Flexible collaboration without programming

SharePoint 2010
Site Owner's Manual

SAMPLE CHAPTER

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/// MANNING

SharePoint 2010 Site Owner's Manual
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Chapter 9

Brief contents

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9

Collecting and managing data by integrating with InfoPath

This chapter covers

- *Forms libraries*
- *InfoPath forms*
- *Forms services*

In the last chapter we began our discussion of composite sites and how to build powerful applications using SharePoint Designer. We'll continue our discussion of composite sites in this chapter. The tool we'll focus on is InfoPath. The scenario that you're going to implement, following a step-by-step process, is for automating the review process of employees at the end of a project. To begin, we'll discuss the scenario you've been given and how you'll attain the solution utilizing SharePoint.

9.1 Gathering employee feedback

This section consists of three parts: situation, business priorities, and solution. The first part, situation, provides a detailed explanation of the

request that you've received. The next part, business priorities, extracts a list of requirements based on priority to accomplish your goals. The third part gives you an overview of the solution that we'll spend the rest of the chapter walking through and building.

9.1.1 Situation

You're a manager of a group of employees. One of your responsibilities is to gather feedback from various clients and peers that they've worked with. Each employee can work on many different projects that are run by different managers. Employee reviews are approaching, and you want to gather the necessary feedback with an organized and consistent solution. Now that you understand the situation, let's discuss the business priorities.

Business priorities

I'll now define what the business priorities are so you can put together an appropriate solution:

1   Keep an up-to-date store of the projects and managers that each of your employees is assigned to.
2   Develop a consistent form to gather feedback after a project is complete.
3   Track which feedback forms have been sent out for input.
4   Create a central repository with an easy way to find the information by employee for completed feedback forms.

I've also provided a process map to help you visualize the system you're going to implement. This is shown in figure 9.1.

The next section highlights the solution you're going to build in this chapter.

9.1.2 Solution

Once you complete the steps in this chapter, you'll have a site that meets the situation and business priorities specified to you. Your final
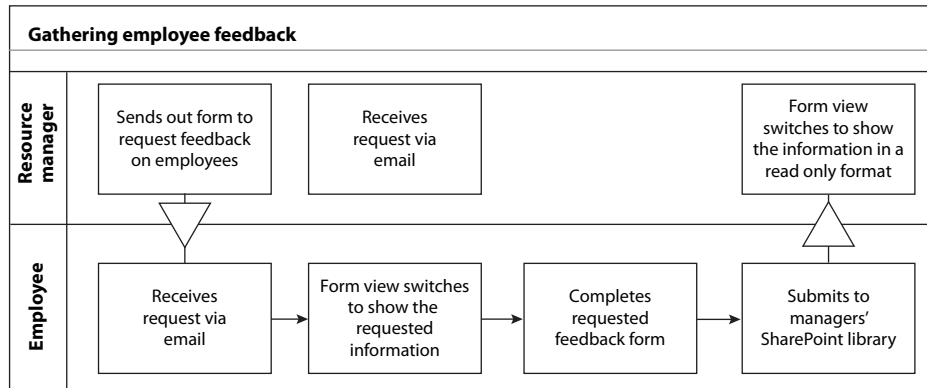
| Gathering employee feedback | | | | |

Figure 9.1 Process map for the solution that you're going to build. This explains the roles of the resource manager and the project manager. It will help you to visualize what the requirements are and how the users will advance through the system.

solution is shown in figure 9.2. To initiate the form, you'll use a Forms Library web part view.

Once a manager has initiated the form, they'll be prompted to select the information for the project and employee that they'd like to gather feedback on. This request will go out as an email submission, as shown in figure 9.3.
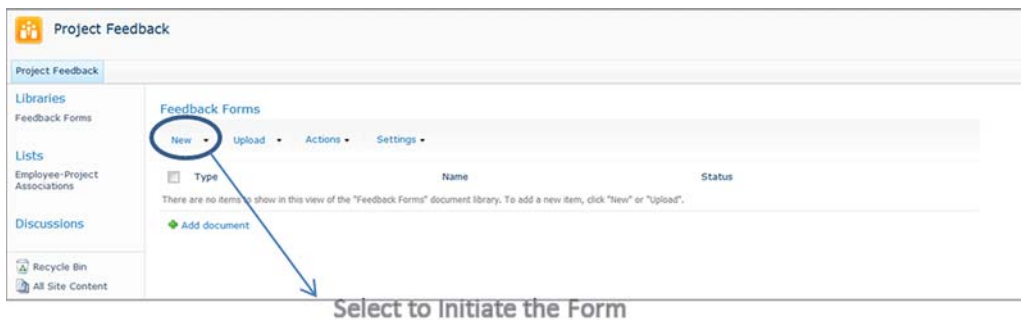

Figure 9.2 Click the New button in the web part to initiate your form. This is what your solution will look like if you choose to initiate the form without Forms Services, which is described in section 9.3.
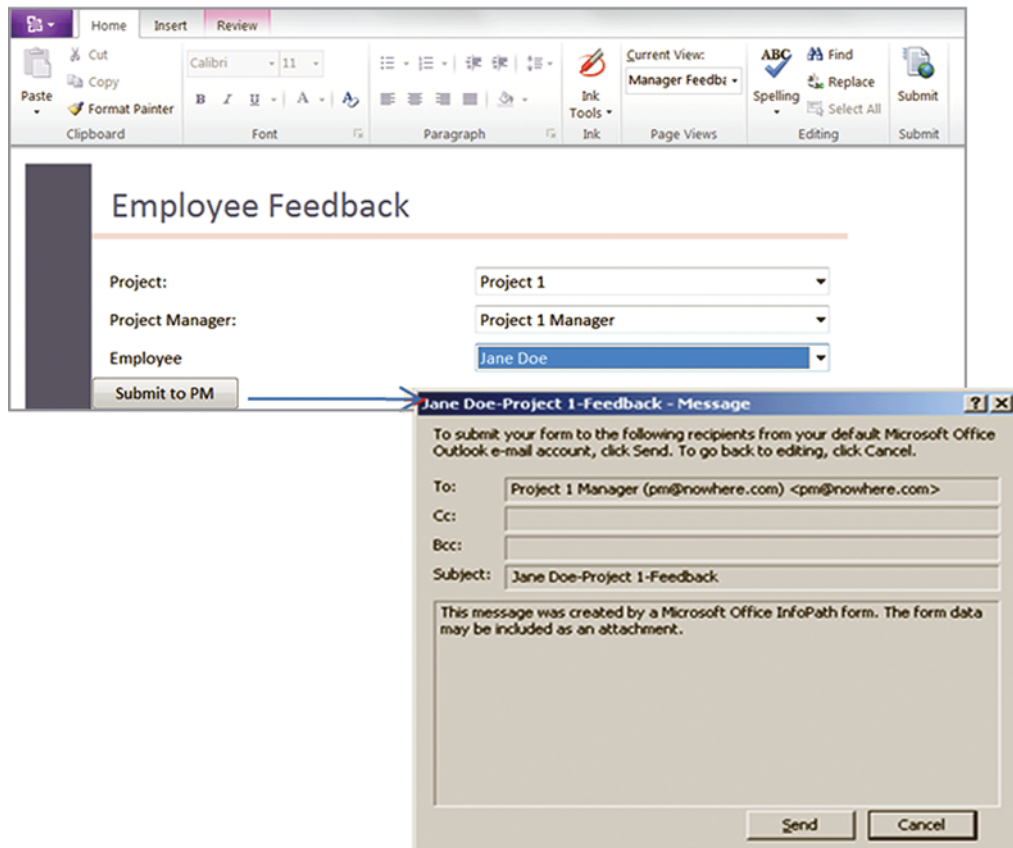
Figure 9.3 Once a resource manager initiates a request for feedback, an email is generated and sent to the project manager. The project manager will get this request and be able to open the form to fill it out.

The form will also be submitted to SharePoint, and the status will be updated as submitted. The reason you'll do this is to track the status of the form as submitted and/or completed. Figure 9.4 shows you an example of the feedback request that just went out.
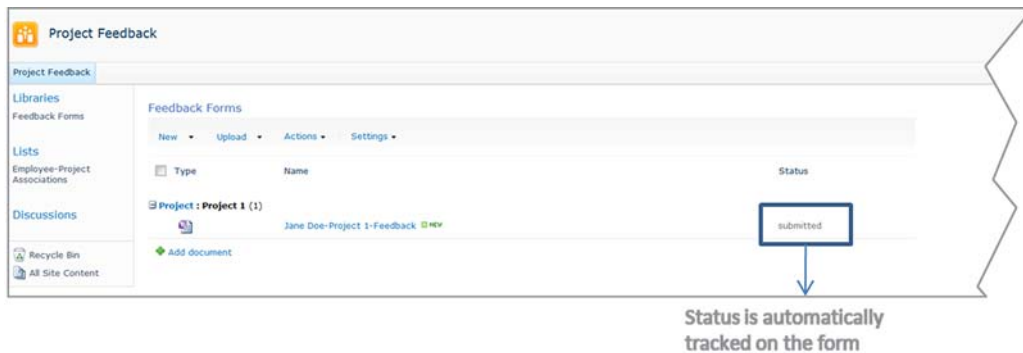
Status is automatically
tracked on the form

Figure 9.4 The form will also be submitted to a SharePoint library so the resource manager can track how many requests they've sent and their status. As you can see, the status for your recent request is submitted because it hasn't been completed.

Once the user receives the form, they can open it via an attachment, or if they have Outlook 2010, they should see the form as displayed in figure 9.5 and will have the ability to complete it via Outlook.

When the project manager opens the form, it will open InfoPath, unless the site is configured to use Forms Services, which will open it in a web browser. If the user has Outlook 2007 or above it will open as shown in figure 9.6.

Figure 9.5 This is what the project manager will receive when they get a request for feedback. Note here that the Open Form option will enable users to open the form from Outlook.

Figure 9.6 If the user is using Outlook 2007 or above when they open the email, it will appear as shown here, and the user will have the ability to complete and submit it without leaving Outlook.

Once the project manager has completed the request, the form will be submitted to a SharePoint library. An example of what this could look like is shown in figure 9.7.

Now that you know the solution for your scenario you can start building out the site to reach the solution described previously.
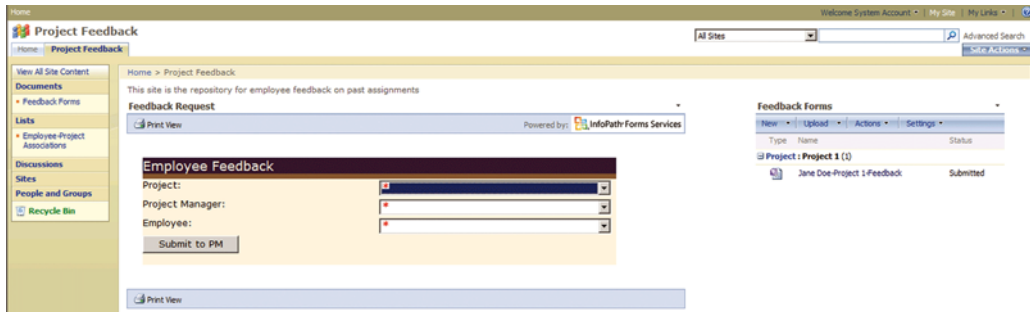
Figure 9.7 This example shows the scenario built out with Forms Services. To the right is the form library that you'll create, which will display the forms that have been sent out for feedback and returned.

9.2 Using InfoPath with SharePoint Foundation

This section covers your approach to using SharePoint Foundation and InfoPath. You'll start by developing several lists in SharePoint to store the data. You'll then design a form using InfoPath. Topics that you'll learn pertain to designing the form, leveraging controls, connecting to data sources, and implementing different views. Finally, you'll publish your form to SharePoint so others can access it. The first section focuses on your approach with InfoPath. Your second approach, covered in section 9.3, uses Forms Services. This is part of SharePoint Server and is important if your end users don't have InfoPath installed on their PC.

9.2.1 Creating your site

To begin, make sure your site is created using a Publishing or Blank Site template. Enter the following for Title, Description, and Web Site Address:

Property	Value
Title	Project Feedback
Description	This site is the repository for employee feedback on past assignments.
Web Site Address	ProjectFeedback

Now that you've created your site, you'll set up a custom list to manage the employees and projects.

9.2.2 Custom list: creating a data store of current projects

To begin, you'll create a list to manage your employees and the projects they work on. To do this, create a custom list:

Step	Action	Result/Notes
1	Choose Site Actions > More Options, filter by Blank & Custom, and select Custom List. For the name enter Employee–Project Associations. Select More Options, and for the description enter The following list stores information about current projects and the employees assigned to them. Click Yes for displaying this list in the Quick Launch bar.	
2	Click Create.	This will redirect you to the main page of your newly created list.

You should now be looking at the main page for the Employee-Project Associations list. A series of menu options in the Ribbon have been provided to help you manage these items, as shown in figure 9.8. You'll focus on the List Settings option, which is found in the Settings section in the far-right side of the Ribbon, to customize the list's metadata.
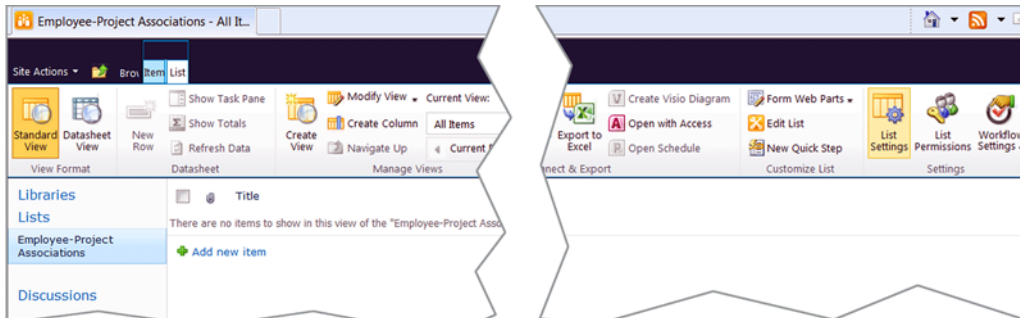
Figure 9.8 Menu options for a list in SharePoint. The List Settings option is selected on the right side of the Ribbon.

Now that you have a list, it's time to get creative and begin to customize the list settings.

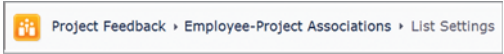**List Settings: disabling attachments**
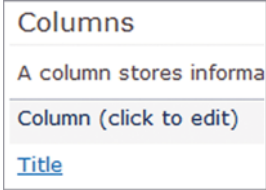
By default when you create this list, a paper clip icon will display any attachments associated with an item. For our scenario, there's no need for a user to upload an attachment, so you're going to disable the feature:

Step	Action	Result/Notes
1	Choose List Settings.	
2	Select Advanced Settings	This is located under the General Settings grouping.
3	Click the radio button to disable attachments to list items.	This will remove the paper clip icon shown in figure 9.8 next to Title.
4	Click OK.	

Your users will no longer have the ability to add an attachment. Next we'll discuss how to customize the rest of the columns in the list. What you've done so far may seem a bit boring, so let's have some fun and customize the rest of the columns in the list to match our scenario.

List columns: customizing the data captured

This section deals with modifying the columns associated with the Employee-Project Associations list under List Settings. You want to track Project Manager, Employee, and Project. First, modify the existing Title column:

Step	Action	Result/Notes
1	Choose List Settings.	You're probably already there if you just completed the previous section. You'll know this if you see the following image at the top of the page. Project Feedback ▸ Employee-Project Associations ▸ List Settings
2	Select Title, which is displayed in the Columns section.	Columns A column stores informa Column (click to edit) Title
3	In the Column Name field enter Project and click OK.	Title by default is a required field requiring that you enter information in it. Because you renamed Title to Project, you now have a required field for Project. Next you'll create the Employee and Project Manager columns.
4	In the Columns section select Create Column. For Column Name enter Employee. Choose Single Line of Text. Click Yes under Require That This Column Contains Information. Click OK.	

Step	Action	Result/Notes
5	Repeat step 4, but enter `Project Manager` for the column name.	You now have a list that will enable you to track your employees and their projects.
6	Complete these steps again, but enter `Project Manager` for the column name in step 3.	

Yay! You're now able to track your employees and their projects and have a consistent approach for the data that needs to be entered. Now that you've completed this, let's get started with the creation of a Forms library so you'll have a consistent form to gather feedback at the end of a project. You'll need some data in the list you just created to complete the next section, so add a few items to the Employee-Project Associations list.

9.2.3 Forms library: creating a library to manage the feedback form
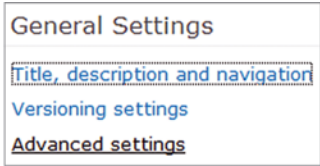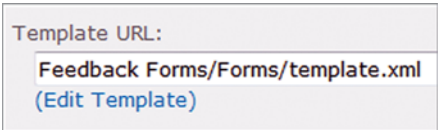
To create the Forms library to manage the form, complete the following steps:

Step	Action	Result/Notes
1	Choose Site Actions > More Options, filter by Library, and select Forms Library. For Name and Description enter Feedback Forms. For the Description enter `The following library is set up to manage the feedback forms.`	
2	Click Create.	This will redirect you to the main page of your newly created list.

Your Forms library is in place, so next you'll open up InfoPath to create a form.

9.2.4 InfoPath: creating your feedback form

Microsoft Office InfoPath is part of Office Professional Plus. It helps users to create rich dynamic forms without having to write a line of code. For the SharePoint Foundation section of this chapter, you're going to use the client version of InfoPath. The SharePoint Server section, 9.3, will cover Forms Services, which will allow users to access the form without InfoPath. For this example you're going to generate a feedback form using InfoPath. To start, you'll need to open InfoPath by doing the following:

Step	Action	Result/Notes
1	Choose Library Settings for the Forms library.	You're probably already there if you just completed the previous section.
2	Select Advanced Settings under the General Settings section.	
3	Select Edit Template (under the Template URL field) to open a blank Info-Path template.	You'll now see a blank form that has been opened in InfoPath Designer.

> **NOTE** If you have an existing template that you'd like to publish, you can open InfoPath in design mode and click the Office button. Here you'll see a series of options; the one you're interested in is called Share. There you can publish to a SharePoint Server.

You'll now see a blank form that you can design. We're now going to walk through the powerful features of InfoPath so you can learn to create powerful forms. The designer enables you to quickly add controls, style, and logic to your forms.

Design task: designing your form

> You now have a blank form open that you can begin to design. The Ribbon has a menu of actions that you'll use to design your form, along with a column to the right to manage your fields, as shown in figure 9.9.

Figure 9.9 Ribbon is used often when designing your form. In this image it's displayed at the top of the page.

> To begin you'll create the layout of your form:

| Step	Action	Result/Notes
1	Click the Insert tab in the Ribbon.	
2	In the Page Layouts section select the fourth table, described as Title with Vertical Emphasis Bar.	You'll now see an empty layout table displayed, as shown in figure 9.10.
3	Click the section with the text Add Section Layouts.	
4	In the Section Layouts section of the Insert tab of the Ribbon, select the fourth section layout, described as Two-Column with Label Left-Aligned and No Heading.	
5	Select the text Click to Add Title and enter Employee Feedback.	You'll now see the updated layout table displayed; see figure 9.11.
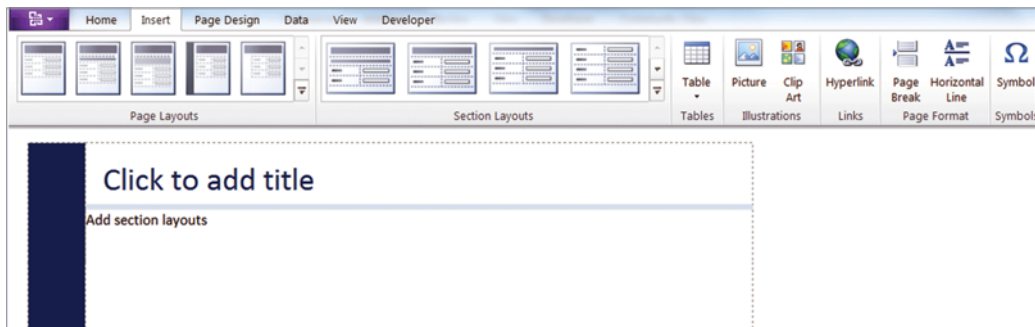
Figure 9.10 InfoPath form with a layout table added. This will help you to quickly format the content and get started on your form.

These simple steps will enable you to quickly get started with setting a design and format for your forms.

Now that you've designed your form, we'll discuss how to input or display data through the use of controls. A pretty form can take you only so far without the use of controls to capture the data. So let's get started discussing how to add value to this form.
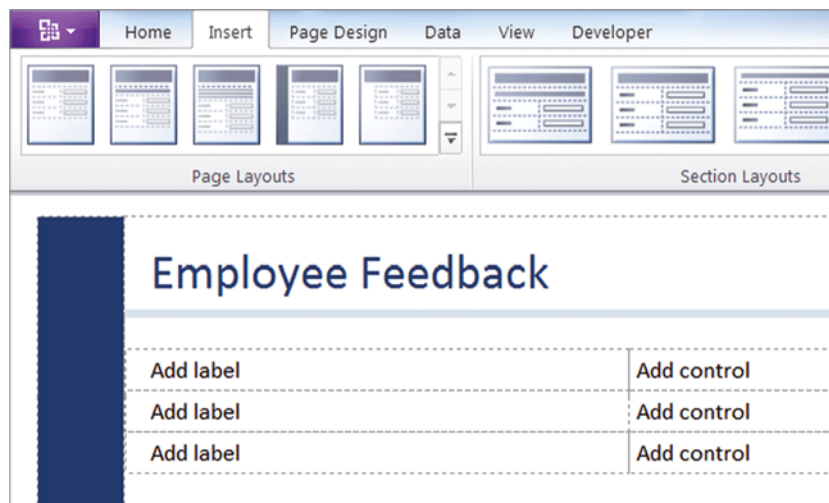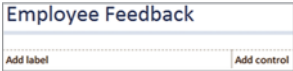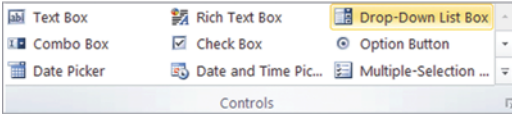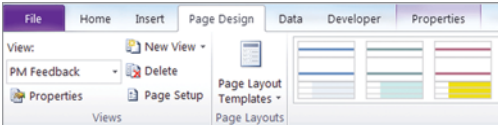

Figure 9.11 InfoPath form with a layout table and section layout added. This will help you to quickly format the content and get started on your form.
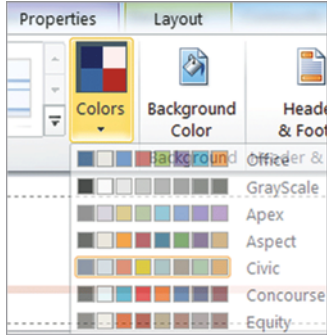
Controls: enabling users to input data

In this section you're going to add a series of controls and a data connection to populate them with data from a SharePoint list. First, you'll add the controls to your form:

Step	Action	Result/Notes
1	Click the top row on the right containing the text Add Control.	
2	Select the Home tab in the Ribbon, and in the Controls section select Drop-Down List Box.	
3	Repeat this step for the next two rows.	
4	In the left column for the first row containing the text Add Label, enter `Project:`. In the next row enter `Project Manager:`. In the next row enter `Employee:`. In the last row add a button control by selecting it from the controls section.	

Before moving on to dealing with the forms data source, let's update the color scheme:

Step	Action	Result/Notes
1	Select the Page Design tab in the Ribbon.	

Step	Action	Result/Notes
2	In the Colors drop-down list select Civic.	

Once you've finished your form should look like the one in figure 9.12.

Congratulations! You've now created and designed your own form. But what can you do with the data? It's great to have a form, but you need something to put in it. Aren't you excited? That's what you're going to do next!
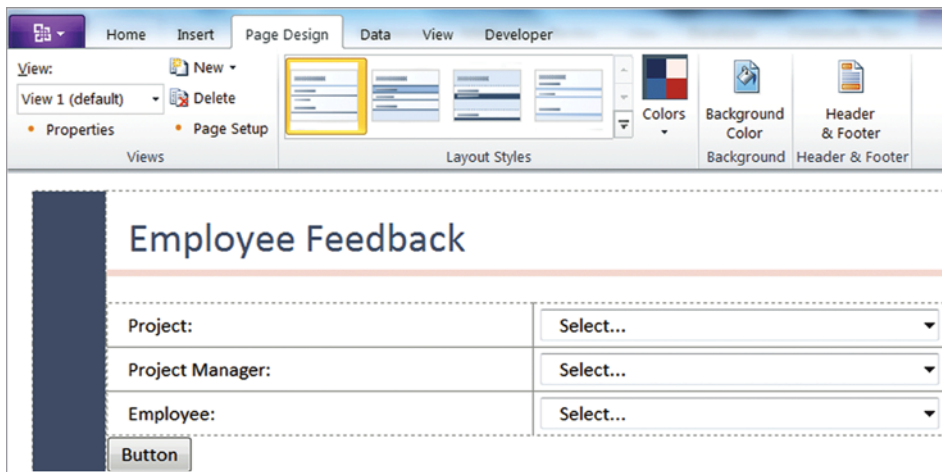

Figure 9.12 Color schemes are a quick and easy way to modify the look and feel of an InfoPath form. Here you've applied the Civic color scheme.

Data source: managing the data

A forms data source is important because it structures the data. One common mistake that new users of InfoPath make is that they don't ever go back and give meaningful names to the data they capture. It's important for you to understand the data in the form when you're creating your views. Your data can be viewed in the column marked Fields displayed on the right side of the page.

Here you'll notice that there are three fields under myFields named field1, field2, and field3. Each of these fields corresponds with one of the drop-down list box controls. You need to rename each field to a meaningful value. You'll do this by right-clicking each drop-down list box control and selecting Drop-Down List Box Properties to display the properties associated with it. Figure 9.11 shows the properties for your drop-down list box.

Figure 9.13 This is the dialog box that will appear for each of the field properties associated with the drop-down list boxes. This will help you provide additional power and logic to your controls.
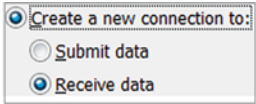
Updating the properties associated with your controls will help you provide additional functionality to how users enter the information. The following steps walk you through the needed changes to the properties:
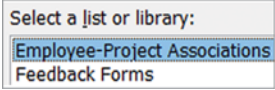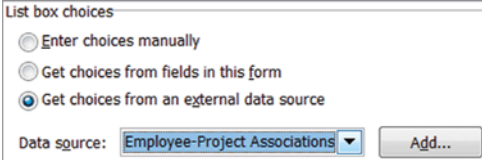
Step	Action	Result/Notes
1	Right-click the first drop-down list box control and select Drop-Down List Box Properties. Enter Project for the Field Name. Select Cannot Be Blank under Validation. Select Get Choices from an External Data Source under List Box Choices.	

You now want to configure this to look up values from an external data source. The source that you're interested in accessing is the Employee-Project Associations list you created earlier in this chapter in section 9.2.1. To do this you must create a data connection.

Click Add, and the Data Connection Wizard will appear. Figure 9.14 shows the Data Connection Wizard.

Now you'll configure your data connection:

Step	Action	Result/Notes
1	Click Create a New Connection To and choose Receive Data. Then click Next to go to the next step.	
2	For the location where you would like to receive your data, select Share-Point Library or List, and click Next to go to the next step.	By pulling the data from a SharePoint list, you can modify the values without having to republish the form.
3	Enter in the URL to the site where the Employee-Project Associations list is located, and go to the next step.	

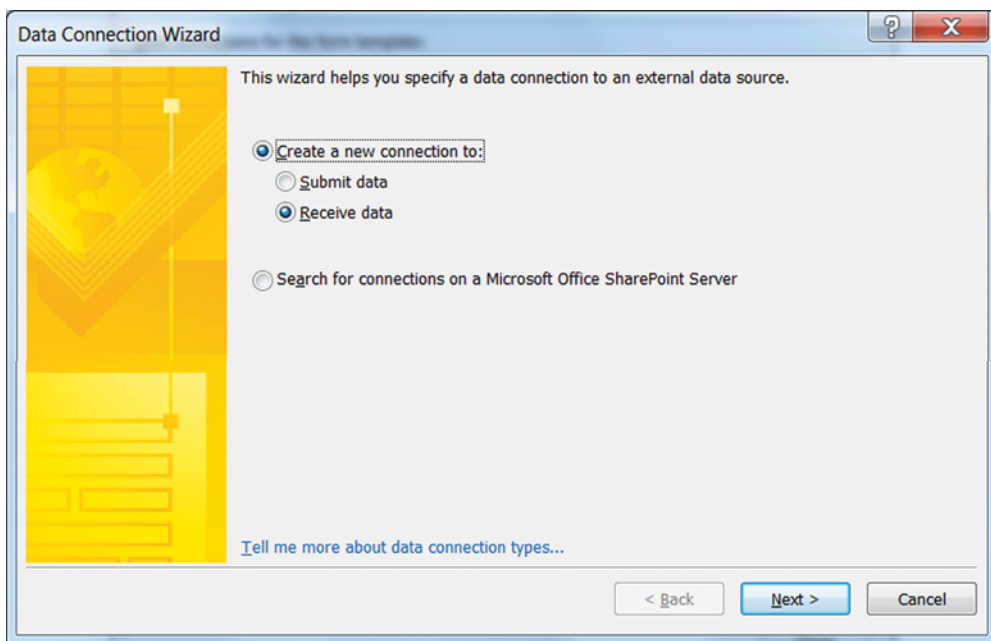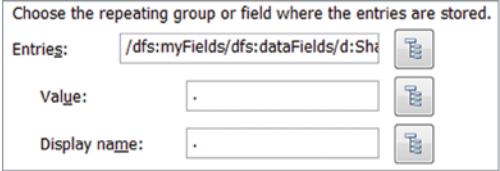| Step	Action	Result/Notes
4	Under Select a List or Library select Employee-Project Associations and go to the next step.	Select a list or library: **Employee-Project Associations** Feedback Forms
5	Check the following fields: Project, Employee, and Project_Manager. Click Next until you're finished with the Data Connection Wizard.	You'll now see the new data source in the drop-down list box properties. List box choices ○ Enter choices manually ○ Get choices from fields in this form ◉ Get choices from an external data source Data source: Employee-Project Associations ▼ Add...

Figure 9.14 To retrieve data from a SharePoint site you have to create a connection to receive data by configuring the Data Connection Wizard. This will enable you to populate your drop-down list boxes from lists that exist in SharePoint.

You should now be in the Drop-Down List Box Properties dialog box and ready to configure the details for pulling the data:

Step	Action	Result/Notes
1	Click the XPath icon next to Entries. Expand dataFields. Expand the SharePoint List Item grouping. Select Project.	
2	Click OK.	Your configured entries should look like the following: Choose the repeating group or field where the entries are stored. Entries: /dfs:myFields/dfs:dataFields/d:Sha Value: . Display name: .
3	Select the check box next to Show Only Entries with Unique Display Names, and click OK.	☑ Show only entries with unique display names

To test what you've done and verify that it was successful, you'll need to have entered data into the Employee-Project Associations list. You can then test it by selecting Preview to ensure that the project values that you've entered into the Employee-Project Associations list are displaying.

You'll now see your form. If it's working, the project data should be displayed, as shown in figure 9.15.

When you've finished testing your form, you can exit the preview mode by selecting Close Preview, as shown in the ribbon in figure 9.15.

You'll need to perform these steps again for the drop-down list box for Project Manager and Employee with a few minor exceptions:

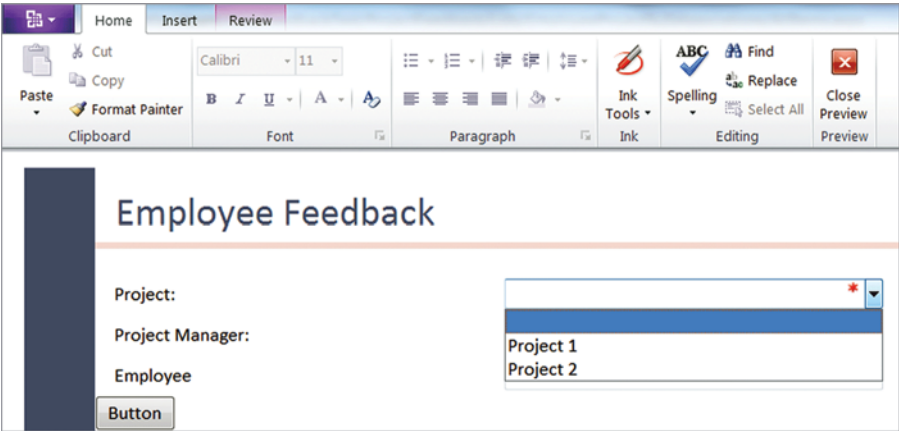⚙ For Field Name enter `ProjectManager` or `Employee`.

Figure 9.15 The drop-down list displayed is dynamically pulling information from a list on your SharePoint site. If you were to add new values to the SharePoint list, they'd automatically appear in the drop-down list.

- You won't have to add another data source.
- For the XPath entries select Project Manager or Employee.
- On the XPath entries you'll need to define a filter by completing the following steps:

Step	Action	Result/Notes
1	Click the Filter Data button on the Select a Field or Group dialog box.	

| Step	Action	Result/Notes
2	Click Add. For the Project Manager field, select Project Is Equal To Project from the main data source. For the Employee field, create two rules, one that matches the Project Manager rule and a second that sets Project Manager equal to ProjectManager from the main data source. It should look like figure 9.16. To get to the main data source, choose Main from the drop-down list at the top of the dialog box labeled Fields, as shown in figure 9.17.	
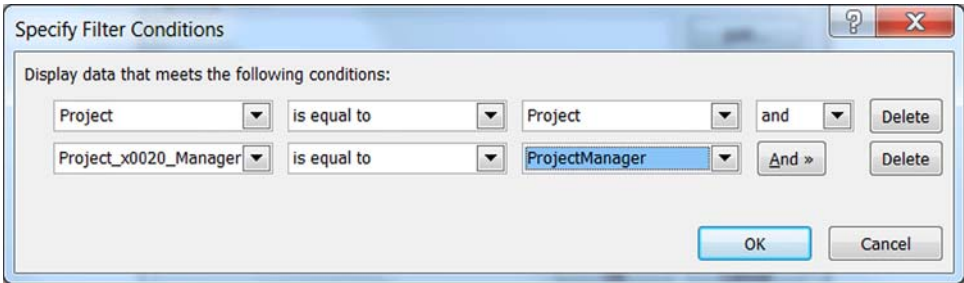
Figure 9.16 This is what the filter conditions for the Employee field should look like. This will add the logic to your drop-down controls to show only the values that are valid based on the previous selection.

You've now applied a filter to your drop-down lists so they'll show only the values that are valid based on the previous selection. To make sure we're on the same page, verify that your data source looks like the one in figure 9.17.

In this next section we're going to cover views. This will enable you to create a flow to the form so that different users will see only the data that pertains to them. So far you have a powerful form, but you'll want the resource manager to see different information than the project
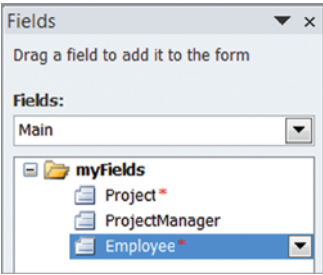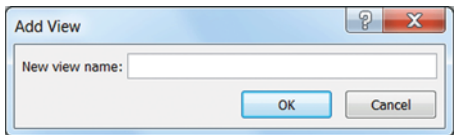
Figure 9.17 Your data source so far should appear like this. Naming your fields with recognizable terms is important when you start to build out forms that have many fields.

manager. This will make the information that the form is requesting easy to identify. Remember that once you've finished with this, you'll have an automated way to gather feedback on employees and to track it. You'll be able to quickly send out many requests within minutes and keep the data organized.
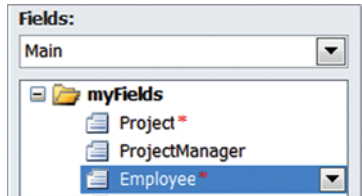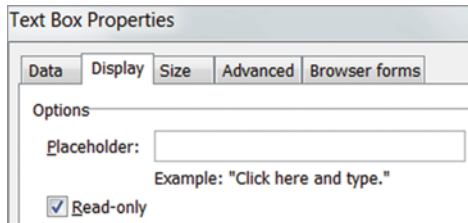
InfoPath views: changing the way the form is displayed

This section walks you through the process of creating views. The default view that you just created is for the resource manager to complete before sending out a feedback request. The next view will be for the project manager to complete in order to give feedback on an employee:

Step	Action	Result/Notes
1	Navigate to the Page Design tab in the Ribbon of InfoPath.	
2	Select Properties, and for the View Name enter Manager Feedback Request.	
3	Locate the New drop-down list box next to the views and select New View.	

Step	Action	Result/Notes
4	The Add View dialog box will appear and prompt you to enter a view name. Enter PM Feed–back.	

You'll now begin to design your new view. This view is for the project managers to give feedback on the employees assigned to their projects. You'll design a similar layout to that completed in the *Design task: designing your form* section. You'll complete the same steps; the one new step is to add three new rows to the section layout. Once that's complete, you'll lay out the controls:

Step	Action	Result/Notes
1	In the Fields section select Project and drag it to the upper-left cell of your lay-out.	If you drag it into the right column, it won't autoformat the label and control across the two columns.
2	In the Fields section select Employee and drag it to the upper-left cell.	
3	For each control you just added, right-click the text box and select Text Box Properties. Navigate to the Display tab and check the text box to make the control read-only.	
4	Click OK.	

Step	Action	Result/Notes
5	For the next few rows, enter the following questions and choose a control for each based on the next table.	
Demonstrates knowledge in his or her area of specialization		Rich text box
Manages expectations and delivers accordingly		Rich text box
Enters time accordingly		Rich text box
From a scale of 1 to 5 with 5 being the highest, rank your overall satisfaction with this employee		Option button set for 5

For the final control, add a button to the bottom of the page. Now that you've added the controls, you'll need to customize them.

For the rich text boxes complete the following:

- Enter Question 1, Question 2, or Question 3 for the field name:
- For the option button complete the following:
- For the field name enter Employee_Ranking.
- Modify the text to be labeled 1-5.

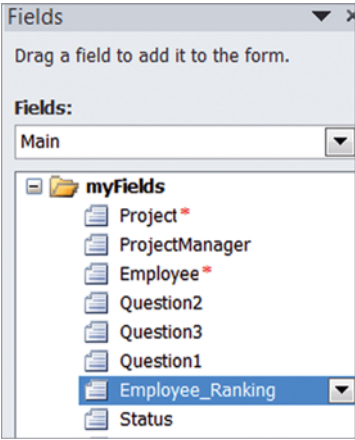Once you've completed these steps, your form will look like the one in figure 9.18.

Figure 9.18 Your form will look like this once the controls have been added to the page. Exciting to see it in action! Was it really that hard? No, I didn't think so.

You'll now create a third view that will be identical to the previous view except all the controls will be read-only. This view will be the one that displays when forms are submitted to SharePoint:
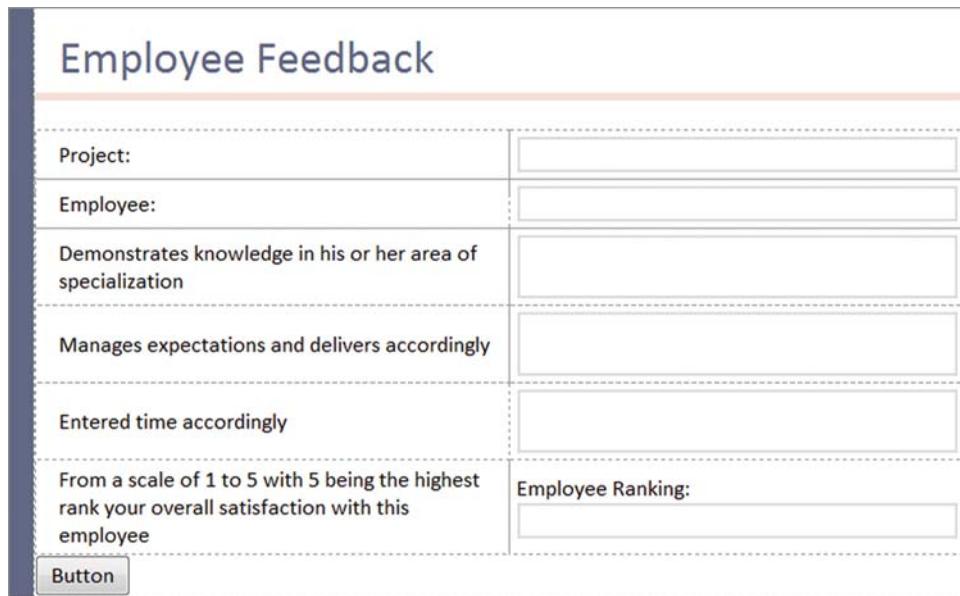
Step	Action	Result/Notes
1	Select everything in the PM Feedback view by pressing Ctrl-A, and then press Ctrl-C to copy.	
2	Locate the New drop-down list box next to the views and select New.	A dialog box will appear and prompt you to enter a view name. Enter Submitted Feedback.
3	Click OK.	
4	Right-click the new view and select Paste.	

You should now be looking at a version of the form that matches figure 9.18. There are just a few modifications that you'll need to make to this form:

Step	Action	Result/Notes
1	Delete the buttons.	Delete both the option and classic buttons at the bottom of the page.
2	Change the properties for all the controls to read-only.	Remember that this is under the Display tab.
3	Go to Fields, and select and drag Employee_Ranking over to the section where the options buttons had been.	

Once you've finished your form for the Submitted Feedback view should like figure 9.19.

Congratulations! You've now completed your form, and you should be proud of yourself. The information that you'll capture will now be consistently entered and managed. Your end users have a nice way to view the data and see it in a format that applies to them. To finish this off, you'll want to configure your data connections so you can send the form to SharePoint and also send it via an email to request the recipient to enter feedback. You'll also want to ensure that this form and its information are published to SharePoint so managers can quickly access it and send out a request and track the responses that they receive. To begin, you'll configure your data connections.
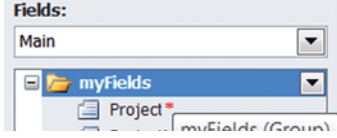
Figure 9.19 Once you've added and configured the data source, verify that your form appears like this one. Also, once you run the form, the controls that are marked Required will now have either a red dotted line or an asterisk to denote that they're required.

9.2.5 InfoPath workflow: configuring how users see the data
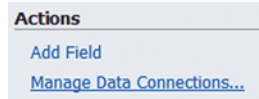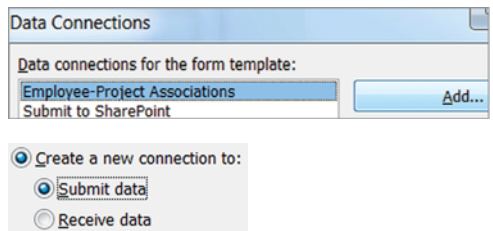
InfoPath doesn't necessarily have workflow, but it does have the ability to dynamically switch views as end users go through the different stages of completing the form. In this section you're going to define data connections to share the data with SharePoint and the end users through Outlook. You'll also configure submission behaviors and form behaviors to dynamically switch the views. To begin, you'll define the data connections.

Data connections: sending the data to SharePoint and Outlook

The next series of steps walks you through configuring the data connections. The first step is to configure a field to track the different phases of the form submission. To begin, you'll create a new field in the data source to track the status of the form:

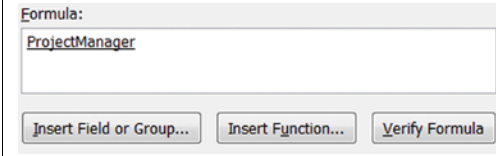| Step	Action	Result/Notes
1	Click the drop-down arrow for myFields in the Data Source section of the Fields bar displayed to the right of your InfoPath form.	
2	Click Add. For Name enter Status.	
3	Click OK.	You'll now have a new data field to store the status of the form so the web can track what stage of the submission process you're in.
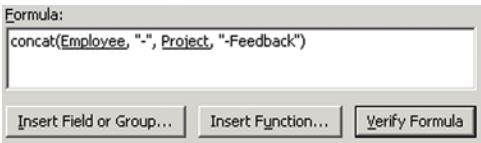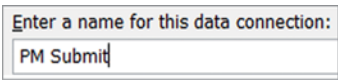
The next section walks you through the steps to create a data connection:

Step	Action	Result/Notes
1	Select Manage Data Connections under Actions in the Data Source section of the Fields bar displayed to the right of your InfoPath form.	
2	Click Add.	
3	Select Create a New Connection To and select Submit Data. Click Next to go to the next step.	
4	Select As an Email Message, and go to the next step.	This will generate an email that will notify the project manager when the resource manager would like feedback on an employee.
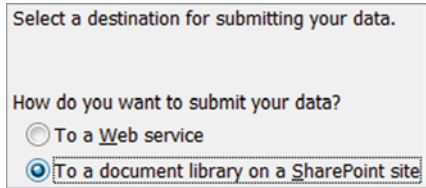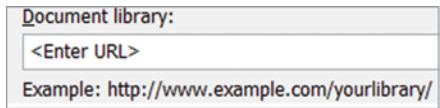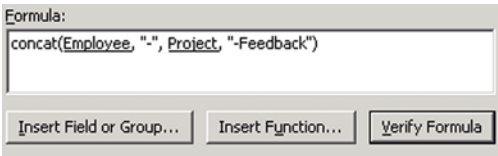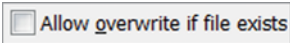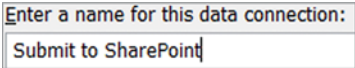
Step	Action	Result/Notes
5	For the To line, select the option Insert a Formula, and from there choose Insert Field or Group. Select ProjectManager and click OK.	Formula: ProjectManager [Insert Field or Group...] [Insert Function...] [Verify Formula]

NOTE   Sending an email using the name of the project manager works only if Outlook can resolve the names that are entered into the Employee-Project Associations list. If this doesn't work for you, then you may want to add an Email column to your list and use that field instead.

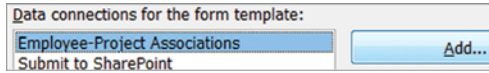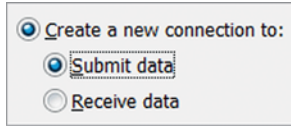| Step	Action	Result/Notes
6	For the Manage Data Connections Subject line, select the option Insert a Formula, and from there choose Insert Field or Group. Add both Employee and Project. Add `concat(` before the two fields. Separate the fields with , "–", and add ,"–Feed-back") at the end. Click OK.	Formula: concat(Employee, "-", Project, "-Feedback") [Insert Field or Group...] [Insert Function...] [Verify Formula]
7	Click Next twice and leave the defaults.	
8	In the next screen enter the following name for the data connection: `PM Submit`.	Enter a name for this data connection: PM Submit
9	Click Finish.	

Good job! Now that you have your data connections completed for sending an email, you'll also want to configure the data connection for submitting the data to SharePoint. Don't worry—this will be just as easy as the last set of steps:
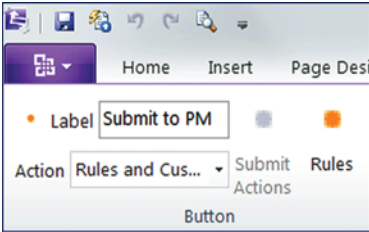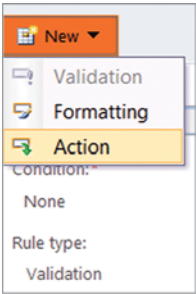
Step	Action	Result/Notes
1	Select … in the Data Source section of the Fields bar displayed to the right of your InfoPath form.	You should already have the Manage Data Connections dialog box open if you're continuing from the previous steps.
2	Click Add.	Data connections for the form template: Employee-Project Associations Submit to SharePoint Add…
3	Select Create a New Connection and then click Submit Data. Click Next to go to the next step.	○ Create a new connection to: ○ Submit data ○ Receive data
4	Select the destination To a Document Library on a SharePoint Site, and go to the next step.	Select a destination for submitting your data. How do you want to submit your data? ○ To a Web service ○ To a document library on a SharePoint site
5	For the Document Library field, enter the URL for the Forms library.	Document library: <Enter URL> Example: http://www.example.com/yourlibrary/

Step	Action	Result/Notes
6	For the File Name line, select the option Insert a Formula, and from there choose Insert Field or Group. Add both Employee and Project. Add `concat(` before the two fields; separate the fields with , `"-"`, and add `,"-Feed-back")` at the end. Click OK.	Formula: `concat(Employee, "-", Project, "-Feedback")` Insert Field or Group... Insert Function... Verify Formula
7	Select the check box next to Allow Overwrite if File Exists, and go to the next step.	☐ Allow overwrite if file exists
8	In the next screen enter the following name for the data connection: `Submit to SharePoint`.	Enter a name for this data connection: Submit to SharePoint
9	Click Finish.	

Now that you've configured your data connections, you need to configure how to link these connections to the different submission phases. The next section covers the configuration of form submissions.

Submissions: setting rules to customize the behavior of form submissions

The next series of steps is to configure the submissions. In this section you're going to submit forms using a series of rules so multiple actions can take place. To begin you'll work with the Manager Feedback Request view:

Step	Action	Result/Notes
1	Select the button control.	The Ribbon will automatically default to the Control Properties tab when the button is selected.
2	For the label enter Submit to PM.	
3	Select Rules.	The rules manager will open on the right side of the page.
4	Select New > Action.	
5	In the section marked Details For, enter Submit to PM.	
6	Select Add > Set a Fields Value. For the field select Status, and for the value enter Submitted and click OK.	**Note:** InfoPath is case sensitive.
7	Select Add > Submit Data. In the Data Connection drop-down list, select Submit to SharePoint and click OK.	

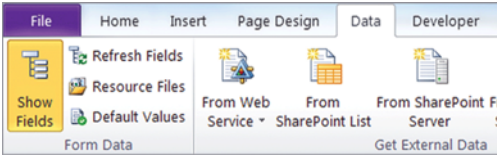| Step	Action	Result/Notes
8	Select Add > Submit Data.	In the Data Connection drop-down list, select PM Submit and click OK.
9	Select Add > Close the Form.	If the option to prompt the user to save is selected, then deselect it and select OK.

You'll complete the same series of steps for the button control on the PM Feedback view with the following exceptions:

- For step 5 enter Completed Feedback for the Details For section.
- Change the label to Submit.
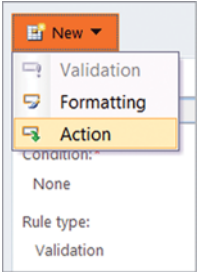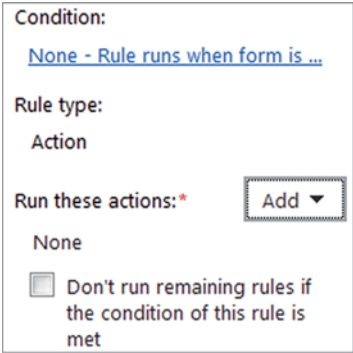- For step 6 enter the value as Completed.
- Skip step 9.
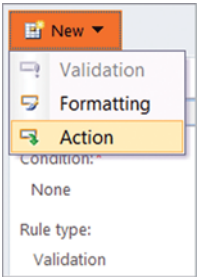
In this section you added the actions behind the user submit and updated the Status field. You'll now work on customizing the form behavior based on the Status field.

Page options: customizing the form behavior when opened

You have several options for dynamically switching the view. One common way is to do it when setting the rules. Another way is to do it through the Page Options settings. For this section you're going to set up the dynamic behavior of the form based on the Form Load rules, which can be found in the Data section:

Step	Action	Result/Notes
1	Navigate to the Data tab in the Ribbon.	
2	Select Form Load.	The rules manager for form load will display on the right side of your form.

Step	Action	Result/Notes
3	Select New > Action.	
4	In the section marked Details For, enter Open PM Feedback View.	
5	Click the hyperlink under Condition to set a condition. Set it to Status Is Equal to (Type a Text) Submitted, and click OK.	
6	Select Add > Switch Views.	Select PM Feedback from the View drop-down list and click OK.
7	Select New > Action.	
8	In the section marked Details For enter Final Submission View.	

Step	Action	Result/Notes
9	Click the hyperlink under Condition to set a condition. Set it to Status Is Equal to (Type a Text) Completed, and click OK.	Condition: None - Rule runs when form is ... Rule type: Action Run these actions:* Add ▼ None
10	Select Add > Switch Views.	Select Submitted Feedback from the View drop-down list, and click OK.

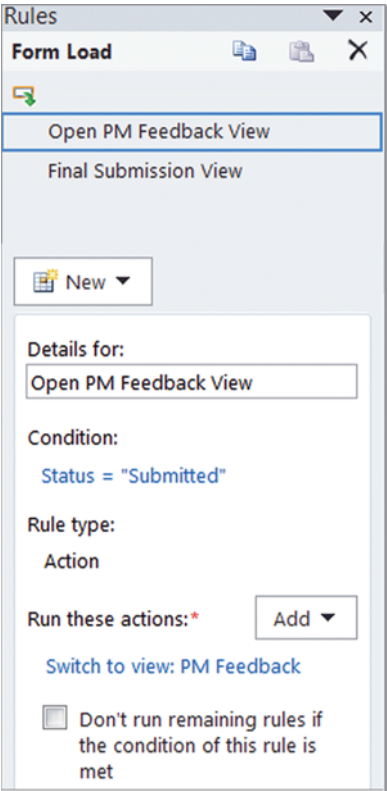The rules you created should look like those in figure 9.20 once they're completed.

Figure 9.20 The rules you set up for your form load should look like these once you've completed them. In SharePoint 2010 the rules manager makes it easy to see all your rules in one place.

Congratulations! You've finished creating your form. Now all that's left is to publish it. This is important because it impacts how the users will access it. Publishing your form to a Forms library ensures that all your end users open the same form, and any updates that you make go to one central location, so you can ensure all of the end users are using the same template.

9.2.6 Publishing: publishing the form to SharePoint

Now that you've created your library, we will go through the steps to update the form associated with that library. If you ever need to make changes, you can complete the following steps to republish the updates you make:

Step	Action	Result/Notes
1	To get to the full publishing capabilities, click the Office button, navigate to Share, and select Publish.	Here you should see the Quick Publish bar for the current location along with other capabilities, such as publishing to a SharePoint library, email, or network location.
2	Select SharePoint Server.	This will open a dialog box that will enable you to configure various publishing options. By default, the location should already be entered for the first step of the dialog box. If it isn't, enter the URL for the site that has your Forms library and click Next.
3	Leave the default setting for Document Library and click Next.	
4	Select Update the Form Template in an Existing Library. Select Feedback Forms and go to the next step.	

Step	Action	Result/Notes
5	Click Add.	This step is important because it allows you to select columns from the form so they'll be available in SharePoint. This is useful when working with views in a Share-Point list because it will allow the users to view and access the data in different ways.
6	Add all the columns and click Next.	
7	Click Publish.	
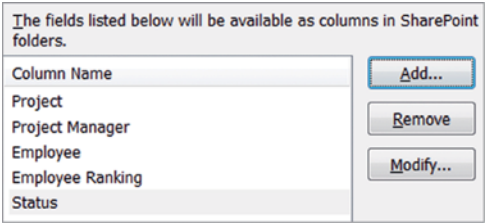
Good job! The form is now published and your users have access to it. Let's now discuss how to share the data with SharePoint.

9.2.7 Form library views: displaying the forms

Now that the form is created and uploaded, you'll need to reconfigure the site to display the data. To begin, you'll add a web part view of the Feedback Forms library:

Step	Action	Result/Notes
1	Choose Site Actions > Edit Page.	
2	Select Add a Web Part in the Left Zone.	
3	Select Feedback Forms in the Web Parts section of the Ribbon, and click Add.	

Step	Action	Result/Notes
4	On the web part that you just added, select Edit Web Part.	If you're having trouble finding the Edit Web Part option, make sure you hover your mouse over the title of the web part. On the right side a drop-down arrow will display with the option to edit the web part.
5	Select Edit the Current View. Deselect Modified, Modified By, and Checked Out To. Select Status. Expand Group By, and select First Group by the column Project. Click OK.	
6	You've not finished editing your web part, so go back to Edit Web Part.	
7	For Toolbar Type select Show Toolbar, and then click OK.	

In the web part you just created you'll now have an option to click the New button to initiate a form, as shown in figure 9.21.

Feedback Forms

	Type	Name	Status
New ▾   Upload ▾   Actions ▾   Settings ▾

There are no items to show in this view of the "Feedback Forms" document library. To add a new item, click "New" or "Upload".
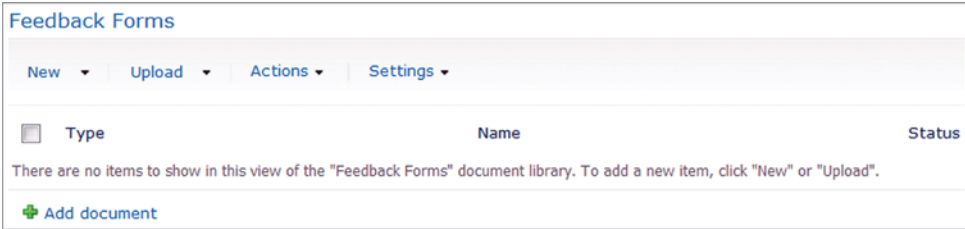
➕ Add document

Figure 9.21 You now have the ability to click the New button in the web part to initiate your form. This step won't be necessary in the next section using Forms Services. Instead, you'll display the form in the browser.
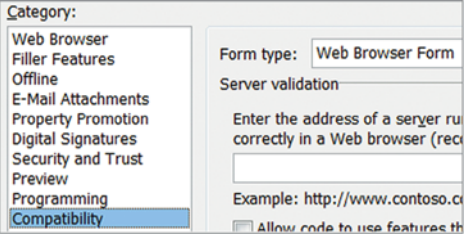
You've finished configuring your feedback form for the SharePoint Foundation portion of this scenario. The one catch is that it requires your users to have InfoPath in order to complete the form. There's a browser-based option called InfoPath Forms Services, which is part of SharePoint Server, that we'll discuss in the following section. This will allow you to use the same scenario we walked through, but it won't require your end users to have InfoPath installed on their machine. One key area where this would be of significant use is public-facing sites on the internet. You have no control over the software that users have installed on their machines. This feature will be key to ensuring they can complete the forms.

9.3 Leveraging Forms Services with SharePoint Server

SharePoint Server provides some new options to InfoPath 2007 and above through the addition of Forms Services. In the 2003 release, users were required to have InfoPath in order to complete the forms, but this was resolved when InfoPath Forms Services was released, which enabled users to access the forms though a browser. This continues to be a strong feature with SharePoint Server 2009. This scenario leverages the steps from section 9.2, where you created your form, but instead it walks you through the publishing steps to make it a web-based form that doesn't require your end users to have InfoPath installed on their PC.

9.3.1 Forms Services: accessing the form without InfoPath

You'll start by enabling Forms Services on the Document library and on the form so that the behavior will change to open the forms via the web browser when a user clicks New:

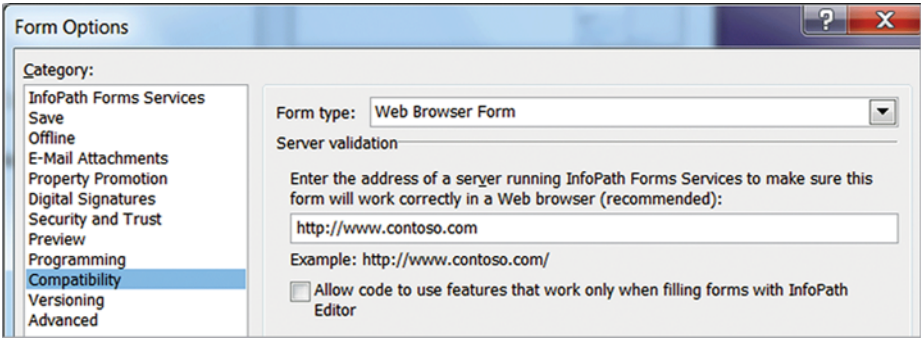| Step	Action	Result/Notes
1	Select file and choose Form Options.	**Advanced form options** Configure advanced form design options and customize how users will fill out this form.
2	In the Category box select Compatibility, and verify that Form Type is set to Web Browser Form. Click OK. A full view of this is shown in figure 9.22.	Category: Web Browser, Filler Features, Offline, E-Mail Attachments, Property Promotion, Digital Signatures, Security and Trust, Preview, Programming, Compatibility — Form type: Web Browser Form. Server validation. Enter the address of a server ru... correctly in a Web browser (rec... Example: http://www.contoso.c... Allow code to use features th...
3	Enter the URL for your SharePoint site, and click OK.	

Figure 9.22 Enable browser compatibility from InfoPath to verify your design. This will ensure that you have Forms Services. Although you may have SharePoint Server, the site that you're implementing it on might have that feature turned off.

When you go to publish the form, you'll need to check the check box to enable this form to be filled out using a browser, as shown in figure 9.23.
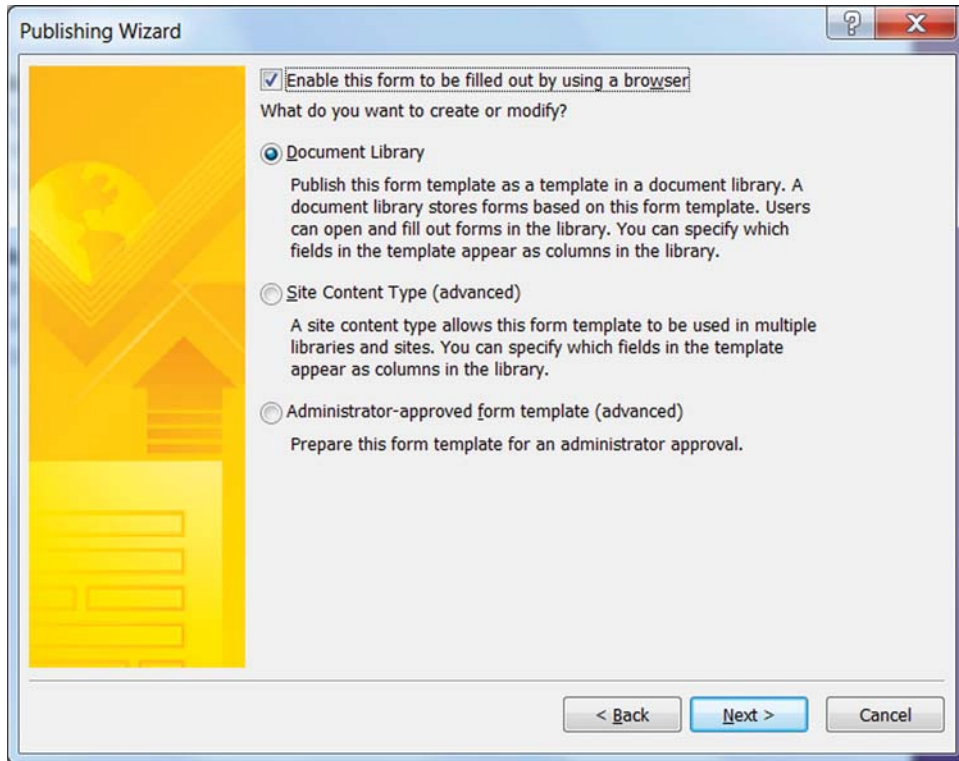
Figure 9.23 Step in publishing where you'll need to enable the form to be filled out using a browser. Notice the option here to also publish a form as a site content type. This can be useful if you need to push your template to multiple libraries.

The next time you go to view the form, it will display in the browser, as shown in figure 9.24.

You're finished with that section, so now it's cleanup time. Your focus will be on the toolbar to remove some of the functionality from the users; this will prevent them from doing something that you don't want them to do. An example would be switching around the views and not following that nice logic that you put into your form for showing the end user the appropriate view.
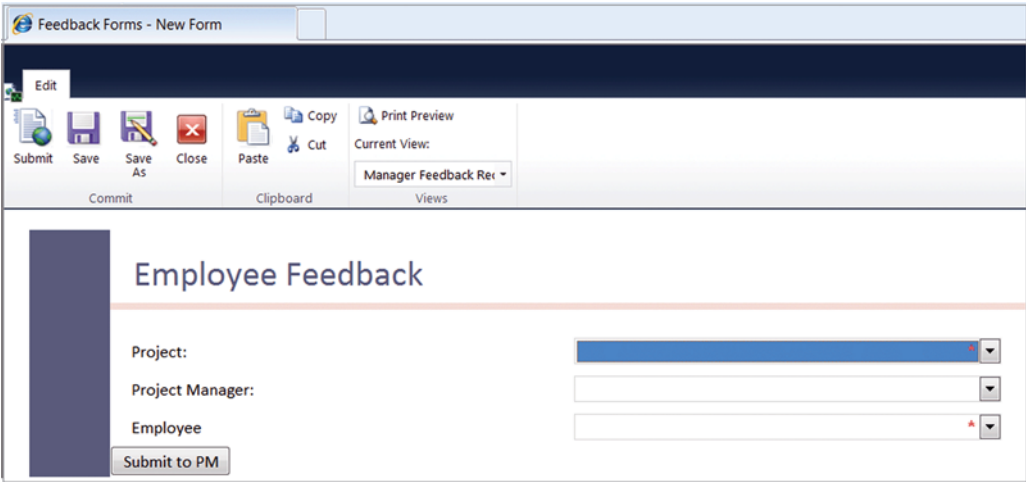
Figure 9.24 The view of the feedback form for the resource manager to request feedback from the project manager is displayed using InfoPath Forms Services. This enables the form to be filled out without having the client version of InfoPath installed.

Browser properties: modifying the toolbar

When you view a form using Forms Services, two toolbars will be displayed above and below the form. You can modify both toolbars or remove them altogether. Because it displays specific items that you won't want your users seeing, you're going to remove some of those features:
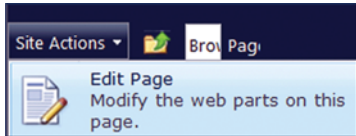
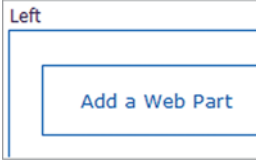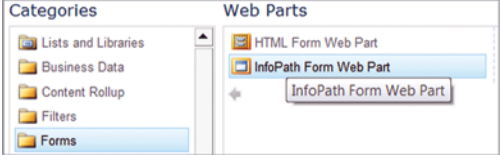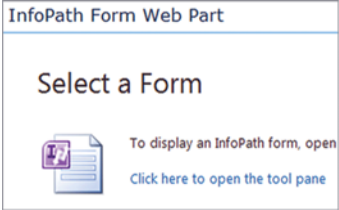| Step	Action	Result/Notes
1	Click the File button and choose Form Options.	

Step	Action	Result/Notes
2	Uncheck Save, Save As, Close, and Views,	The following options apply when the form is opened in a Web browser. User Interface Options ☑ Show InfoPath commands in Ribbon or toolbar When the Ribbon is unavailable ○ Show toolbar at the top of the form ○ Show toolbar at the bottom of the form ⦿ Show toolbars at the top and bottom of the form Show the following commands: ☑ Submit ☐ Save ☐ Save As ☐ Close ☐ Views ☑ Print Preview ☐ Update
3	Republish the form.	

Now that you've designed your form and published it to the site, let's discuss an alternative approach for displaying your browser-based form.

9.3.2 Page Viewer web part: displaying your form

The Page Viewer web part used with Forms Services can provide a fantastic option for enabling users to have quick access to a form once they go to a page. To add the form to your SharePoint site without having your users click New, you can do the following:

Step	Action	Result/Notes
1	Navigate to the homepage of the Project Feedback site.	
2	Select Site Actions > Edit Page.	Site Actions ▾ 🗂 Brow Pag 📝 Edit Page Modify the web parts on this page.

Step	Action	Result/Notes
3	Select Add a Web Part in the Left zone.	
4	Under Categories select Forms, and choose the web part called InfoPath Form Web Part.	
5	The web part will display a hyperlink that says Click Here to Open the Tool Pane. Click that link.	
6	Enter or enable the following for the web part properties: List or Library: Feedback Forms Views: Make sure the default is set to Manager Feedback Request. Submit Behavior should be set to Open a New Form. Click OK.	

Next, you'll clean up the way the page is laid out. Because the form will need more space, you may want to play around with where items are located. To remove the scroll bars from around your form, you'll need to complete the following:

1 Select Edit > Modify Shared Web Part.

2 Expand Appearance.

3 Modify the height and width so the entire form can be viewed in the Page Viewer web part.

4 Keep modifying and clicking Apply until you have it correct.

5 Before exiting, update the title to `Feedback Request`.

6 Click OK.

7 Your page should look like figure 9.25 if formatted correctly.

The current email data connections will now be sent from the server computer. If an error appears on the submission, then it's likely this hasn't been configured. You'll need to contact your administrator and request that they configure email on the server or consider granting users permissions to the feedback forms sites so they can enter the data in the forms without the use of the email connections.

Good job! You can now develop web-enabled forms with advanced capabilities such as filtering data, print views, enhanced data submission options, and much, much more. You can see the power of Forms Services in this example, but imagine it on a public-facing site. That didn't take too long to create, did it? This can be used as an enterprise solution on public-facing sites to gather information from users everywhere on the internet. Now doesn't that sound appealing?

Figure 9.25 Feedback site with the form displayed on the homepage using the Info-Path Form web part. This way you don't have to open the form on a different page. It's automatically displayed for you when you come to the site.

9.4 Summary

Following is a summary to help you understand the functionality that you should now be comfortable with implementing from completing this scenario:

- Creating a custom list and modifying the columns
- Publishing to and creating Forms libraries
- Designing a form in InfoPath
- Adding controls to capture data for your InfoPath form
- Working with data sources to retrieve and submit data via Share-Point and email
- Creating views and dynamically changing them based on the status of the form
- Displaying your form via a web browser using Forms Services

Up to this point, you've designed your sites in silos. They all function perfectly without leveraging any of the data or functionality from other sites. The next chapter will walk you through some features for integrating these sites and provide some management tips without having to maintain each site individually.

Let's test your knowledge. A few of the questions that you should be able to answer are these:

- What's the difference between InfoPath and InfoPath Forms Services?
  InfoPath requires that your users have a license for Microsoft Office InfoPath to complete the form. InfoPath Forms Services doesn't require a license because it displays the forms via the web.
- Why would you use a filter when populating a drop-down list box when retrieving your values?
  This enables you to create dynamic drop-down lists where the values in the drop-down lists that follow will show different values that are specific to the entry in a previous drop-down list.

⚙ What are some of the benefits of using views?
You can dynamically switch between different views, based on a value in your form, so it shows the information in a relevant format.

The same data can be displayed in edit mode or read-only mode while using the same data source.

SharePoint 2010
Site Owner's Manual

Yvonne M. Harryman

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This book is a guide for business users without programming skills who want to build their own SharePoint sites. With it, you'll learn how to set up document sharing, trackable workflows, and many other business applications. You'll go step-by-step through real-world scenarios like content management, business intelligence, sharing information on the web, and search. Along the way, you'll learn how to interact with other business tools like Access, InfoPath, and SharePoint Designer.

What's Inside
- Go from user to *power* user
- Build on out-of-the-box features
- Customize your SharePoint site

This book is designed for SharePoint users who want to become tech-savvy in configuring SharePoint's out-of-the-box functionality. No programming or system administration experience is required.

Yvonne M. Harryman is an Architect at Microsoft, specializing in SharePoint technologies. She has implemented and designed SharePoint solutions for clients such as the White House, US Air Force, National Institute of Health, Iron Mountain, Ingersoll-Rand, and many others.

For online access to the author and a free eBook for owners of this book,
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