



How to Host Microsoft InfoPath Forms in SharePoint 2007 Web Part Pages

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Version 1.10.

[Nick Grattan Consultancy Limited](#) specialise in providing design, consultancy, development and training services for Microsoft Office SharePoint Server 2007 and Microsoft SharePoint Services 3.0.

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Using Microsoft InfoPath Forms with Microsoft SharePoint

By default, when a Microsoft InfoPath Form is displayed as a web page the form occupies the entire browser – the context of the SharePoint site that displayed the form is lost. A common problem is that once filling the form has been completed users close the browser rather than hitting the back button. The solution is to display the form in a web part on a web part page within the SharePoint Pages.

Note: The solution described here requires that either Microsoft Office SharePoint Server 2007 Enterprise Edition or Microsoft Office InfoPath Forms Server is installed.

Two approaches are described here:

1. Simple: Display the InfoPath toolbar with the “Save” button through with which the form can be saved.
2. Advanced: Provide a “Submit” button and use a data connection to save the form to a document library.

Both use the XmlFormView web part to display the InfoPath form rendered as HTML using Microsoft InfoPath Forms server. This web part is located in Microsoft.Office.InfoPath.Server.dll, and this web part must first be installed in a site.

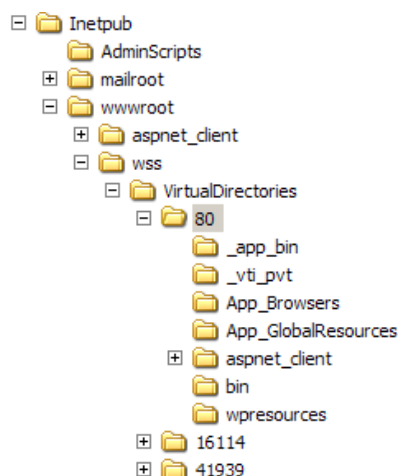
In this walkthrough the SharePoint site in which the document library and web part page will be created is <http://moss2007>.

Installing the XmlFormView Web Part

To install the web part you must:

1. Add an entry to a web application’s web.config file to mark the web part as “safe”.
2. Add the web part to the site’s web part gallery.

The web application’s web.config file is located in a folder based on the web application’s port number typically off \Inetpub\wwwroot\wss\VirtualDirectories:



- Open the file web.config in an editor
- Add the following line at the end of the existing <SafeControls> element:

```
<SafeControl Assembly="Microsoft.Office.InfoPath.Server, Version=12.0.0.0, Culture=neutral, PublicKeyToken=71e9bce11e9429c" Namespace="Microsoft.Office.InfoPath.Server.Controls" TypeName="*" Safe="True" />
```

- Save the web .config file.

The XmlFormView web part can now be added to the site's gallery:

- Navigate to the SharePoint site, e.g. <http://moss2007> and select the **Site Actions + Site Settings + Modify All Site Settings** menu command.
- Select the **Web Parts** link under the "Galleries" section.
- Click the **New** button on the "Web Part Gallery" form.
- Locate the entry for the XmlFormView web part and select the check box:

Microsoft.Office.InfoPath.Server.Controls.XmlFormView

XmlFormView .webpart

Microsoft.Office.InfoPath.Server,
Version=12.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c

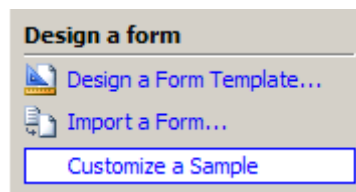
- Click the **Populate** button at the top of the form.

This adds the XmlFormView web part to the "Miscellaneous" section.

Publishing an InfoPath Form

Next, an InfoPath form needs to be published to test displaying in XmlFormView. The sample "Travel Request" form will be used:

- Run Microsoft InfoPath 2007.
- Click the **Customize a Sample** link the "Design a form" section:



- Double-click the "**Sample – Travel Request**" template.

This form will be used unmodified, so it can now be published to a SharePoint document library:

- Select the **File + Publish** menu command.
- Save the template locally as prompted.
- In the "Publishing Wizard" accept the default location "To a SharePoint server ..." and click **Next**.
- Enter the URL for the web site in which the document library will be created, e.g. <http://moss2007>, and click **Next**.
- On the next step ensure "Enable this form to be filled out by using a browser" and "Document Library" are selected, and click **Next**.
- On the next step select **Create a new Document Library** and click **Next**.
- Next, give a name for the new library, such as "TestInfoPathTemplate" and click **Next**.
- Accept the default list of fields from the form that will be made available to the document library and click **Next**.
- Click **Publish** and then **Close** to complete the Publishing Wizard.
- Close Microsoft InfoPath.

You will now set the default action for this Document Library to open the form in a browser and not in InfoPath:

HOW TO HOST MICROSOFT INFOPATH FORMS IN SHAREPOINT 2007 WEB PART PAGES

- Open the “TestInfoPathTemplate” document library.
- Select the **Settings + Form Library Settings** menu.
- Click the **Advanced settings** link.
- Check the **Display as a web page** radio button.
- Click **OK**.

You can now skip to the “Testing the Web Part Page” section to test your web part page.

Creating the Web Part Page with Microsoft SharePoint Designer

The easiest way of creating a web part page for the XmlFormView web part is to use Microsoft SharePoint Designer. If you don't have SharePoint Designer (it is a free download from www.microsoft.com) or do not have the knowledge to use the package, you can create a web part page with the browser. This is described in the next section. Note, though, it is much more difficult to create a web part page with the browser.

To create a web part page with SharePoint Designer:

- Run SharePoint Designer.
- Select **File + Open Site** and select the site in which you want the new page created.
- Select **File + New Page**
- Select **Create from Master Page...** and click **OK** and **OK** again.

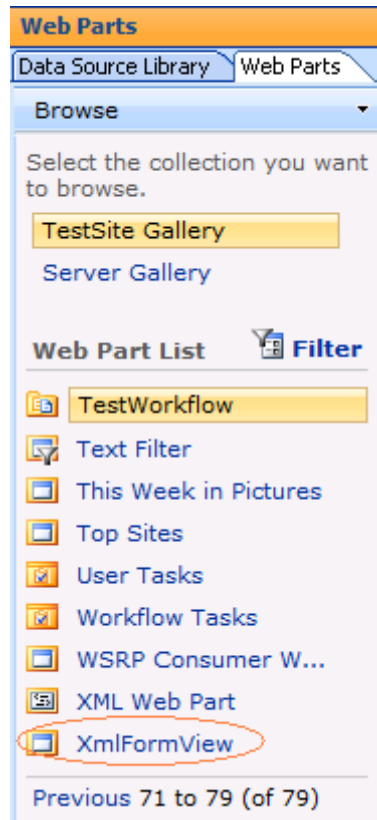
You will now add a web part zone to the “PlaceholderMain” placeholder:

- Click in “PlaceholderMain” and select **Create Custom Content**.
- With the insertion cursor in “PlaceholderMain” select the **Insert + SharePoint Controls + Web Part Zone** menu command.

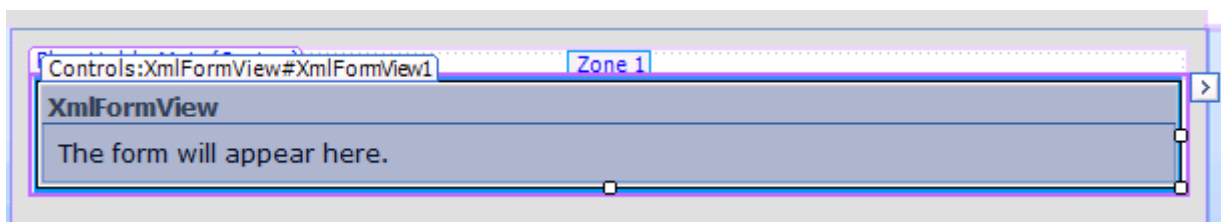


The XmlFormView web part will now be added to the page:

- Click the **Click to insert a web part** link in the zone you have just created.
- Locate the “XmlFormView” web part in the “Web Parts” pane and drag the web part into the zone you just created:



The page should now look like this:



Web Part properties now need to specify the location of the XSN file (InfoPath Form Template) and the library into which completed forms will be placed (the XML document).

- Right-click the XmlFormView web part and select **Web Part Properties**.
- Expand out the “Data Binding” section.
- Enter the following URL for the XsnLocation:

<http://moss2007/TestInfoPathTemplate/Forms/template.xsn>

Note how this refers to the “Forms” folder in the Document Library into which the InfoPath template was published.

- Enter the following URL for the SaveLocation:

<http://moss2007/TestInfoPathTemplate>

This is the document library created when the InfoPath template was published.

- Click **OK** save the property changes.

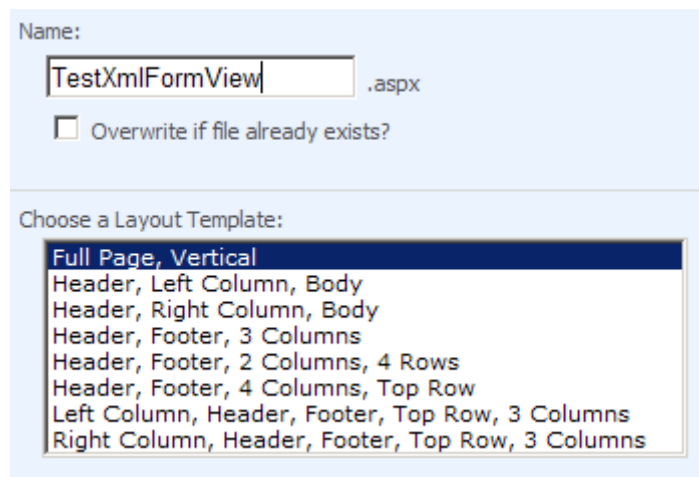
- Select **File + Save** to save the web part page into a document library in the site.

Creating the Web Part Page with the Browser

Follow these instructions if you did not create a web part page with SharePoint Designer, otherwise skip to the next section.

A Web Part Page can now be created on to which an XmlFormView web part will be placed. This web part will display the Travel Request form created in the previous section.

- Select the **View All Site Content** link and then click **Create**.
- Click **Web Part Page** in the “Web Pages” section on the right side of the form.
- Enter a name for the page, e.g. “TestXmlFormView” and select **Full Page, Vertical** for the layout template:



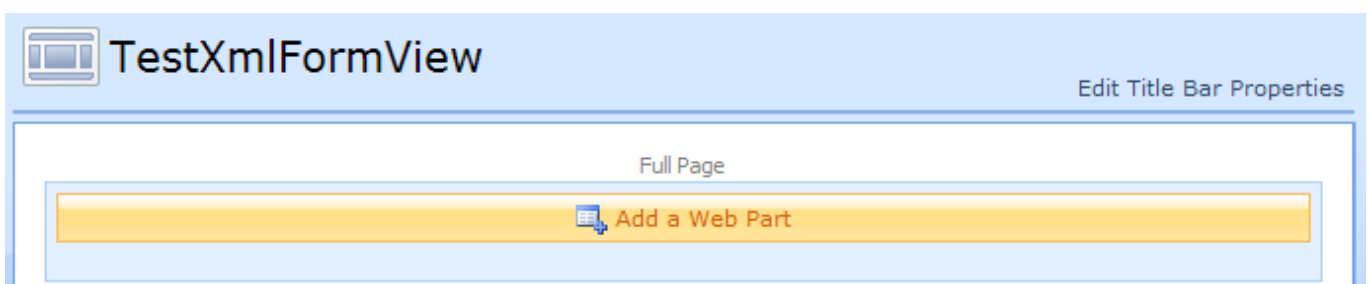
Name: .aspx
 Overwrite if file already exists?

Choose a Layout Template:
Full Page, Vertical
Header, Left Column, Body
Header, Right Column, Body
Header, Footer, 3 Columns
Header, Footer, 2 Columns, 4 Rows
Header, Footer, 4 Columns, Top Row
Left Column, Header, Footer, Top Row, 3 Columns
Right Column, Header, Footer, Top Row, 3 Columns

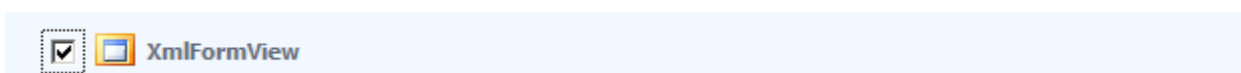
- Click **Create** to create the page.

The page will be opened and the XmlFormView web part can now be added:

- Click the **Add a Web Part** button:

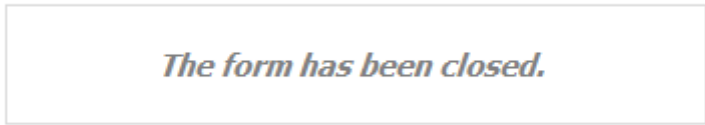


- Locate the “XmlFormView” web part in the “Add web parts to Full Page” dialog – it is under the “Miscellaneous” section – and check the box next to it:



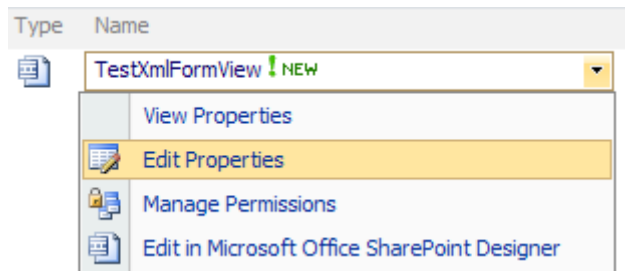
- Click **Add** to add an instance of the web part to the page.

When adding the XmlFormView web part to the page you may see the following error:

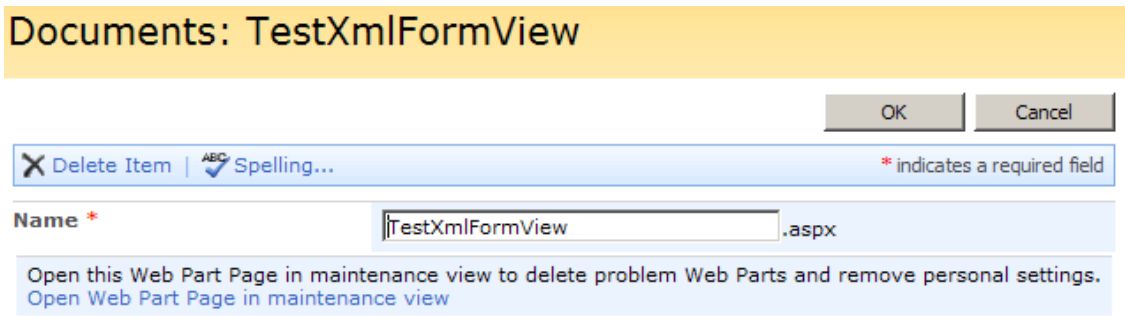


A “The form has been closed” message indicates that the XmlFormView web part has generated an exception due to missing property settings. However, you cannot set the properties to correct the problem, and so the following workaround is required:

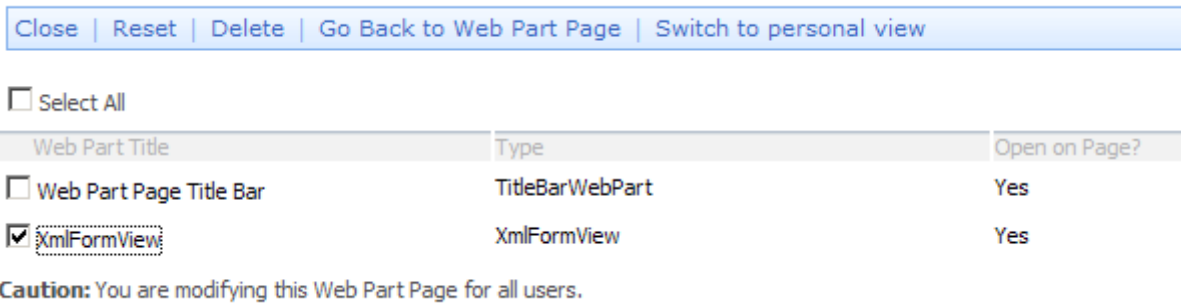
- Navigate back to the document library where the web part page, e.g. “TextXmlFormView.aspx” was created.
- Drop down the edit menu for the web page and select **Edit Properties**:



- Click the **Open Web Page in maintenance view** link:



- Check the XmlFormView web part and click **Close**:



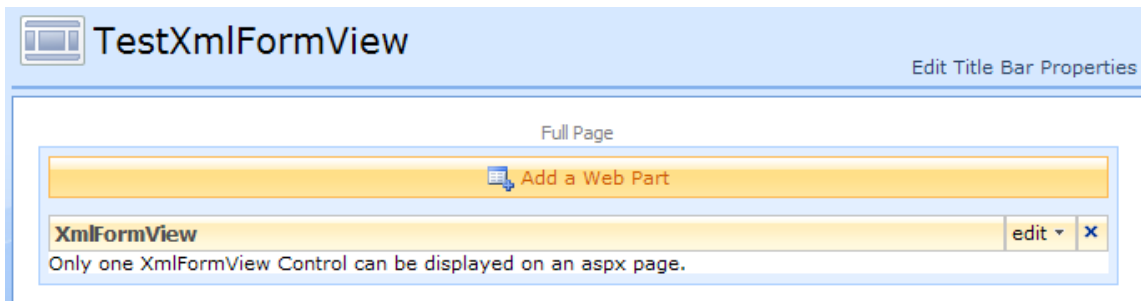
- Click **Go Back to Web Part Page**.

You will now add another instance of the XmlFormView web part to the page:

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- Select **Site Actions + Edit Page**.
- Click **Add a Web Part**.
- Check the XmlFormView web part in the Miscellaneous section and click **Add**.

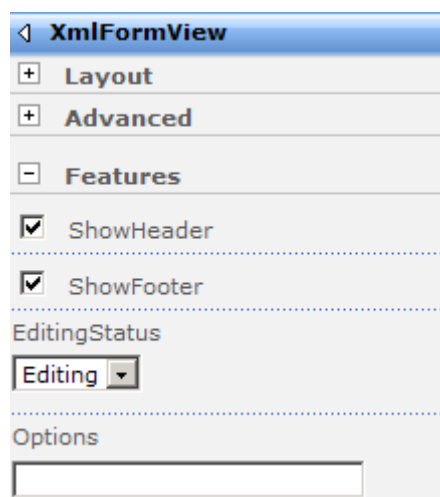
The XmlFormView web part will now be displayed with the message “Only one XmlFormView Control can be displayed on an aspx page”. The first web part is in the “Closed” web part gallery.



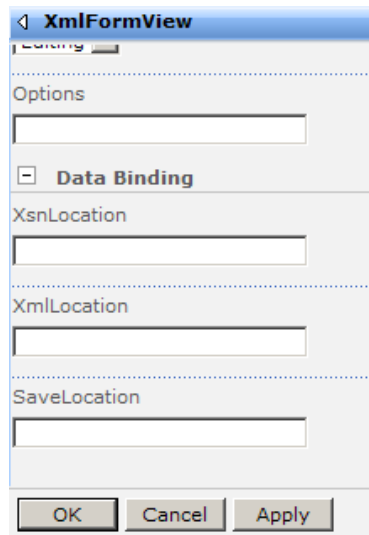
- Select the **Edit + Modify Shared Web Part** menu command.

In the properties pane under features you can control whether the standard InfoPath header and/or footer will be displayed. The header and footer contain the “Save”, “Save As” buttons etc.

- Ensure the “Editing Status” is set to **Editing**:



- Expand out the “DataBinding” section in the properties pane:



The location of the InfoPath template needs to be specified using either the “XsnLocation” or “XmlLocation” properties. We will use “XsnLocation” to specify the location of the InfoPath template. The “SaveLocation” property is used to specify where the form’s data will be saved to. This will be the document library created earlier.

- Enter the following URL for the XsnLocation:

<http://moss2007/TestInfoPathTemplate/Forms/template.xsn>

Note how this refers to the “Forms” folder in the Document Library into which the InfoPath template was published.

- Enter the following URL for the SaveLocation:

<http://moss2007/TestInfoPathTemplate>

This is the document library created when the InfoPath template was published.

- Click **Apply** to check that the settings are correct.

If you click **OK** and the property values are incorrect you’ll be taken back to the “The form has been closed” error and you will not have an opportunity to fix the problem. If this happens you can sometimes save the day by using the browser’s back button and then correcting the problem.

- If the property settings are correct click **OK** to close the property pane.
- Click the **Save and Stop Editing** button.

There are now two XmlFormView web parts on the page – the one that was closed should now be removed.

- Open the Web Part Page maintenance page (see above) for the Web Part Page.
- Check the first “XmlFormView” on the page – ensure it is the one with “No” for “Open on Page?”.
- Click **Delete**.

Close | Reset | Delete | Go Back to Web Part Page | Switch to personal view

Select All

Web Part Title	Type	Open on Page?
<input type="checkbox"/> Web Part Page Title Bar	TitleBarWebPart	Yes
<input checked="" type="checkbox"/> XmlFormView	XmlFormView	No
<input type="checkbox"/> XmlFormView	XmlFormView	Yes

Testing the Web Part Page

You can now test filling in a form using the Web Part Page.

- Open the Web Part Page created earlier, e.g. TestXmlFormView.aspx from the document library in which it was placed.

The form will be displayed in the page:

The screenshot shows a web part page titled "TestXmlFormView". The form is titled "TRAVEL REQUEST" and contains the following fields:

- Business Purpose:** A text input field.
- Request Date:** A date picker set to 12/14/2007.
- Traveler Information:** A section containing two input fields: "Name:" and "E-mail Address:".

The form is displayed within a browser window with a menu bar containing "Save", "Save As...", "Close", "Print View", and "Update".

- Fill out information as normal into the form.
- Click the **Save** button.
- Enter a name for the new document and click **Save**.
- Verify that a document has been added to the document library, e.g. TestInfoPathTemplate.

Adding A Submit Button

Adding a Submit button requires the following steps:

1. In InfoPath add a Data Connection that allows the form to be automatically saved back to a SharePoint document library.
2. Add a Submit button which, when pressed, will save the form to the document library using the Data Connection. You will need to provide rules that will determine how the name of the document library item will be formed as the user will not enter the name directly.
3. Change form settings to remove the header and footer from the form so the standard "Save", "Save As..." buttons are not displayed.

First, you will need to open the template you've been working on in InfoPath:

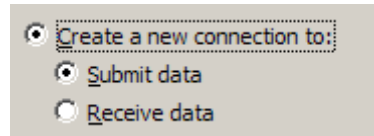
HOW TO HOST MICROSOFT INFOPATH FORMS IN SHAREPOINT 2007 WEB PART PAGES

- Run InfoPath and open the template, e.g. Travel Request, from the local file system.

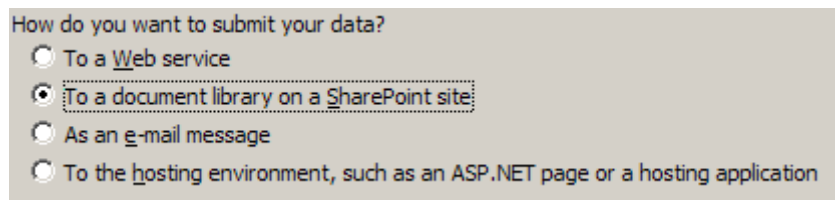
Creating a Data Connection

To create the Data Connection:

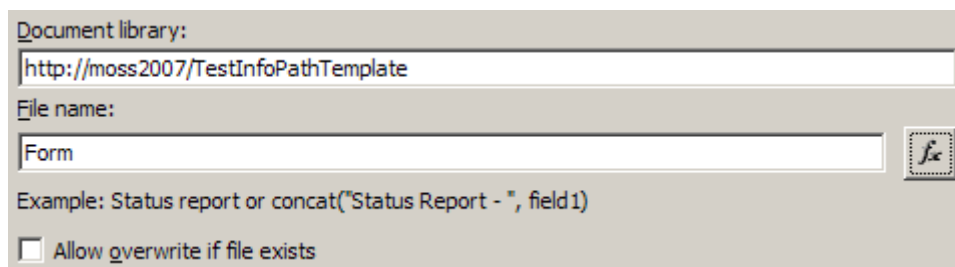
- Select the **Tools + Data Connections** menu command.
- Click **Add...** to create a new data connection.
- Select **Create a new connection to:** and then select **Submit data:**



- Click **Next**.
- Select **To a document library on a SharePoint site:**



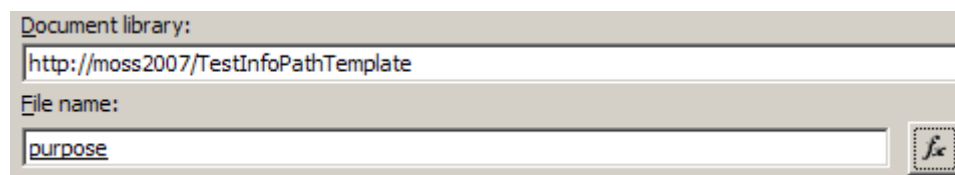
- Click **Next**.
- Enter the URL for the Document Library into which the completed form will be displayed:



You now need to create the rules to be used to make the filename under which the form will be saved. This is the “File name” field in the image above. In this case the “purpose” field from the form will be used to create the filename.

- Click the **fx** button.
- Click the **Insert Field or Group** button.
- Select “Purpose” and click **OK** twice.

The rule for the file name will now be displayed:



- Click **Next**.

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- Click **Finish**. The default name for the connection will be used of “SharePoint Library Submit”.
- Click **Close**.

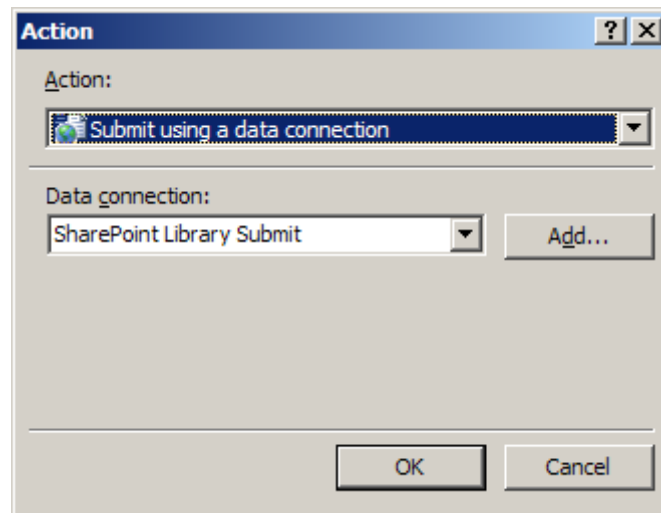
Adding the Submit button

To add the Submit button to the form:

- Click the **Controls** link in the design tool pane on the right to display the list of available controls.
- Drag a button from the control tool pane onto the form. Place it at the bottom under “Notes”:

The screenshot shows a form design tool interface. At the top, there is a 'Preferences' section with three dropdown menus: 'Trip Class' (value: Select...), 'Car Class' (value: Select...), and 'Seat Location' (value: Select...). To the right of these is a checkbox labeled 'Non-smoking hotel room required'. Below the preferences is a 'Notes' section with a large empty text area. At the bottom left of the form is a 'Button' control.

- Right click the new button and choose **Button Properties**.
- Click the **Rules** button on the “Button Properties” dialog.
- Click **Add** to add a new rule.
- Click **Add Action** to display the “Action” dialog.
- Select the “Submit using a data connection” action and ensure that the data connection created earlier, “SharePoint Library Submit” is selected:



- Click **OK** to add the action.
- Add a new action using the action “Close the form”.
- Click **OK** twice to return to the Button Properties dialog.
- Change the label to “Submit” and click **OK** to close the Button Properties dialog.

Removing the Standard InfoPath Toolbars

The header and footer toolbars will now be removed from the form:

- Select the **Tools + Forms** option.
- Uncheck the checkboxes: “Show toolbar at top of form”, “Show toolbar at bottom of form” and “Refresh the form before submitting it if form data might change during processing”:

The following options apply when the form is opened in a Web browser.

Toolbars

Show toolbar at top of form

Show toolbar at bottom of form

Include the following commands on the toolbars:

Submit Submit is not configured...

Save

Save As

Close

Views

Print View

Update

Refreshing data

Refresh the form before submitting it if form data might change during processing

The last option allows the user to review calculated data and other data changes made during the processing of the form.

- Click **OK**.

The form should now be published:

- Select **File + Publish** and use the same options as used before for publishing the form.

Testing the Web Part Page

The Web Part Page can now be displayed and the “Submit” button used to save the form’s data:

- Open the Web Part page, e.g. “TestXmlFormView.aspx”.
- Enter data into the form.
- Click the “Submit” button and verify that a document is saved using a filename based on the “Purpose” field. The document should be saved into the document library specified by the InfoPath data connection, e.g. TestInfoPathTemplate.

Hint: You will see a header being displayed for the XmlFormView web part. The text in this heading can be removed by modifying the properties of the web part or can be removed entirely by setting the “Chrome State” to None:

Chrome State

Minimized

Normal

Chrome Type

None

References:

Some of the techniques described in this publication are based on the presentation documented at <http://www.21apps.com/2007/06/infopath-forms-in-webpart.html> by Andrew Woodward.