## XSLT Web Part and Data View Web Part

**Lab Time**: 90 minutes

**Lab Folder**: C:\Student\Labs\DataWebParts

**Lab Overview:** In this lab you will be working with fetching various data sources and displaying them within SharePoint. To facilitate the display of data, you will use the XSLT List View and Data View Web Parts. The XSLT Web Parts give you the flexibility to manipulate the data points at a very granular level to expose your data any way you wish to the end users.

Lab Setup Requirements

* Before you begin this lab, you must run the batch file named **SetupLab.bat**. This batch file creates a new blank site collection at the location **http://intranet.wingtip.com/sites/DataWebParts**.

### Exercise 0: Preparing the Database Server

Before proceeding with this lab, there are a few things you need to do to your local SQL Server in order for SharePoint Designer 2010 to perform certain tasks.

1. Launch the **SQL Management Utility: Start » All Programs » Microsoft SQL Server 2008 R2 » SQL Server Management Studio**.
2. When prompted to login, use the following options:

**Server Type:** Database Engine

**Server Name:** WINGTIPSERVER

**Authentication:** Windows Authentication

1. Change the schema and owner of **AdventureWorks** to **DBO**:
   1. In the **Object Browser**, expand the following: **WINGTIPSERVER » Databases » AdventureWorks » Tables**.
   2. Select **File » Open » File…**. When prompted, open the [[LAB FILES]]\StarterFiles\AlterSchemaToDBO.sql.
   3. Select the **Execute** button in the toolbar.
   4. When the **Messages** panel says **Command(s) completed successfully.** you can now move onto the next step.
2. Change the authentication from **Windows only** to **Mixed**:
3. Right-click **WINGTIPSERVER** in the **Object Explorer** and pick **Properties**.
   1. Select the Security node in the left-hand panel.
   2. Under **Server authentication**, switch it from **Windows Authentication** mode to **SQL Server and Windows Authentication mode** and click **OK**.
   3. When prompted, click **OK**.
   4. In the **Object Browser**, expand the following: **WINGTIPSERVER »Security » Logins.**
   5. Right-click the **sa** account and select **Properties**.

**Note:** This is not what you would do in production. Your database administrator should provide you a valid login to use in your organization.

* 1. Set the **Password** fields to **Password1.**
  2. Select the **Status** node in the left-hand panel, set the **Login** to **Enabled** and click **OK**.

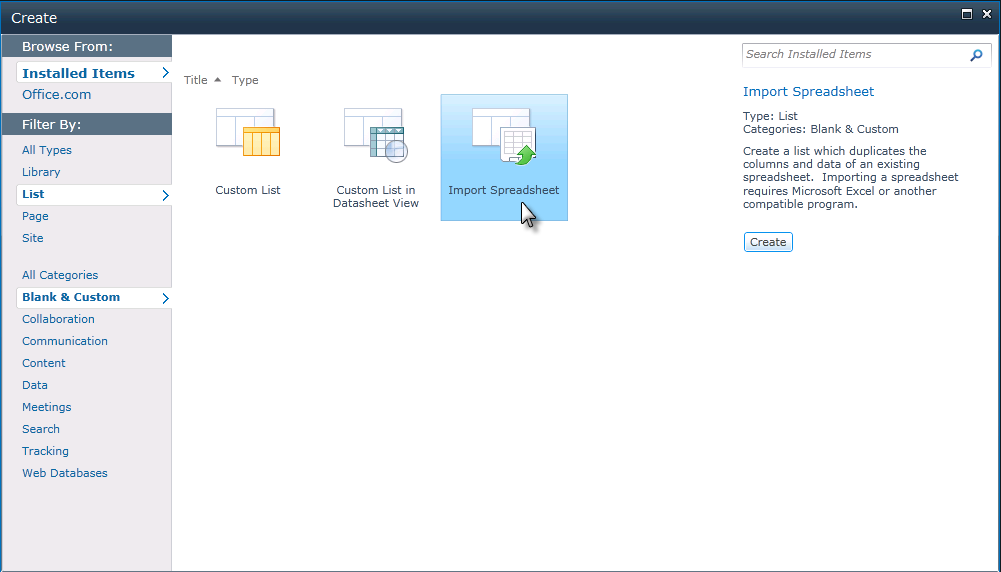
1. Close the **SQL Server Management Studio**.
2. Recycle the SQL Server process for the security changes to take effect:
3. Open the services applet: **Start » Administrative Tools » Services**.
   1. Find the service **SQL Server (MSSQLSERVER)**, right click it and select **Restart**.

At this point the local SQL Server is ready for this lab.

### Exercise 1: Creating List Forms

In this exercise you will first create a new list using data in a spreadsheet. Then you will use SharePoint Designer to create a new edit form for the list.

1. Open the browser and navigate to type in the following URL: **http://intranet.wingtip.com/sites/DataWebParts**.
2. In the ribbon select **Site Actions » More Options**.
3. Click the **List** option under **Filter By** and select the **Blank and Custom** option under **Categories**.
   1. Click the **Import Spreadsheet** button.
   2. Click the **Create** button.

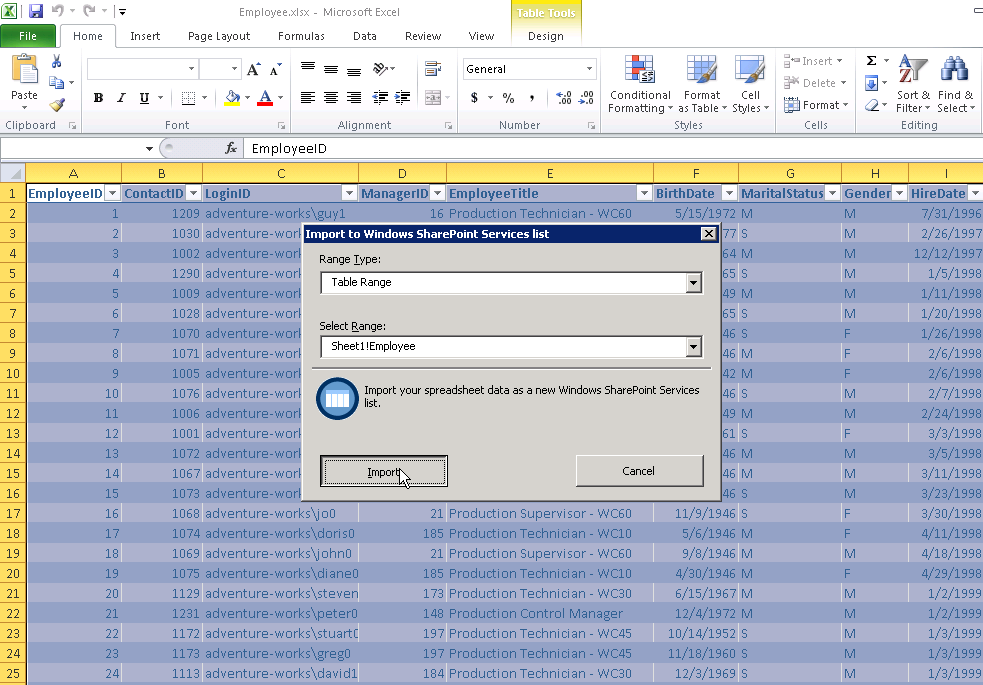


1. You should now be at a page which asks you for the Name, Description and the File Location. Use the following to complete the task:

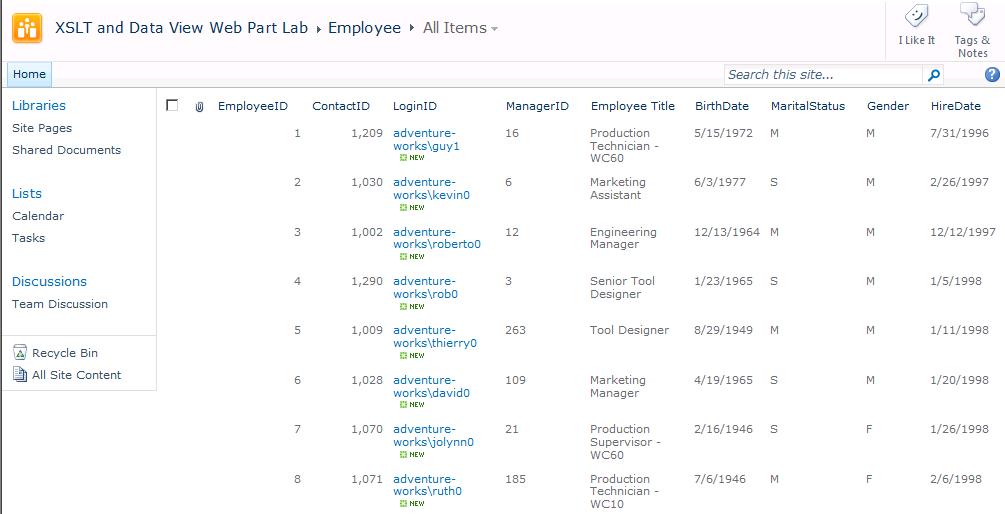
**Name:** Employee

**File Location:** [[LAB FILES]]\StarterFiles\Employee.xlsx file.

When prompted by Excel, set the **Range Type** to **Table Range** and **Select Range** to **Employee!Table1** and click the **Import** button.



1. All the information should be imported into the new list called **Employee**.



1. In the ribbon under the **List Tools** group select **List » Edit List in SharePoint Designer**. This will open **SharePoint Designer 2010** and load the **Employee** list.
2. In the **Employee** list Summary Page, notice the **Forms** section that shows the three forms currently available to display, edit and create new entries in this list. You will create a new form which will serve as the default Edit Form for this list.

Click the **New** button in the **Forms** section of the Summary Page. In the form that appears, use the following to create a new list form:

**File Name:** EditEmployeeInfo

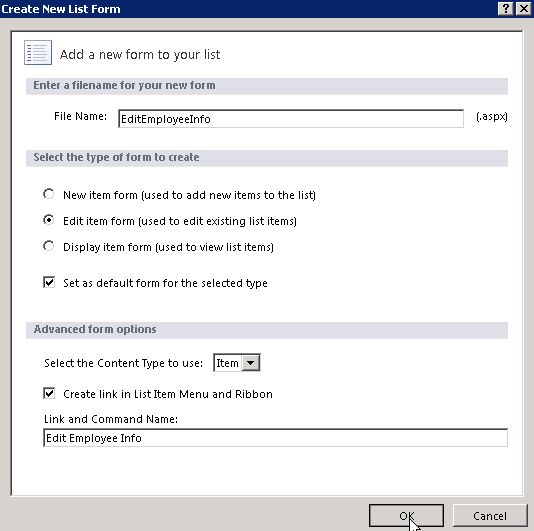
**Select the type of form to create:** Edit item form

**Set as default for the selected type:** checked

**Select the Content Type to use:** Item

**Create link in List Item Menu and Ribbon:** checked

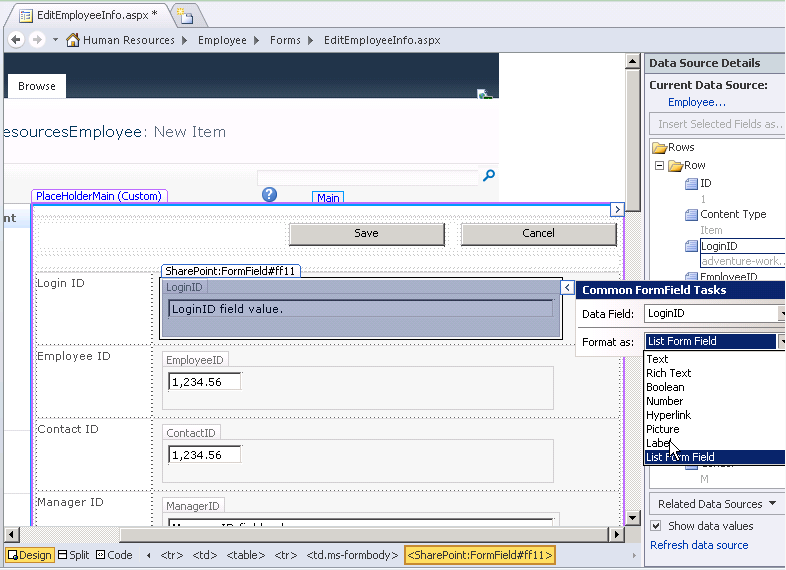
**Link and Command Name:** Edit Employee Info



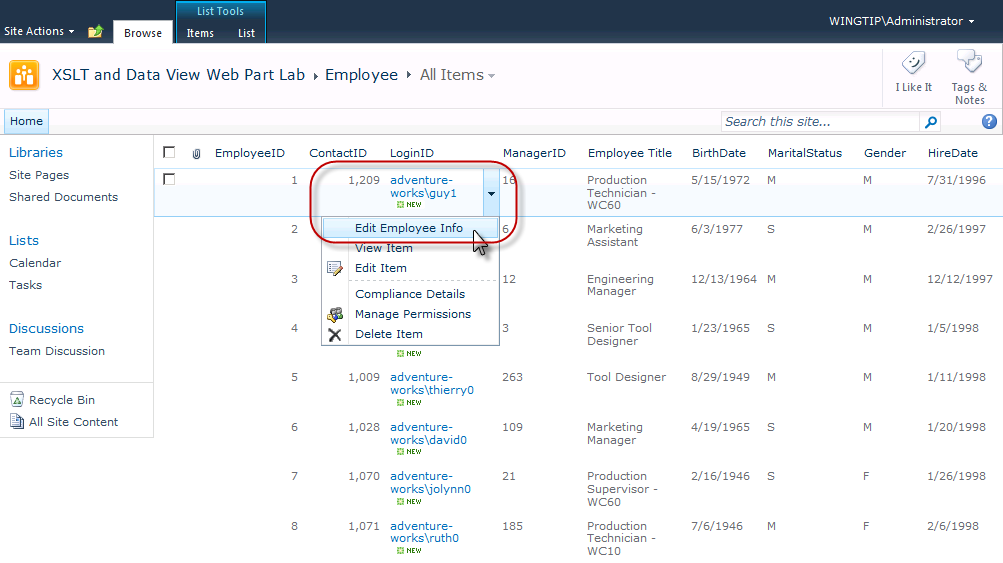
1. You should now see the EditEmployeeInfo.aspx page in the **Forms** section. Click EditEmployeeInfo.aspx.
2. In **Design** mode you’ll notice all the default fields for the Employee list. You will now modify the columns in this List and also the formatting for some of the values in the columns.
3. Go to the **LoginID** label and put in a space between **Login** and **ID**.
4. Do the same thing for **EmployeeID**, **ContactID** and **ManagerID**.

You are able to modify these labels because these are just static information and it is not connected to the backend data source, which in our case is the Employee list.

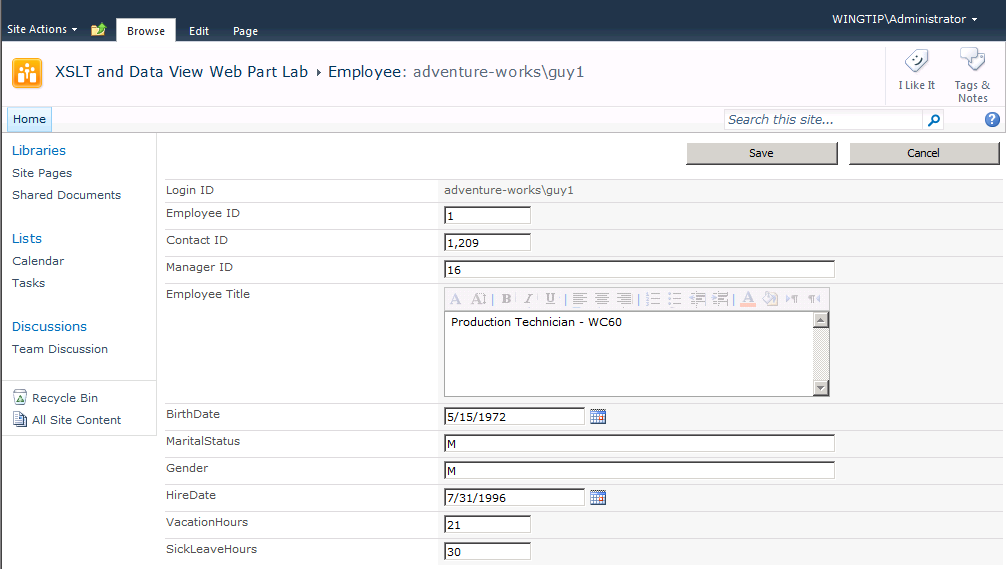
1. In the second column, select the **LoginID** field, click the **chevron** (arrow) that appears at the top right of that field. For the **Format** **as** drop down, select **Label**. Doing this will change this field from a text box to a label, which will make it read-only for users who are reading this data.



1. You will now remove a field that we do not need in this form. Go down to the **SalariedFlag** field, click the cell for the **SalariedFlag**. At the bottom of **SharePoint Designer 2010** environment, you will see tag selectors. Click the <tr> tag selector that will highlight the table row that you are currently focused on, which in this case is the SalariedFlag.
2. You want to delete this row. To do that, in the ribbon under the **Data View Tools** section select **Table » Delete » Delete Rows**. The SalariedFlag row has now been deleted.
   1. Save this page by clicking on the **Save** icon in the ribbon Quick Launch.
3. Open the browser, and make sure you are looking at the **http://intranet.wingtip.com/sites/DataWebParts** site and the **Employees** list. Click the **Refresh** button in the browser or press **[F5]** to refresh your page.
4. Once it is refreshed, hover over the **LoginID** field of any of the rows and use the edit control block (ECB) menu for the row. You should see the **Edit Employee Info**. This is the new custom action that got created for us which points to the new Edit Employee Info form that we just created.



1. Click the **Edit Employee Info** menu item. You should now see the Edit Employee form with the customizations you made:



1. Click the **Cancel** button. You should now be brought back to the Employee list's main view.

In this exercise you created a custom edit for and modified the form using SharePoint Designer 2010.

### Exercise 2: Creating List Views

In this exercise you will create a new view for a list.

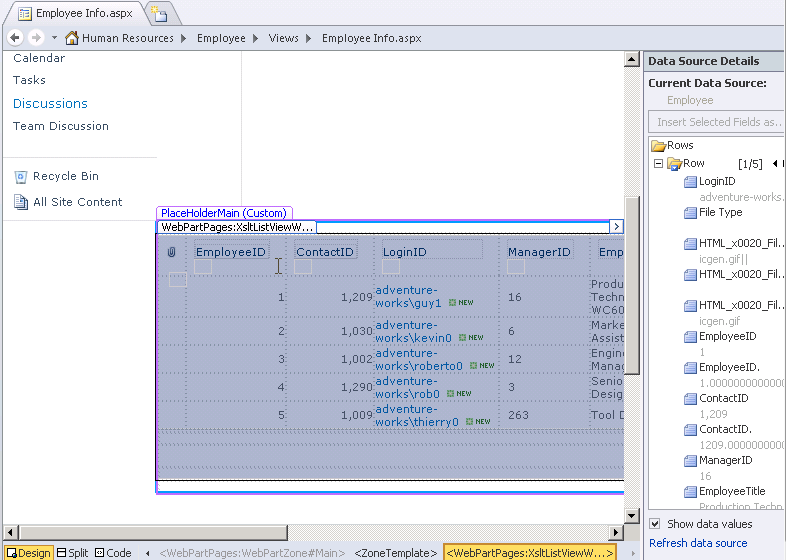
1. In **SharePoint Designer 2010** you should now be looking at the EditEmployeeInfo.aspx page.
2. Using the navigation breadcrumb on top of **SharePoint Designer 2010**, click **Employee**. You should now see the Summary Page for the Employee list.
3. Notice that the **Views** section of the Summary Page contains only one view called **All Items**. This is the default view that gets created automatically for the list.
4. To create a new view, click the **New** button in the **Views** section. Create New List View dialog box opens. Use the following information to create the view:

**Name:** Employee Info

**Make this the default view:** checked

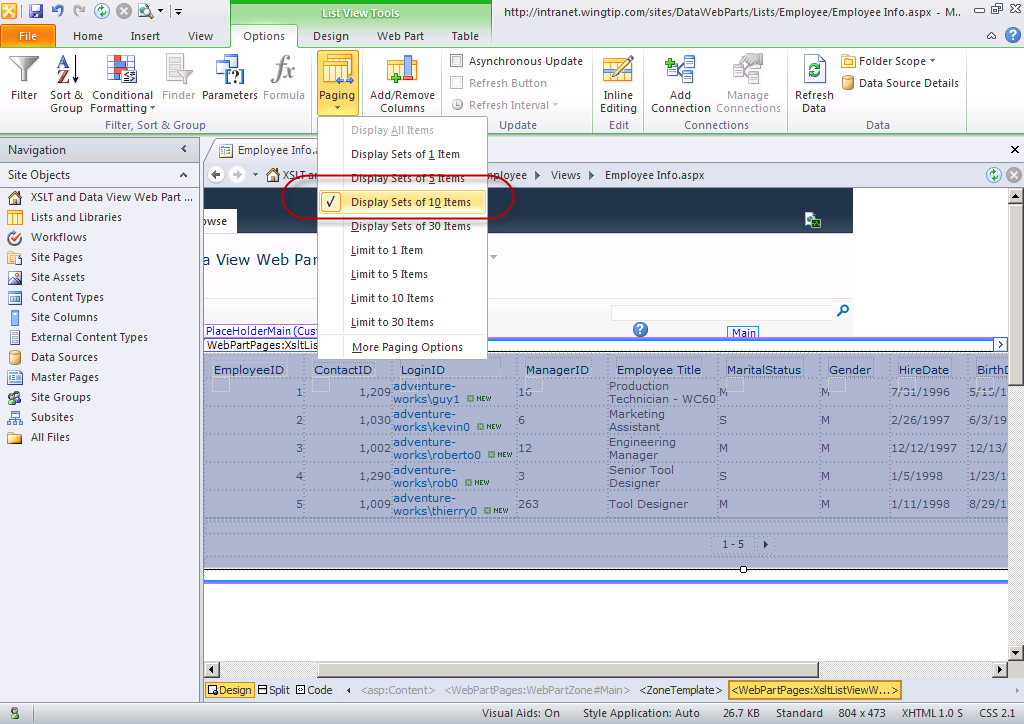
Click **OK**.

1. The Employee Info view is now created. Click the **Employee Info** link. The Employee Info.aspx page comes up.
2. The Employee list information is already displayed in this view.

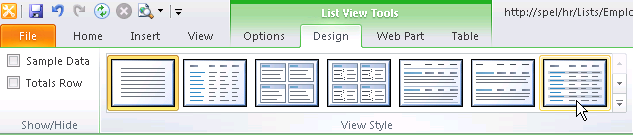


Notice that this Web Part that is showing the Employee information is called the **XsltListView Web Part**. This is a new type of a Web Part that is now available in SharePoint 2010. It can be used to show List or Library information from anywhere on the site. In addition, it is a very flexible Web Part that lets you change the formatting of the data points at a very granular level.

1. You will now change some of the columns that are displayed by default in this Web Part:
2. Click the **Add/Remove Columns** button in the ribbon. Remove the fields **Attachments** and **SalariedFlag**.
   1. Click the **BirthDate** in the **Displayed Fields** section. Click the button **Move Down** to move the **BirthDate** immediately before **HireDate**.
   2. Click **OK**. The XsltListView Web Part should now be refreshed, to show the modified column view.
3. Currently this XsltListView Web Part is set to show 30 rows at a time. We are going to show that to show 10 rows at a time.
4. In the ribbon under the **List View Tools** contextual tab group select **Options » Paging » Display 10 Items**.



1. You will now change the design of the XsltListView Web Part.
2. In the ribbon under the **List View Tools** contextual tab group select **Design » click the last option** which is for a shaded rendering.
   1. The XsltListView Web Part has now been changed to the shaded view.



1. Go back to the browser and click the **Employee** link in the top breadcrumb navigation.
2. Notice the changes you made in this exercise… the alternating rows are shaded and the **BirthDate** field is after **HireDate**.

In this exercise you created a new list view using SharePoint Designer 2010.

### Exercise 3: Setting up Conditional Formatting

In this exercise you will setup conditional formatting on the displayed data.

1. In **SharePoint Designer 2010**, go to the **VacationaHours** column in the XsltListView Web Part and click one of the data points in this column.

Once you apply formatting to one data point in this column, that same formatting is going to repeat for all of the data points in this column. So it doesn't matter which one you select.

1. While the data point is selected, ribbon under the **List View Tools** contextual tab group select **Options » Conditional Formatting » Format Selection**.
2. In the **Condition Criteria** dialog box that appears use the following information:

**Field Name:** VacationHours

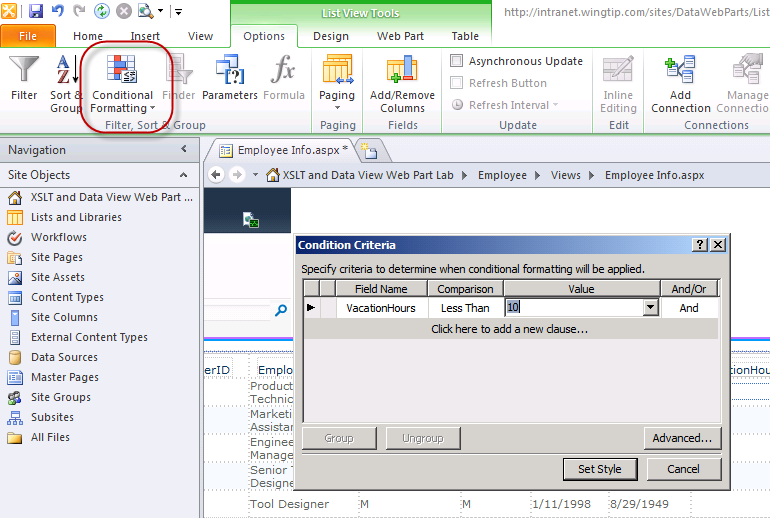
**Comparison:** Less Than

**Value:** 10

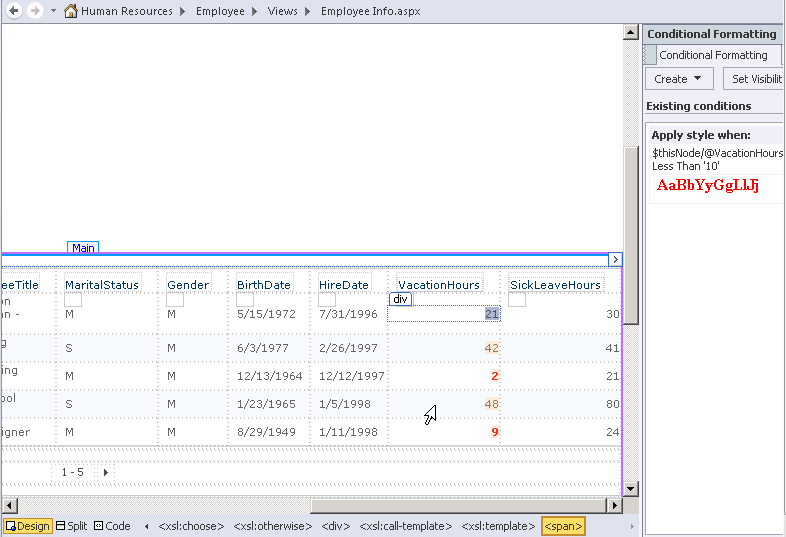
* 1. Click **Set Style**. In the Modify Style dialog box that appears use the following information:

**Font weight:** bold

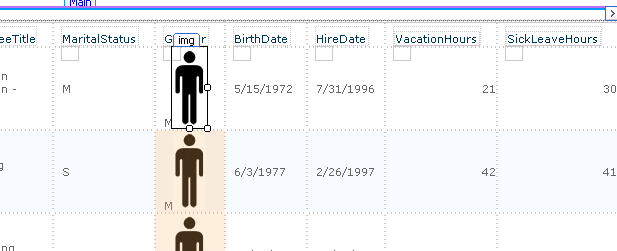
**Color:** red



1. You should see that a couple of data points have now been changed to bold and red.



1. You will now use conditional formatting once again to conditionally show content depending on if the condition criteria is true or false.
2. Pick a cell under the **Gender** column. Your cursor should now be right after the letter for **Gender**, either **M** or **F**.
   1. In the ribbon select **Insert » Picture**.
   2. Select [[LAB FILES]]\StarterFiles\male\_sign.jpg and click **OK** to add the icon.

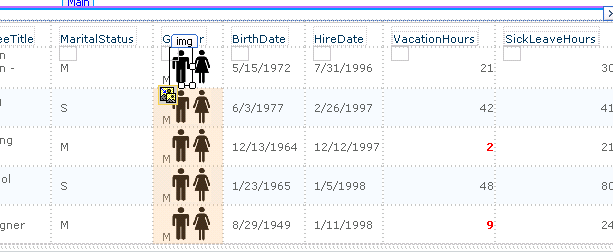


1. Ensure one of the icons is selected and then in the ribbon under the **Picture Tools** tab set the dimensions of the icon in the **Size** section:

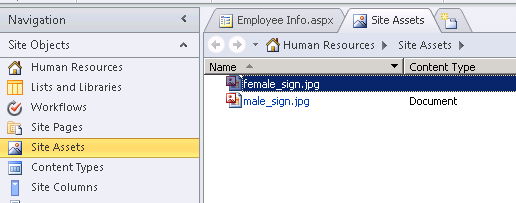
**Width:** 20

**Height:** 35

1. Repeat the steps above to insert another icon with the same dimensions right next to the male icon except use the following picture: [[LAB FILES]]\StarterFiles\female\_sign.jpg.



1. Save this page by using the **Save** icon in the **SharePoint Designer 2010** ribbon **Quick Launch** menu.
2. A dialog box should pop up to ask you if you wanted to save embedded files. Click the **OK** button.
3. The images should now have been automatically saved to the **Site Assets** library of this site. Click **Site Assets** in the Navigation Pane. We should see both the male\_sign.jpg and female\_sign.jpg files there.

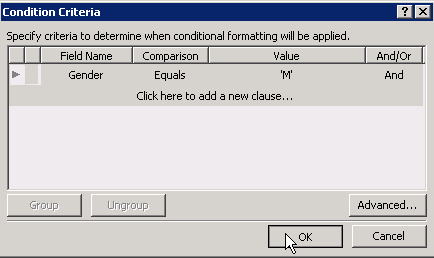


1. You will use conditional formatting now to show the appropriate image, Male or Female, depending on the gender.
2. Select the **male** icon.
   1. In ribbon under the **List View Tools** contextual tab group select **Options » Conditional Formatting » Show Content**. In the Condition Criteria dialog box, use the following information:

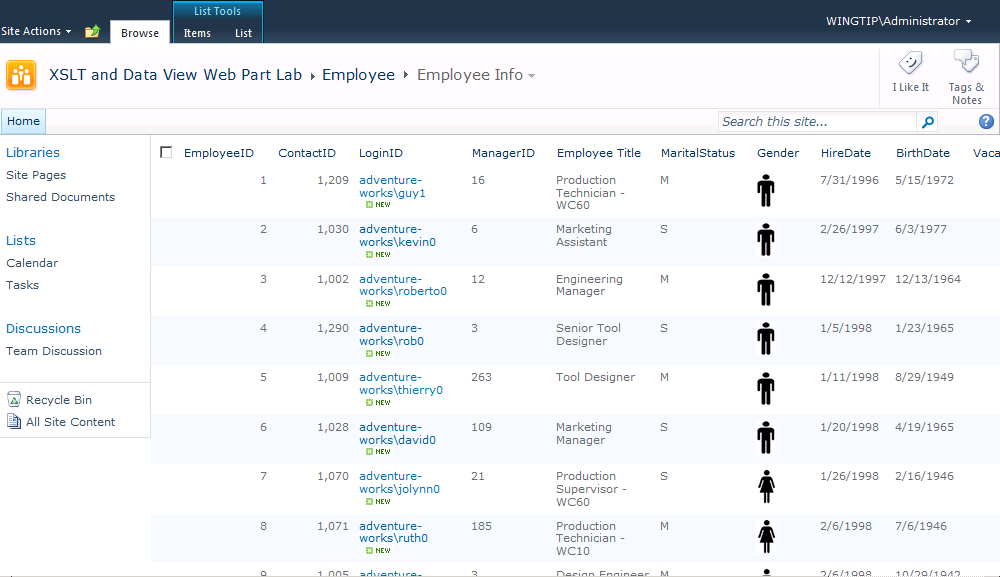
**Field Name:** Gender

**Comparison:** Equals

**Value:** M



1. Repeat the same process for the **female** icon, except use the appropriate **Value** in the **Comparison Criteria** dialog box.
2. Now in the **Gender** column, the **M** or **F** content is no longer necessary. Select the **M** or **F** data point, and then press the [Delete] button on your keyboard.
3. Now you will navigate to the Employee Info view in the browser to make sure that it renders correctly. Go to the browser where you should now be looking at the **Employee** list. However it is now showing the correct view, your new default view.
4. Click the **All Site Content** link in the **Quick Launch**.
5. Click the **Employee** list, it should show you the **Employee Info** view which has now become the default view of this list. Make sure all of your modifications show up correctly.



In this exercise you added some conditional formatting to the list view based on the data in the record displayed.

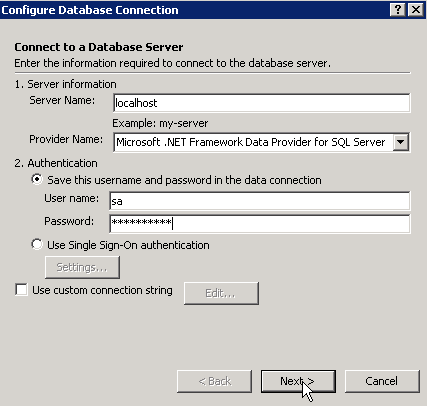
### Exercise 4: Creating Database Connections

In this exercise you will connect to data in a database and display it on a Web Part page.

1. Open **SharePoint Designer 2010** and load the **http://intranet.wingtip.com/sites/DataWebParts** site.
2. Click **Data Sources** in Navigation Pane. In the ribbon you should see all the different choices you have to make connections to including Web Services, XML File Connection and Database Connection.
3. In the ribbon, click the **Database Connection** button.
4. In the **Data Source Properties** dialog box that appears use click the **Configure Database Connection** button and use the following information:

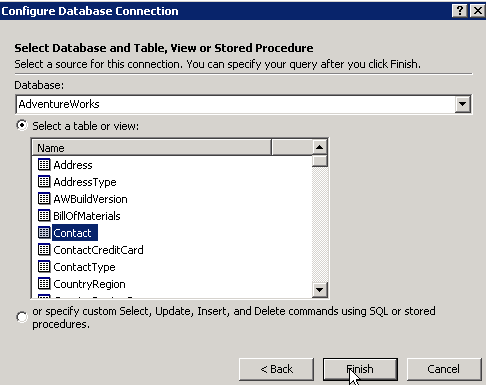
**Server Name:** WINGTIPSERVER

**Authentication: Username=**sa, **Password=**Password1



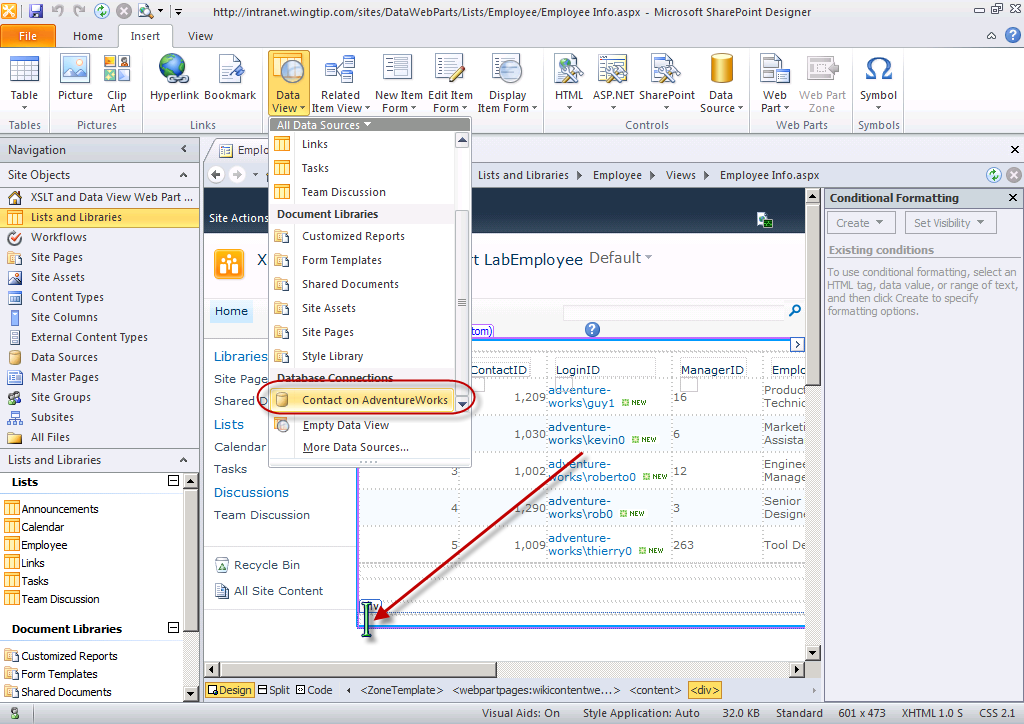
Click the **Next** button. A dialog box comes up letting you know that your username and password will be passed as clear text. In a production environment, it would be best if you use the SSL certificate, so the username and password would be encrypted automatically. However in this lab it isn’t important so click **OK**.

* 1. Select the **AdventureWorks** database.
  2. Select the table **Contact**.
  3. Click **Finish**.



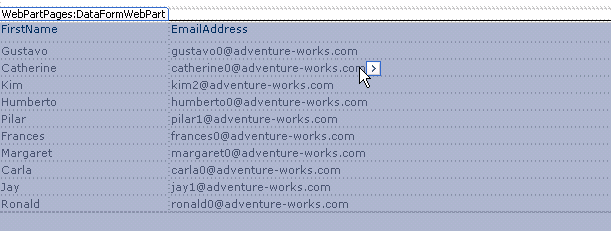
* 1. Click the **OK** button at the **Data Source Properties** dialog.

1. Click **Lists and Libraries** in the Navigation Pane and select the **Employee list**.
2. Click the **Employee Info** view in the **Views** section of the Summary Page. The Employee Info.aspx page should now appear.
3. You will insert the contact information which is coming from the database under the existing the **Employee** XsltListView Web Part. Navigate to the bottom of this main Web Part Zone and put the cursor in the <div> tag **after the XsltListView Web Part**.
4. In the ribbon select **Insert » Data View » Contact on Adventure Works**.



1. A Data Form Web Part is added to the page and shows the first five columns of the **Contact** table. You will now modify the columns being shown in this Data View in this Data Form Web Part.
2. Click the **Data View Tools » Options »** **Add/Remove Columns** button in the ribbon.
3. Remove the following from the **Displayed Columns** area: **Contact ID**, **Name Style**, **Middle Name** and **Title**.
4. Add the following columns from the **Available Fields** section: **EmailAddress** and **Phone**.
5. Click the **OK** button.

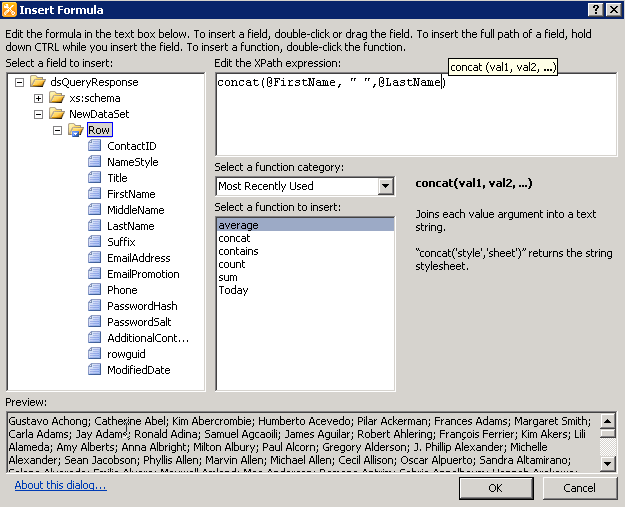
The presentation shown in the Data Form Web Part is generated by retrieving from the data database, converting it to XML and then using XSLT to transform that data another form of XML: HTML. This is then rendered by the browser into a more readable format.



1. You will now format this data using XSLT by using SharePoint Designer 2010’s XSLT editor.
2. Click one of the data points under the **First Name** column and click the **Data View Tools » Options »** **[fx]** (formula) button in the ribbon.
3. Use the **Insert Formula** dialog that appears to edit the XPath expression. Currently it shows the **@FirstName** node which contains only the first name of a person.

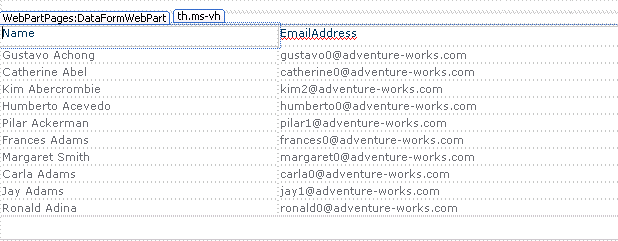
XPath is the query language used when working with XML data.

1. Highlight the **@FirstName** node. From the **Select a function category** selector, double click the **concat** function.
2. The **@FirstName** node should become the first parameter now of the **concat** function.
3. Create the following expression in the **Edit the XPath expression** textbox: concat(@FirstName,” “,@LastName)
4. At the bottom of the Insert Formula dialog box, a preview of the results of the XPath expression is shown in the Preview box.
5. Click **OK**.



The Data Form Web Part should now show the first name and last name of the person.

1. Change the column name from **FirstName** to **Name**.
2. Save the page by clicking on the **Save** icon in the ribbon’s **Quick Launch**.

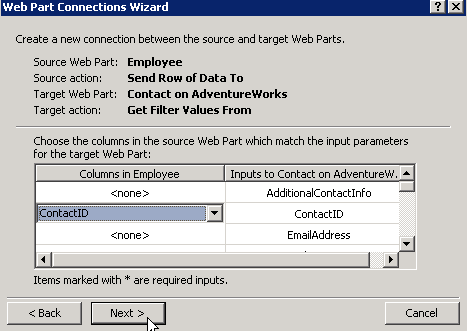


In this exercise you added a Data View Web Part to the page that pulled data from a SQL Server database.

### Exercise 5: Creating Web Part Connections

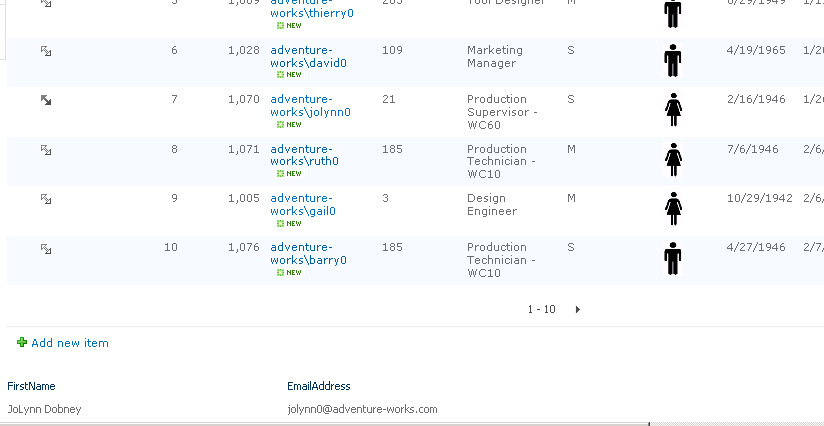
In this exercise you will setup a Web Part connection to pass data from one Web Part to another.

1. Click anywhere on the **Employee** Web Part on this page (*the XsltListView Web Part*).
2. Click the **List View Tools » Options »** **Add Connection** button in the ribbon.
3. The **Web Part Connection Wizard** appears. Click the **Next** button, and use the following to complete the wizard dialog:
4. **Connect to a Web Part on this page:** selected
5. Click **Next**
6. **Target Web Part:** Contact on Adventure Works
7. **Target action:** Get Filter Values From
8. Click **Next**
9. Associate the **ContactID** in the **Columns in Employee** column with the **ContactID** in the **Inputs to Contact on AdventureWorks** column
10. Leave the remaining rows in the **Columns in Employee** column set to **<none>**
11. Click **Next**



* 1. Click the **Finish** button & **Save** the page.

1. Go to the browser and refresh the Employee Info.aspx page.
2. A new column should show up now called the **Select** column. Click the **double facing** arrow that appears under the column to select that row.
3. Scroll down to the bottom of the page to see the contact information for the first item in the **Employee** Web Part.
4. Click the **double arrow** for **Select** in any of the rows in the **Employee** Web Part and make sure that the corresponding contact information appears in the **Contact** Web Part below.



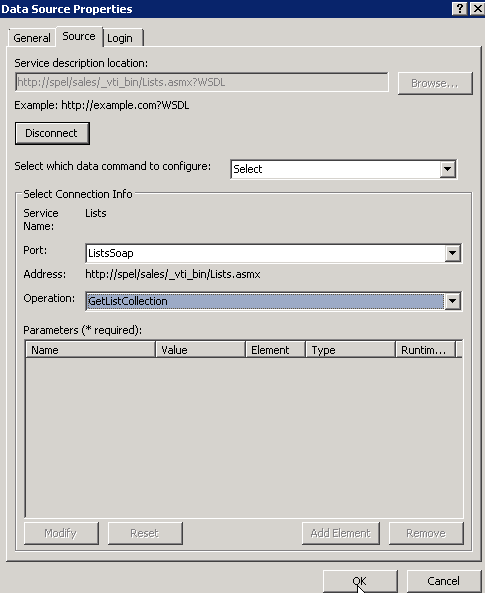
You have now successfully connected information in the Employee list which resides on this site to the Contact Information which resides in the database.

In this exercise you connected the XsltListViewWebPart with the Data View Web Part on the page.

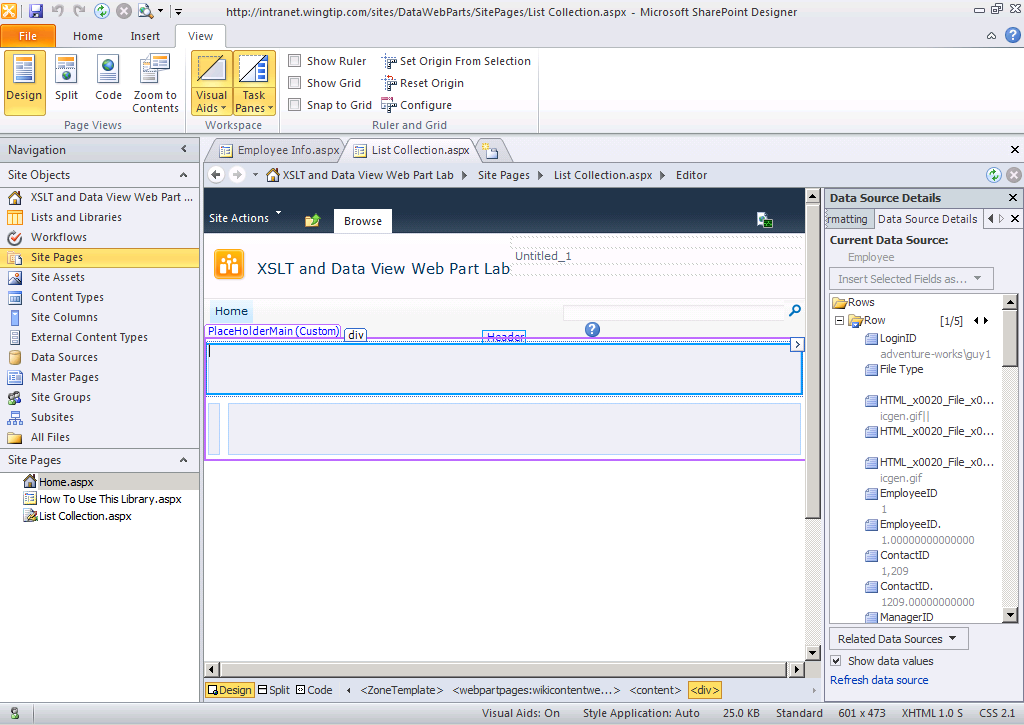
### Exercise 6: Accessing Data through Web Services

In this exercise you will connect a SharePoint Web service called **Lists.asmx**. You will use that Web Service to display Lists information from a different site in the Site Collection.

1. Open **SharePoint Designer 2010** and load the **http://intranet.wingtip.com/sites/DataWebParts** site.
2. Click **Data Sources** in the Navigation Pane.
3. Click the **SOAP Service Connection** button in the ribbon.
4. Enter **http://intranet.wingtip.com/sites/DataWebParts/\_vti\_bin/lists.asmx?WSDL** in the text box for **Service description location**.
   1. Click the **Connect Now** button. You should now be connected to the **Sales** site using **Lists Web service**.
   2. Using the **Operation** drop down, choose the **GetListCollection** selection.
   3. Click the **OK** button in this dialog box.

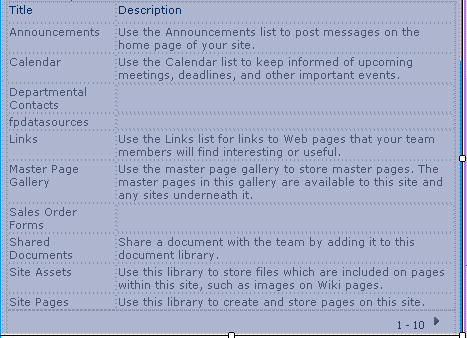


1. You now have a connection to the Sales site lists using the Lists Web service. You will now create a new page on which you will display the lists that are in the Sales site.
2. Click **Site Pages** in the Navigation Pane.
3. In the ribbon select **Web Part Page**. This will create a new Web Part Page.
4. Change the name of this file from Untitled\_1.aspx to List Collection.aspx.
5. Click the List Collection.aspx page to see the Summary Page.
6. Under the **Customization** section of the Summary Page, click the **Edit File** link.
7. The List Collection.aspx page should now appear in the **Design** view.



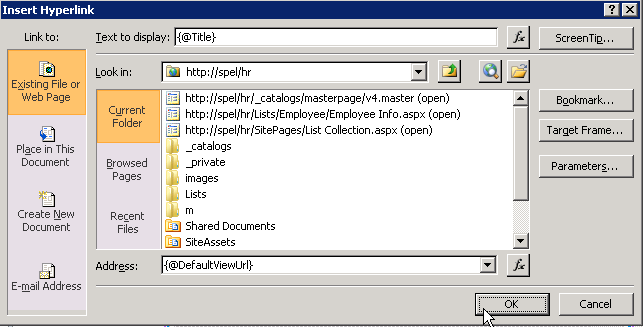
* 1. In the ribbon, select **Insert » Data View » Lists on intranet.wingtip.com** option in the **SOAP services** section.
  2. A new Web Part should now be added to the page showing a variety of information coming from the Lists Web Service.

1. You will now remove the columns not needed. Click the **Add/Remove Columns** button in the ribbon.
2. From the **Displayed Columns** section, remove all the columns but the **Title** column.
   1. From the **Available Fields** section, look for the **Description** column, and addit right under the **Title** column.
   2. Click **OK**.

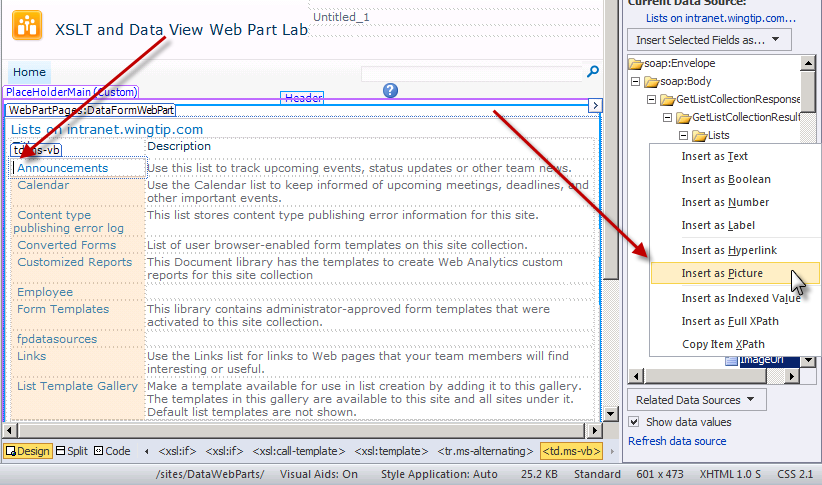


* 1. Click the **Sort & Group** button in the ribbon.
  2. From the **Available Fields** section in the **Sort and Group** dialog box that appears, look for and select the **Title** column and add it to the **Sort Order** section.
  3. Click **OK**.

1. The **Lists** should be sorted in alphabetical order now. You will now create a hyperlink on each of the List names, so when somebody clicks on the Title of the List, they are navigated to that list.
2. Click any of the **List Titles** (make sure the title is highlighted) and using the ribbon select **Insert » Hyperlink**.
   1. The **Insert Hyperlink** dialog box appears. Click the **[fx]** button next to the **Address** drop down.
   2. Choose the **DefaultViewURL** node, click **OK** button and click the **OK** button in the **Insert Hyperlink** dialog box.



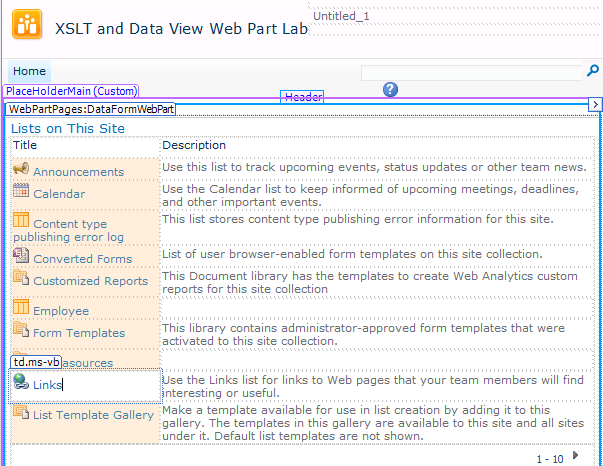
* 1. Click one of the data points in the **Title** column. Press the [left arrow] on the keyboard to put the cursor on the left of the name of the list.
  2. Press [space] to put a space before the List's name.
  3. Now once again press the [left arrow] on the keyboard to put your cursor to the space before the name of the List. In this spot, you will put in the icon that represents each list.
  4. The icon image is in the **ImageUrl** node of the Data Source. Go to the **Data Source Details** task pane and click the **ImageUrl** node.
  5. Click the **Insert Selected Field** as, hover over the **Formatted** option and pick the **Picture** selection.



* 1. The **Confirm** dialog box appears asking you to confirm your action. Click **Yes**.

The icon for each of the Lists should now appear before the Name of the List.

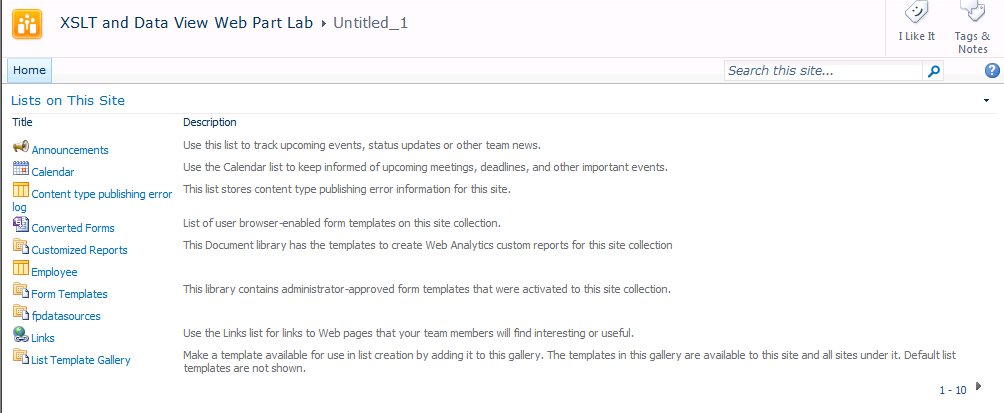
1. From the ribbon, click the **Web Part** tab in the **Data View Tools** contextual tab group.
2. Change the Web Part **Title** to **Lists on This Site**.



1. Click the **Chrome Type** button and select **Title and Border**.
2. For the Header row of the Lists on Sales site Web Part, you will bold the headings: Title and Description.
3. Highlight the first row **Title** and **Description**.
4. Click the **Home** tab in the ribbon and click the bold [B] button.
5. Save this page by clicking on the **Save** icon.



1. Go to the Browser and browse to **http://intranet.wingtip.com/sites/DataWebParts**.
2. Click the **Site Pages** link under the **Documents** section in the Quick Launch.
3. Click the **Lists Collection** page. You should now see the List of all the Lists and the description for each list from the Sales site.
4. To navigate to any of these Lists, all you have to do is click the name of the List. Test it out by clicking on any of the names of the List.



In this exercise you did additional customization of a Data View Web Part that connected to Web Services.