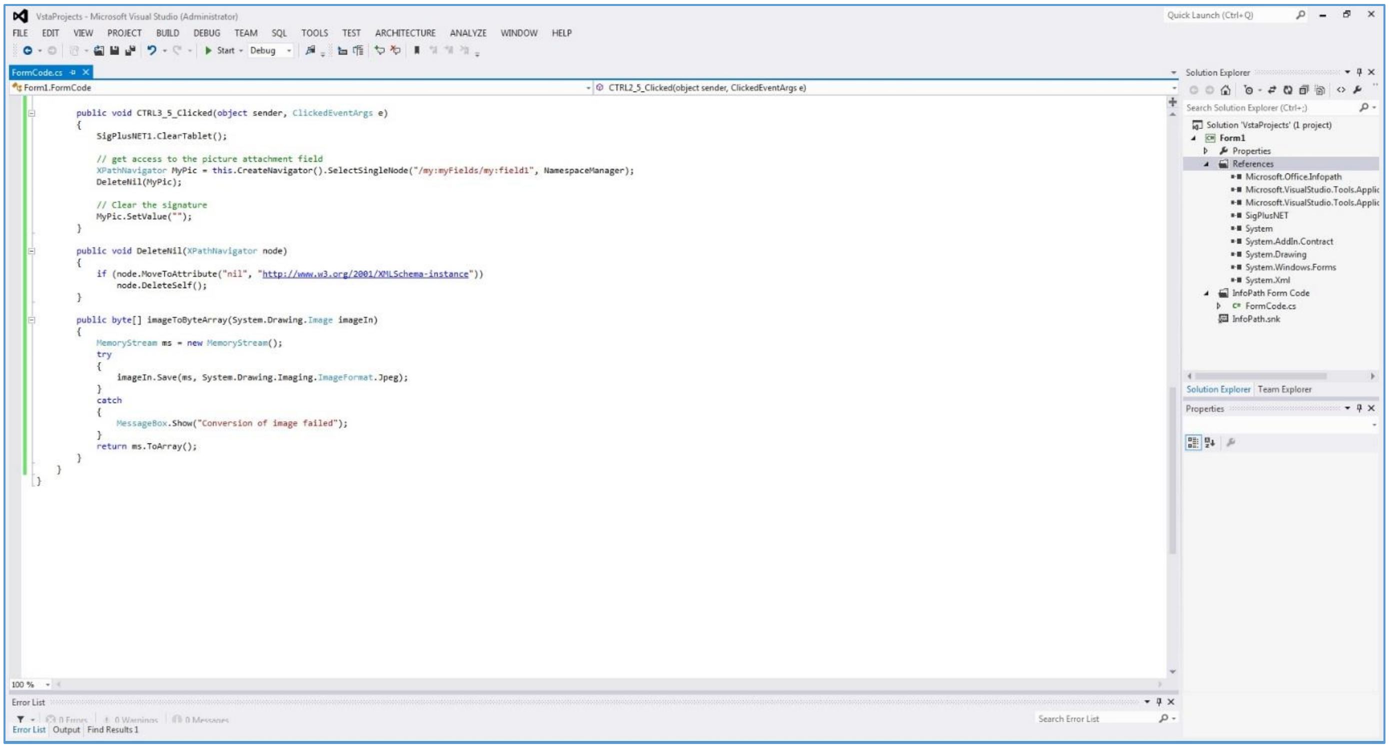
100 %
Error List
0 Errors 0 Warnings 0 Messages
Search Error List
Error List Output Find Results 1

```
        public void CTRL2_5_Clicked(object sender, ClickedEventArgs e)
        {
            if (SigPlusNET1.NumberOfTabletPoints() > 0)
            {

                Image myimage = null;

                SigPlusNET1.SetImageXSize(250);
                SigPlusNET1.SetImageYSize(100);
                SigPlusNET1.SetJustifyMode(5);
                SigPlusNET1.SetImagePenWidth(7);

                SigPlusNET1.SetImageFileFormat(0);

                myimage = SigPlusNET1.GetSigImage();


                /// set the form picture field to the image read from the SigPad
                // get access to the picture attachment field
                XPathNavigator MyPic = this.CreateNavigator().SelectSingleNode("/my:myFields/my:field1", NamespaceManager);
                DeleteNil(MyPic);

                // this is where the real work is done.  Simply take the bytes from the signature image and convert them to base64.
                MyPic.SetValue(Convert.ToBase64String(imageToByteArray(myimage)));

                /// cleanup
                // dispose of the field
                MyPic = null;
            }
            else
            {
                MessageBox.Show("Please sign the signature pad and try again.");
            }
        }

        public void CTRL3_5_Clicked(object sender, ClickedEventArgs e)
        {
            SigPlusNET1.ClearTablet();

            // get access to the picture attachment field
            XPathNavigator MyPic = this.CreateNavigator().SelectSingleNode("/my:myFields/my:field1", NamespaceManager);
            DeleteNil(MyPic);

            // Clear the signature
            MyPic.SetValue("");
        }

        public void DeleteNil(XPathNavigator node)
        {
            if (node.MoveToAttribute("nil", "http://www.w3.org/2001/XMLSchema-instance"))
```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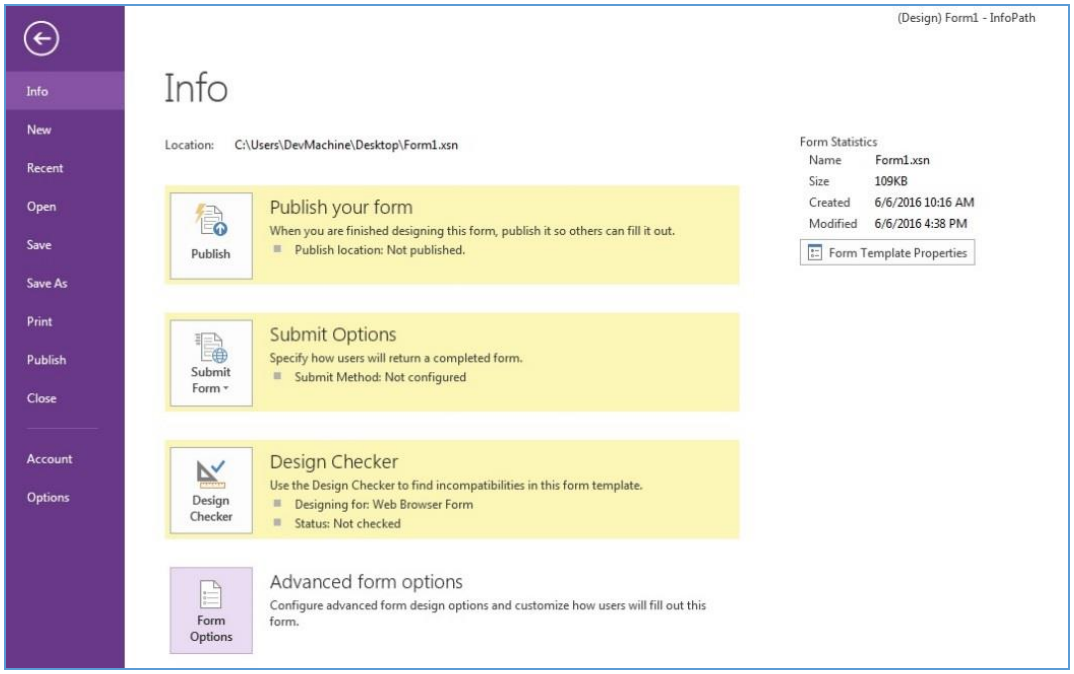
100 %
Error List
0 Errors
0 Warnings
0 Messages
Search Error List
Error List
Output
Find Results 1

```
        public void CTRL3_5_Clicked(object sender, ClickedEventArgs e)
        {
            SigPlusNET1.ClearTablet();

            // get access to the picture attachment field
            XPathNavigator MyPic = this.CreateNavigator().SelectSingleNode("/my:myFields/my:field1", NamespaceManager);
            DeleteNil(MyPic);

            // Clear the signature
            MyPic.SetValue("");
        }

        public void DeleteNil(XPathNavigator node)
        {
            if (node.MoveToAttribute("nil", "http://www.w3.org/2001/XMLSchema-instance"))
                node.DeleteSelf();
        }

        public byte[] imageToByteArray(System.Drawing.Image imageIn)
        {
            MemoryStream ms = new MemoryStream();
            try
            {
                imageIn.Save(ms, System.Drawing.Imaging.ImageFormat.Jpeg);
            }
            catch
            {
                MessageBox.Show("Conversion of image failed");
            }
            return ms.ToArray();
        }
    }
}
```

8. Finally, go back to the form and click “File”. Then, click “Form Options” next to the “Advanced form options” category.



Info

Location: C:\Users\DevMachine\Desktop\Form1.xsn

Publish your form

When you are finished designing this form, publish it so others can fill it out.

- Publish location: Not published.

Submit Options

Specify how users will return a completed form.

- Submit Method: Not configured

Design Checker

Use the Design Checker to find incompatibilities in this form template.

- Designing for: Web Browser Form
- Status: Not checked

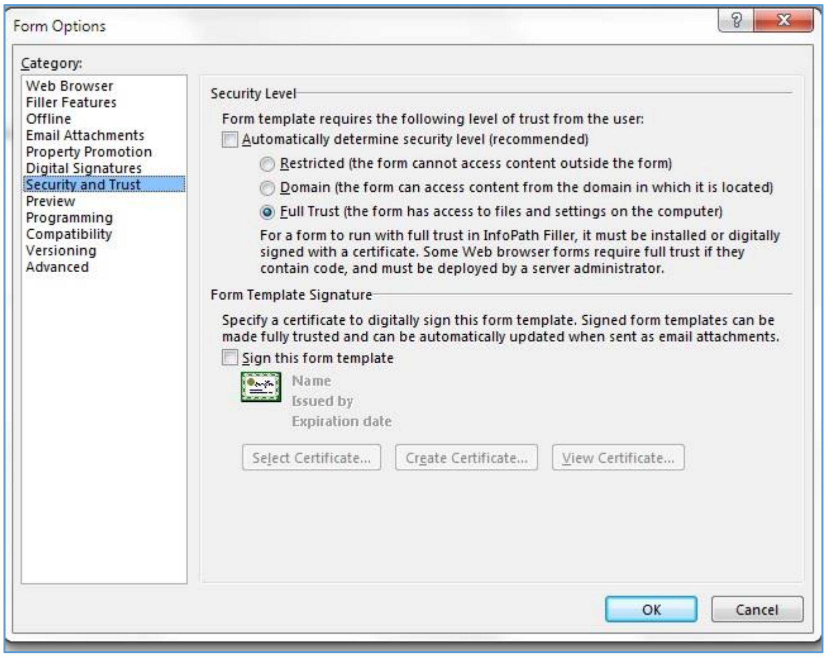
Advanced form options

Configure advanced form design options and customize how users will fill out this form.

Form Statistics

Name	Form1.xsn
Size	109KB
Created	6/6/2016 10:16 AM
Modified	6/6/2016 4:38 PM

9. In the “Form Options” window, click "Security and Trust". Uncheck "Automatically determine security level" and choose “Full Trust”. Click “OK”. You are now ready to test the form.



Form Options

Category:

- Web Browser
- Filler Features
- Offline
- Email Attachments
- Property Promotion
- Digital Signatures
- Security and Trust
- Preview
- Programming
- Compatibility
- Versioning
- Advanced

Security Level

Form template requires the following level of trust from the user:

□ Automatically determine security level (recommended)

○ Restricted (the form cannot access content outside the form)

○ Domain (the form can access content from the domain in which it is located)

● Full Trust (the form has access to files and settings on the computer)

For a form to run with full trust in InfoPath Filler, it must be installed or digitally signed with a certificate. Some Web browser forms require full trust if they contain code, and must be deployed by a server administrator.

Form Template Signature

Specify a certificate to digitally sign this form template. Signed form templates can be made fully trusted and can be automatically updated when sent as email attachments.

□ Sign this form template

Name
Issued by
Expiration date

10. Run the form, and click the first button. Sign on your pad. Click the second button, and your signature will show in the picture control. The third button will clear the signature.