Lab 0.1: Logging in and using the VPC

To log on to the VPC: **username:** litwareinc\administrator **password:** pass@word1

To bring up the login box, click **Right Alt + Delete**

To switch to full screen, click **Right Alt + Enter**

Remember to save your progress before logging off and shutting off your computer. If you forget, you will lose everything you are working on.

Lab 01: Customizing a WSS Site

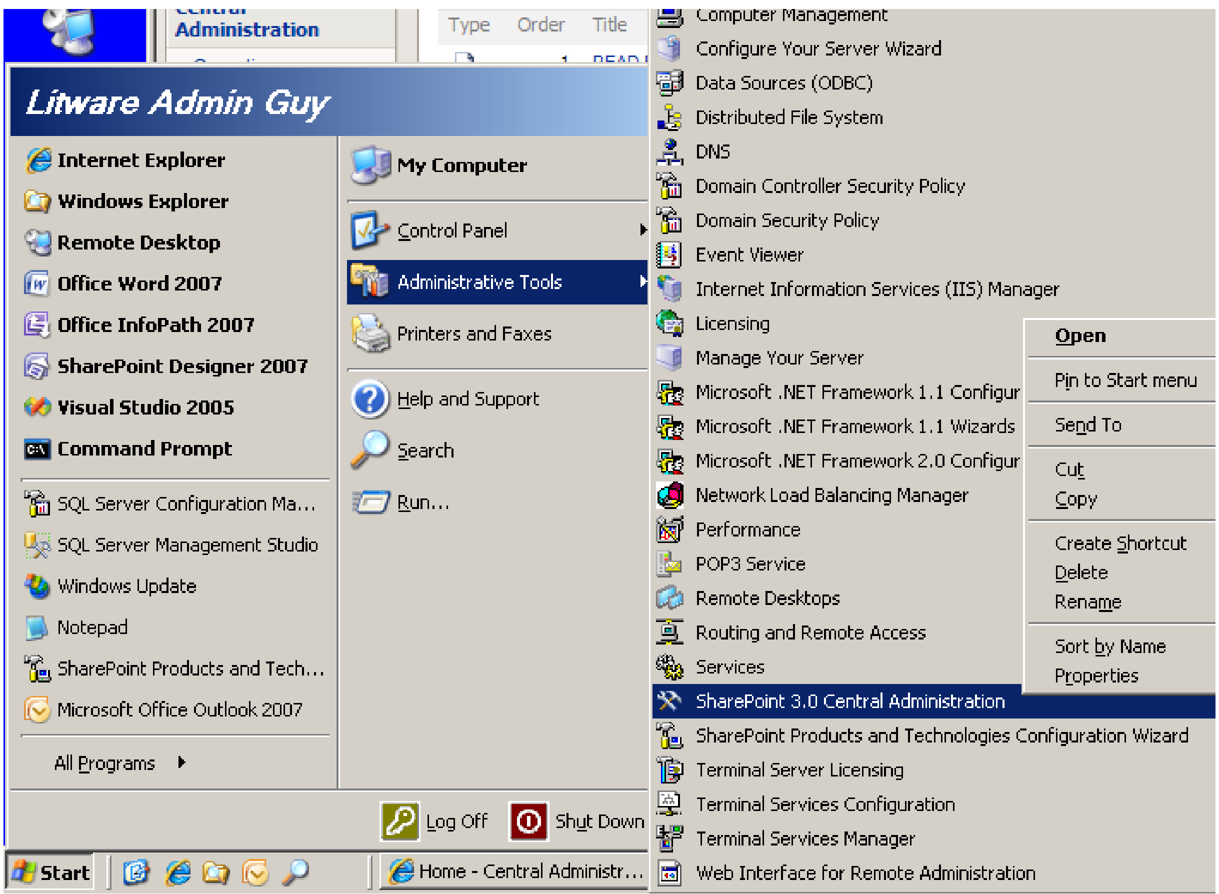
Lab Overview: The management team at Litware has decided to use Windows SharePoint Services 3.0 to assist with storing and managing the content associated with their consulting projects. You are instructed to create a top-level team site with a list that tracks a profile for each consulting project. You will also create a document library for storing various project-related documents such as customer presentations and proposals. You will also create child sites to track information about consultants in various divisions of the Litware Corporation.

Important: You must finish this lab as written for a later lab to work correctly! In addition, make sure that you are logged in as LITWAREINC\Administrator with the password: pass@word1

This lab should take approximately 60 minutes to complete.

Exercise 1: Create a new site collection and a top-level site

1) Create a new top-level site
   A) Click on the **Start** menu.
   B) Click on **Administrative Tools** on the right hand side of the **Start** menu.
   C) Click on the tab for **SharePoint 3.0 Central Administration.**



D) Once the home page of the WSS Central Administration web site appears, click on the **Application Management** tab at the top of the page. This will take you to the **Application Management** page.

E) Under the **SharePoint Site Management** header, click on **Create site collection**. This will take you to the page where you can create a new site collection. On the **Create Site Collection** page, fill in the required information (see below for instructions) to create a new site collection.

   i) *Web Application: http://litwareinc.com*

   ii) *Title: **Litware Project Management***

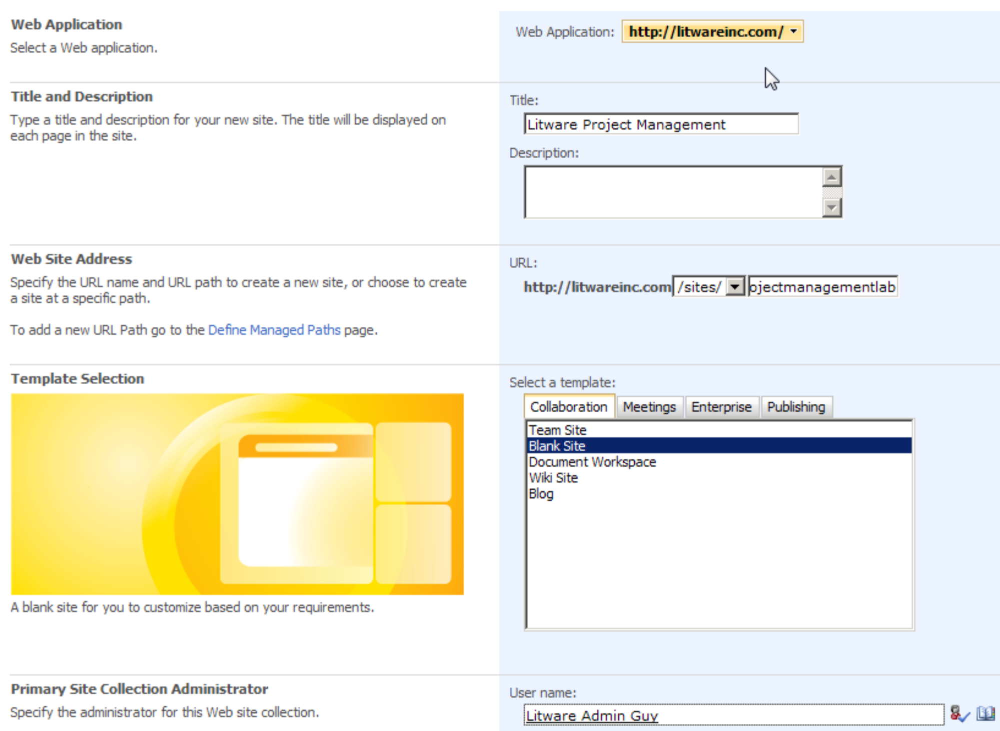
   iii) *URL: **http://litwareinc.com/sites/ProjectManagementLab***

   iv) *In the **Template Selection** section, look at all the site templates that are available. Under the **Collaboration** tab click on the **Blank Site** link.*

   v) *Assign the **Primary Site Collection Administrator** as **LITWAREINC\Administrator**. Be sure to verify this by using the **CRL+ K** keystroke combination or by clicking the check person icon (your entry should become Litware Admin Guy). This action is validating the name you entered with your authorization software.*

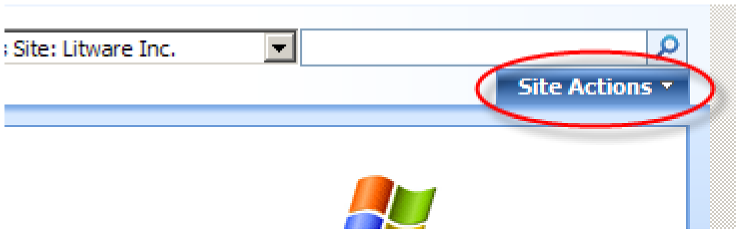
   vi) *Leave the **Quota Template** with the default setting of **No Quota***

   vii) *Click **OK** to create the new site collection and top-level site. Once you see the page that confirms everything has been created, navigate to the top-level site using the browser (click the link http://litwareinc.com/sites/ProjectManagementLab). Once a new browser pops up and is showing your new site collection, you can close the Central Administration window.*



2) Change the name of your new top-level site. The title you entered, **Litware Project Management**, is just a little too boring and technical. Let's change it to **Litware Inc.**

A) Click on the **Site Actions** drop-down menu on the right side of the page.



B) In the **Site Actions** menu, click on **Site Settings**.

C) In the **Look and Feel** section, click on the link for **Title, description, and icon**.

D) Enter in the new title for your site: **Litware Inc.** Click **OK**. Navigate back to the home page by clicking on the **Home** tab in the upper left corner of the page. Confirm that the home page now reflects the new title.

3) Over the next several steps you will add custom Litware graphics to your new site to replace the standard Microsoft graphics.

A) First, we have to copy our image files to the **Images** folder used by SharePoint. Minimize the browser and locate the **Labs** folder on your desktop.

B) Open the folder.

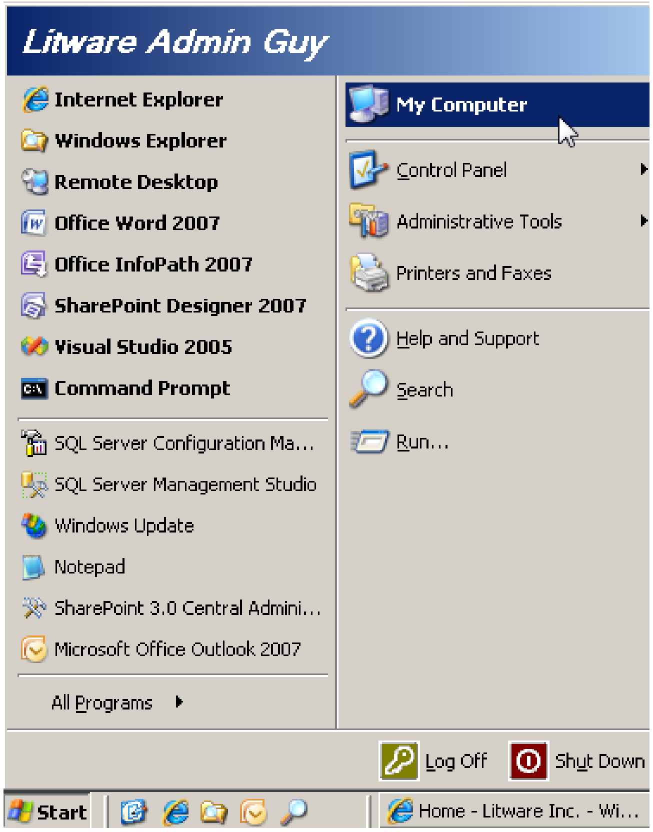
C) You will see 10 folders. Each of these contains the documents that you will use throughout the rest of the labs.

D) Open the **Lab 1** folder.

E) Open the **LitwareGraphics** folder. This folder contains the graphics files that you will use to customize the site collection you've created.

F) Right click on the **LitwareGraphics** folder and click on **Copy**. Close this window.

G) Click on the **Start** menu and click on **My Computer**.



H) Navigate to the following address:

C:/Program Files/Common Files/Microsoft Shared/web server Extensions/12/TEMPLATE/IMAGES

You can do this by typing in this address in the **Address** box or follow steps J-Q

I) Open the **Local Disk (C:)** folder.

J) Open the **Program Files** folder.

K) Open the **Common Files** folder.

L) Open the **Microsoft Shared** folder.

M) Scroll down to the bottom, and open the **web server extensions** folder.

N) Open the **12** folder.

O) Open the **TEMPLATE** folder.

P) Open the **IMAGES** folder.

Q) Right click and click on **Paste**. Your **LitwareGraphics** folder should become visible. The graphics are now loaded. Close this window.

R) Note that WSS configures the **IMAGES** directory with IIS so that it is a child virtual directory of the _**layouts** virtual directory. This means your graphics files should be accessible using a relative URL within any WSS site that looks like this:

.../_layouts/images/LitwareGraphics/

4) Modify the **Site Image Web Part** on the site's home page so that it displays a custom Litware graphic instead of the default Microsoft graphic.

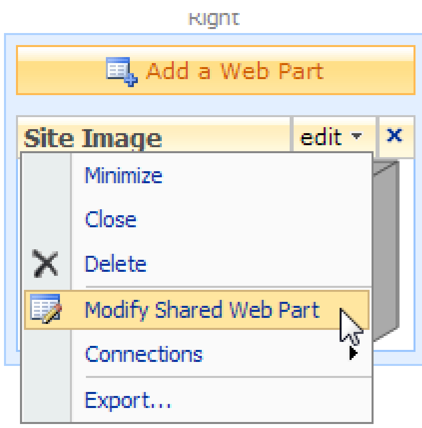
A) In your browser, navigate to the Litware Inc. homepage. (http://litwareinc.com/sites/ProjectManagementLab/). You can do this by clicking on the **Home** tab in the upper left area on the page.

B) Click the **Site Actions** menu.

C) Click on **Edit Page**.

D) Once the page is in edit mode, find the **Site Image Web Part**, it is the web part on the right part of the page. Click on the **Edit** drop-down menu.

E) Click on **Modify Shared Web Part**. After you have run this command, you should see a task pane appear in the browser that allows you to modify the **Image Link**.



F) Assign the **Test Link** to the URL: **/_layouts/images/LitwareGraphics/LitwareSlogan.png.** Click **OK**.

G) In the right hand corner near the top of the page click **Exit Edit Mode**.

H) Confirm that the site's home page now shows the new Litware slogan graphic.

5) Next we will add the Litware Logo to the banner of our home page.

A) Go to the **Site Settings** page (**Site Actions** drop-down menu **> Site Settings**) and under the **Look and Feel** section, click on the link for **Title, description, and icon.**

B) Enter the path to assign the URL to the graphics file named **LitwareLogo.png**. Your path should be: **/_layouts/images/LitwareGraphics/LitwareLogo.png**

C) Click the **Click here to test** link to test and make sure you can see the small logo on the window that pops up. If not, check the URL you entered and try again.

D) Once you can see the logo, click **OK**.

E) Click on the **Home** tab on your page to navigate back to the main page. You should see the new logo in the upper left-hand corner. If not, go back to step 6 A and try again.

Exercise 2: Create new list for tracking profiles for consulting projects

1) Create a new SharePoint custom list for managing Litware consulting projects.

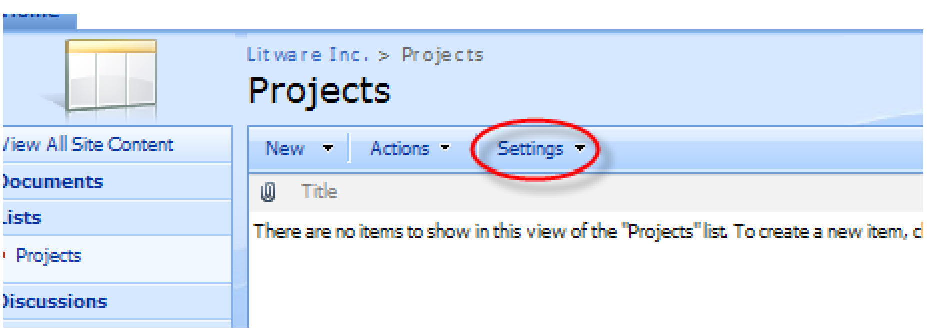
   A) Go to the **Site Actions** menu and click on **Create**. This will take you to the **Create** page.

   B) Under the **Custom Lists** section, click on the link for **Custom List**. This will take you to a page that allows you to specify the values of a new list.

   C) Name the new list **Projects** and click **Create**. Once the list is created, you will be taken to the Allitems.aspx page of the list.

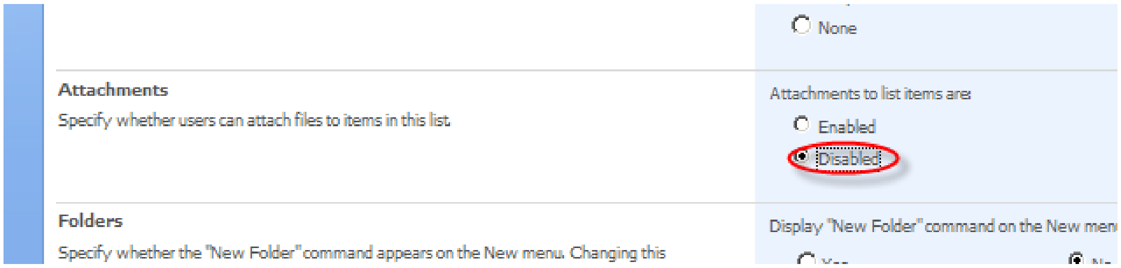
2) Next we are going to modify the setting of our new list to disable the uploading of attachments to the **Projects List**.

   A) Once the **Projects** list has been created, click on the **Settings** drop-down menu on the list's AllItems.aspx page (note: **NOT** the one on the Site Actions menu) and click on **List Settings**. This will take you to the **Customize Projects** page.

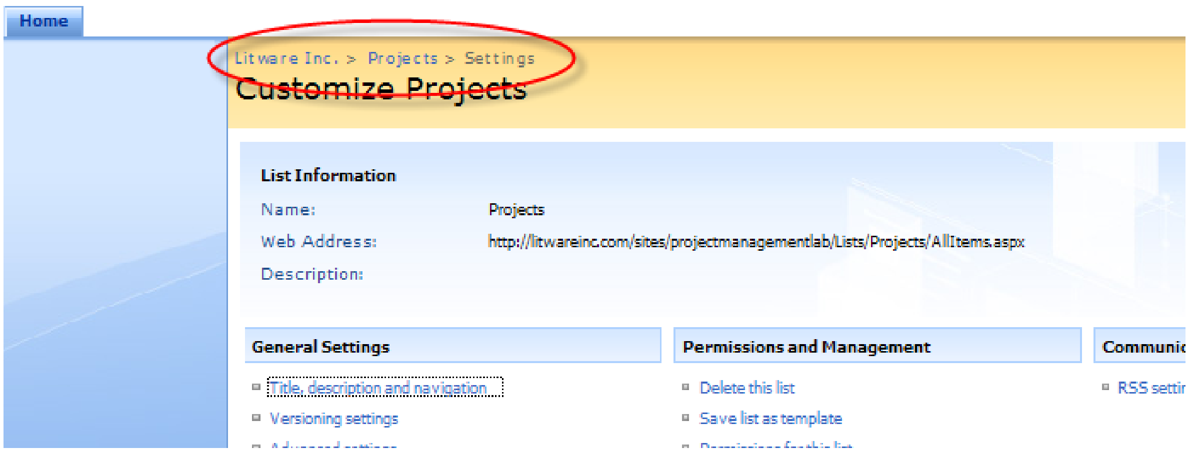


   B) From this page, under the **General Settings** section, click on the link for **Advanced Settings**. Take note of the different modifications you can make to the list from the **Advanced Settings** page.

C) In the **Attachments** section, change the setting to **Disabled** and click **OK**. If a warning box pops up, click **OK.** In this case, there is no need for the list to support attaching documents to items within the **Projects** list. You should now be back on the **Customize Projects** page.



D) For the next step, you will need to navigate back to the **Projects** list page. Use the breadcrumb above the **Customize Projects** heading and click on **Projects**.

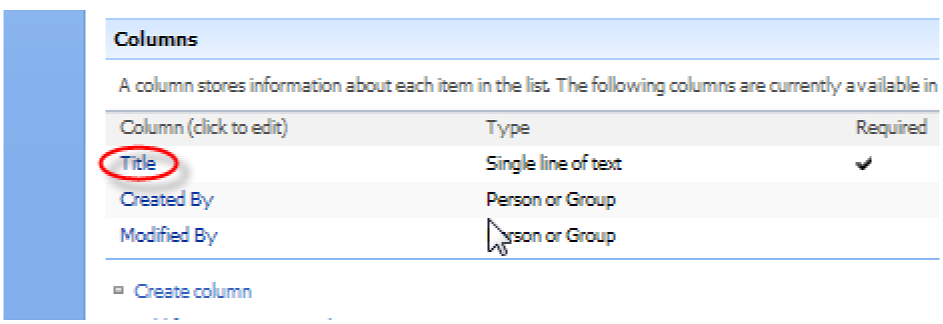


3) You should now be back on the **Projects** list page. In this step you will modify the **Projects** list so its set of columns matches the set of columns defined below (for detailed directions see steps A-G below)

Column Name	Type	Notes
Project	Single Line of Text	**Do not create this column as a new column.** Instead, rename the **Title** column to **Project**.
Client	Single Line of Text	Require that the column contain information
Contract Signed	Yes/No	Set default value to **No**
Contract Amount	Currency	Set currency format to **United States currency**
Begin Date	Date and Time	Format this column to show date only
End Date	Date and Time	Format this column to show date only
Created By	Person or Group	**You do not have to create this column**. It is automatically created when you create a new list
Modified By	Person or Group	**You do not have to create this column.** It is automatically created when you create a new list

A) In the **Settings** drop-down menu, click on **List Settings.**

B) Scroll down to the **Columns section** and click on the **Title** column to edit it.



C) Change the **Column name** to **Project** and click **OK**

D) From the **Columns section** click **Create Column** and using the chart above to configure the following settings:

   i) *Type the column Name*

   ii) *Select the data type for the column*

   iii) *Examine the Notes field from the above table for extra configuration options for each column*

   iv) *Configure extra options as needed and click OK*

E) Repeat until all columns are created.

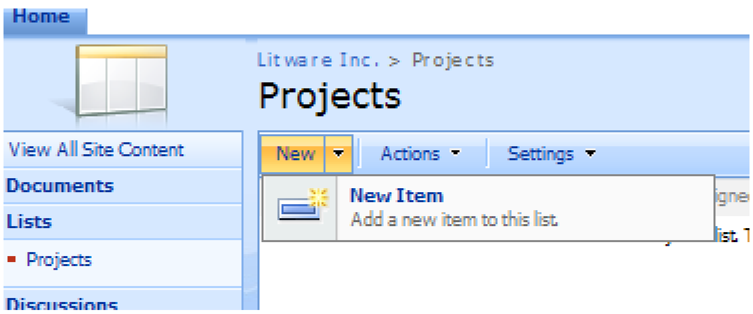
F) Organize the order of the columns so that they match the order in the list above. Note: there may be nothing to do here other than verify the order depending on how you created your columns. If you like, you can view how to do this by clicking on **Column Ordering**. This will take you to the **Change Field Order: Projects** page. From here you can click on the number drop-downs on the right side of the page (underneath **Position from top**. Modifying the number will change the order of the columns on the **Settings** page.

G) Using the breadcrumb navigational element (**Litware Project Management > Projects > Settings**) click on the **Projects** link to navigate back to the **Projects** list page.

4) When you are done creating the **Projects** list structure, add the following four items so that you have some test data to work with.

Project	Client	Contract Signed	Contract Amount	Begin Date	End Date
Wing001	Wingtip Toys, Inc	Yes	$250,000	1/1/2005	4/15/2006
AdWks001	Adventure Works	No	$120,000	1/15/2006	6/1/2006
NW001	Northwind Traders	Yes	$1,200,000	4/1/2006	6/1/2007
Cont001	Contoso	No	$75,000	6/1/2005	9/1/2006

A) On the **Projects List** page, click on the **New** drop-down menu and click **New Item.**



B) Using the data from the table above, enter the information in the corresponding spaces on the **New Item** page.

C) When finished, navigate back the home page using the **Home** tab on the upper left area on your screen.

Exercise 3: Creating a new document library for project documents

1) Create and modify a new SharePoint document library for storing and managing documents associated with Litware consulting projects.

A) Start by clicking on the **Site Actions** menu, then click **Create**.

B) Under the **Libraries** section, click on **Document Library**.

C) Name the new document library **Project Documents** and click **Create**.

2) You should now be on the **Project Documents** page. In this next step, you will add a new column to associate custom metadata with each document that is added to the document library.

A) Click on the **Settings** drop-down menu and click on **Document Library Settings**. This will take you to the document library settings page that has a title of **Customize Project Documents**.

B) Add a new lookup column named **Project**. Underneath the columns section of this page click **Create column**. We will use the Project column of the Projects list you created in the previous exercise as the source for this new lookup Column.

i) *Column name:* ***Project***

ii) *Type:* ***Lookup (information already on this site)***

iii) *Description:* ***Project identifications taken from the Projects list***

iv) *Require that this column contains information:* ***Yes***

v) *Get information from:* ***Projects***

vi) *In this column:* ***Project***

vii) *Click **OK** to add the new column.*

viii) *Using the breadcrumb navigation, navigate back to the **Project Documents** document library.*

3) Now that you have created the **Project Documents** document library and added the lookup column **Project**, it's time to upload a few documents to test it out.

A) Click on the **Upload** drop-down menu and click on **Upload Document**. Notice that you are selecting the option to upload a single document even though you will eventually upload four documents. For your own information, when you upload a document into a library, WSS prompts you to assign a value to the columns you have created. By selecting the **Upload Multiple Documents** choice, you will bypass this assigning functionality. Although you have the option to go back and edit the metadata (term used to describe the information used in the columns you have assigned to the library/list) in these columns, we will use the **Upload Document** choice for simplicity and to familiarize you with the entire process.

B) Click on **Browse**.

C) At the top of the window that pops up, in the **Look in:** box, select **Desktop**.

D) Open the folders in the following order: **Labs > Lab 1 > LitwareDocuments**. In this folder, you will find the four documents you will upload. Click on the first one and click **Open**

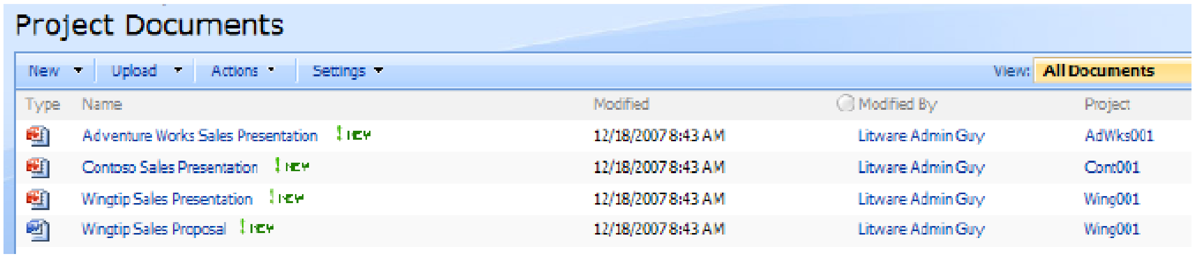
E) Click **OK**.

F) The following screen informs you that the current upload has been checked out to you and that you need to select the metadata. Do not edit the **Name** or **Title**. For the **Project** metadata, pick the corresponding project for the document. This will match the document name field to the project. Use the table below for a reference as necessary:

Project	Client
Wing001	**Wingtip Toys, Inc**
AdWks001	**Adventure Works**
NW001	**Northwind Traders**
Cont001	**Contoso**

G) Click **OK**.

H) Follow steps A-F for the other 3 documents you need to upload. The **Project Documents** library should like the image below.



I) When finished uploading the four documents navigate back to the Litware Inc. homepage (i.e. click on the **Home tab** near the top left corner of the screen)

Exercise 4: Customizing the home page

1) In this exercise you will customize the appearance of the Quick Launch navigation control on the left-hand side of the home page.

   A) Start by click on the **Site Actions** menu and click on **Site Settings.**

   B) Under the **Look and Feel** section, click on the **Quick Launch** link. Once on the **Quick Launch** page, you will be able to add, edit, and delete links and headings from the **Quick Launch** control. In this case, you want to remove the heading for **Discussions**.

      i) *On the **Quick Launch page** click on the **Edit Discussions** icon (i.e. the one to the left of the **Discussions** section)*

      ii) *On the **Edit Heading** page click the **Delete** button*

      iii) *Click **OK***

      iv) *Navigate back to the Litware Inc. page (i.e. click on the **Home tab** near the upper left corner of the page)*

   C) Verify that the Quick Launch control now looks like this

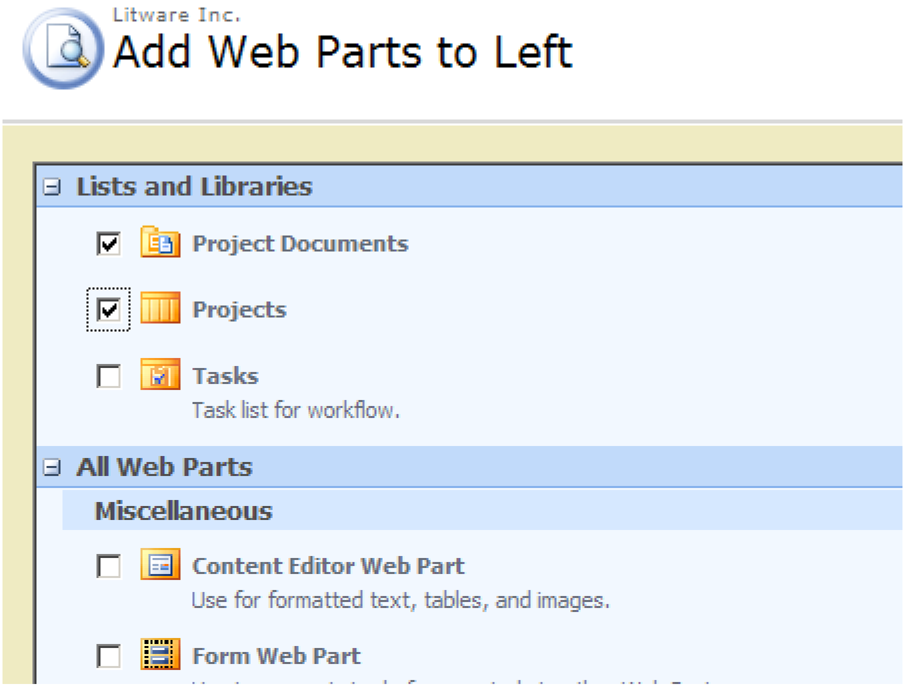
2) Next, you will add two Web Parts to the home page to display the **Projects** list and the **Project Documents** document library.

   A) If necessary, navigate to the home page of this site.

   B) Click on the **Site Actions** menu, and then click on **Edit Page**.

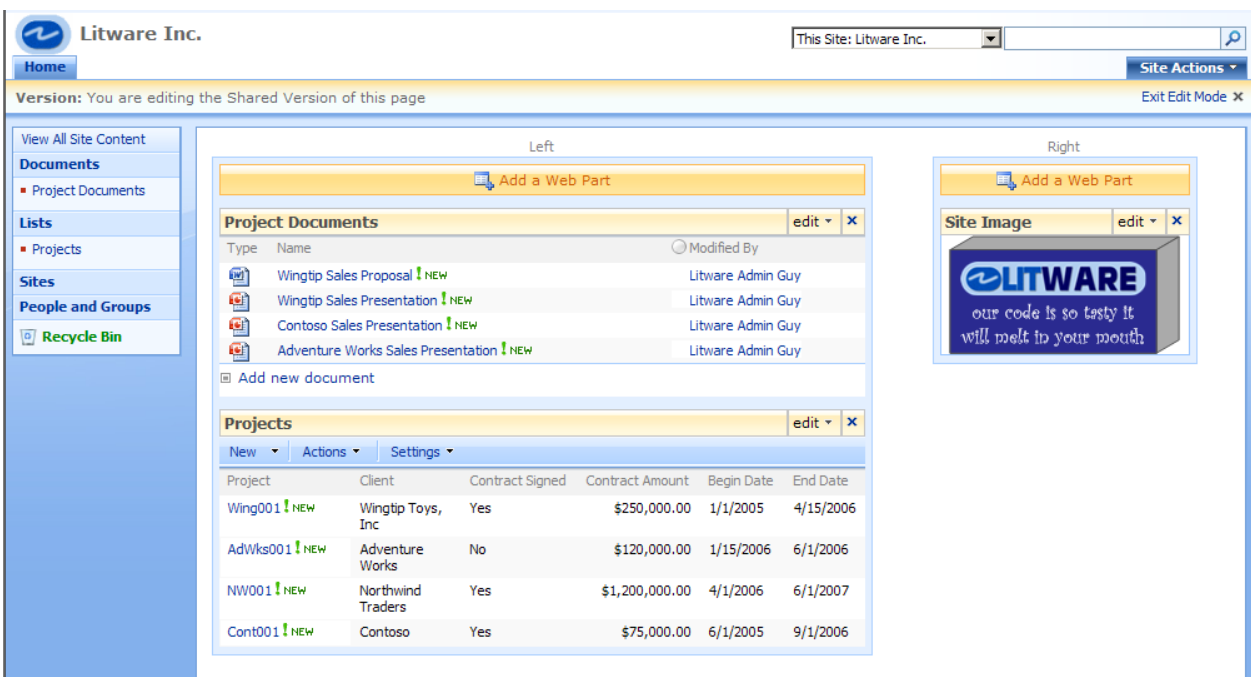
   C) Once the page is in edit mode, you should click the **Add a web part** link under the left web part zone.

D) Check the box for both **Project Documents** and **Projects**.



E) Click **Add**.

F) Your site should look like this:



G) When finished be sure to click on **Exit Edit Mode** (near the upper right corner of the page).

3) Finally, we will create a **Portal Navigation Point** to link our new site collection back to the main portal page.

A) Click on the **Site Actions** menu, and then on **Site Settings.**

B) Under the **Site Collection Administration** section, click on the **Portal site connection** link.

C) Select **Connect to portal site**

i) *Portal Web Address:* [*http://litwareinc.com*](http://litwareinc.com)

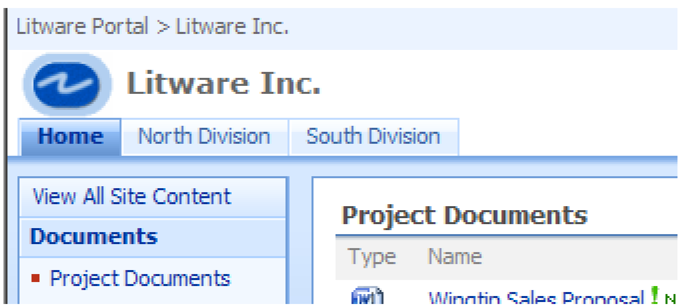
ii) *Portal Name:* ***Litware Portal***

iii) *Click* ***OK***

iv) *Click on the* ***Home*** *tab to navigate back to the top-level site.*

Exercise 5: Creating child sites

1) Now you are going to create two new child sites to track Litware consultants by corporate division. One site will be for the **Litware North Division** and the other will be for the **Litware South Division**. However, keep in mind that when you create these child sites you want to make it easy for users to navigate between them. Therefore, you want to create a resulting top link bar on the parent site and both child sites to look like this:



2) Create a child site named **North Division**.

A) Start by opening the **Site Actions** menu and clicking **Create**.

B) Under the **Web Pages** section, click on the link for **Sites and Workspace**. This will take you to the **New SharePoint Site** page.

i) *Title:* ***North Division***

ii) *URL name:* ***NorthDivision*** *(no space between)*

iii) *For the* ***Template Section****, under the* ***Collaboration*** *tab, select* ***Blank Site***

iv) *In the* ***Navigation*** *and* ***Navigation Inheritance*** *sections choose* ***Yes*** *as the option to* ***Display this site on the top link bar of the parent site*** *and* ***Yes*** *for the option* ***Use the top link bar from the parent site*** *(i.e. just accept the defaults)*

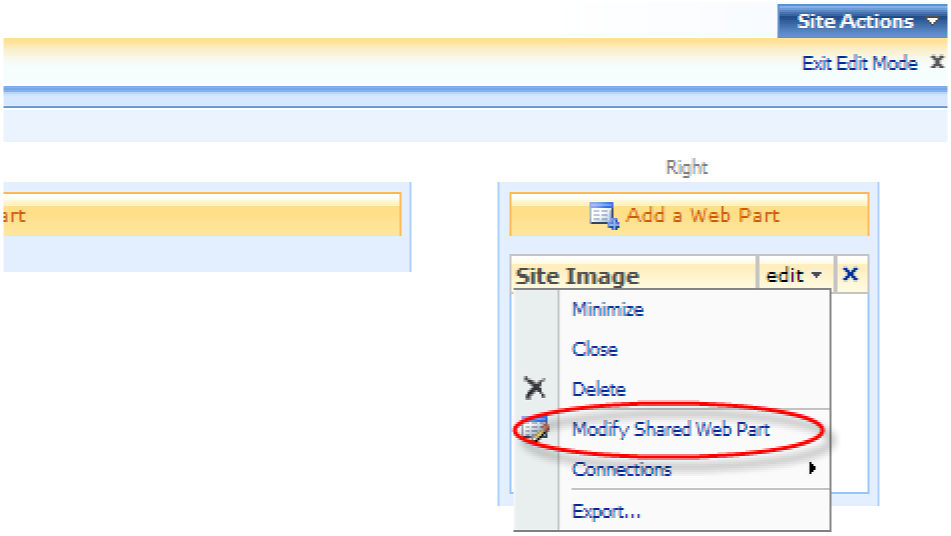
C) Click **Create**

3) Modify the **Site Image Web Part** in the **North Division** site so that is displays a Litware North graphic instead of the default Microsoft graphic.

A) Navigate to the home page of the North Division site (you should be at the Litware North Division homepage from the previous step, if you are not, click on the **North Division** tab in the global navigation).

B) Under the **Site Actions** menu, click on **Edit Page.**

C) Once the page is in edit mode, find the **Site Image Web Part** (Right Zone), click on the **Edit** drop-down menu and click on **Modify Shared Web Part**.



D) After you have run this command, you should see a task pane appear in the browser that allows you to modify the **Image Link** property. Assign the **Image Link** property a new value of **/_layouts/images/LitwareGraphics/LitwareNorth.png**

E) Click **OK**

F) Confirm that the child site's home page now shows the Litware North graphic

G) Remember to click on **Exit Edit Mode**

4) Using the top link bar (global navigation) you should be able to navigate back and forth between the top-level **Litware Inc.** site and its child site, **North Division**.

5) Now click the **home** tab to return to the **Litware Inc.** top-level site and create a second child site named **South Division**.

   A) Create this new site using the same set of instructions (i.e. Exercise 5, step 2) as you used to create the **North Division** site (note: replace North with South as appropriate)

B) Also, modify the Site Image Web Part in the South Division site so that it displays the graphic file at **/_layouts/images/LitwareGraphics/LitwareSouth.png** (i.e. follow the instructions in Ex 5 step 3 if you need help)

6) At this point, you should be able to quick navigate between the top-level site and either child site with a single click on the top link bar.

7) **Note:** You will return to these child sites in a later lab and add some custom lists to track information about Litware consultants.

Lab 02: Site Columns and Content Types

Lab Overview: In this lab you will add tracking functionality timesheets for Litware consultants. You will also improve the way that content is stored in the Litware Inc. site and its child sites by using two new features introduced with WSS 3.0: site columns and content types.

In the first Exercise, you will create a site column definition in the top-level **Litware Inc.** site that performs a lookup on the **Projects** list you created in the earlier lab.

In Exercise 2, you will use this Lookup site column to define a column in the list of a child site (**North Division**) within that same site collection.

In the third Exercise, you will create several new content types that allow users to store their documents in the **Project Documents** document library in a more structured way.

Lab Setup: If you did not complete all of Lab 1 exercises, follow these setup instructions.

Open the **Labs** folder on your desktop. Open the **Lab 2** folder. Open the **StarterFiles** folder. Run the **Lab2StarterFile.bat** file.

Run this batch file to create a new site collection at http://Litwareinc.com/sites/ProjectManagementLab that already has all the customization work called for by Lab 1.

Note that running this batch file will delete any site collection existing at that URL as well as any customization work you did within this site collection.

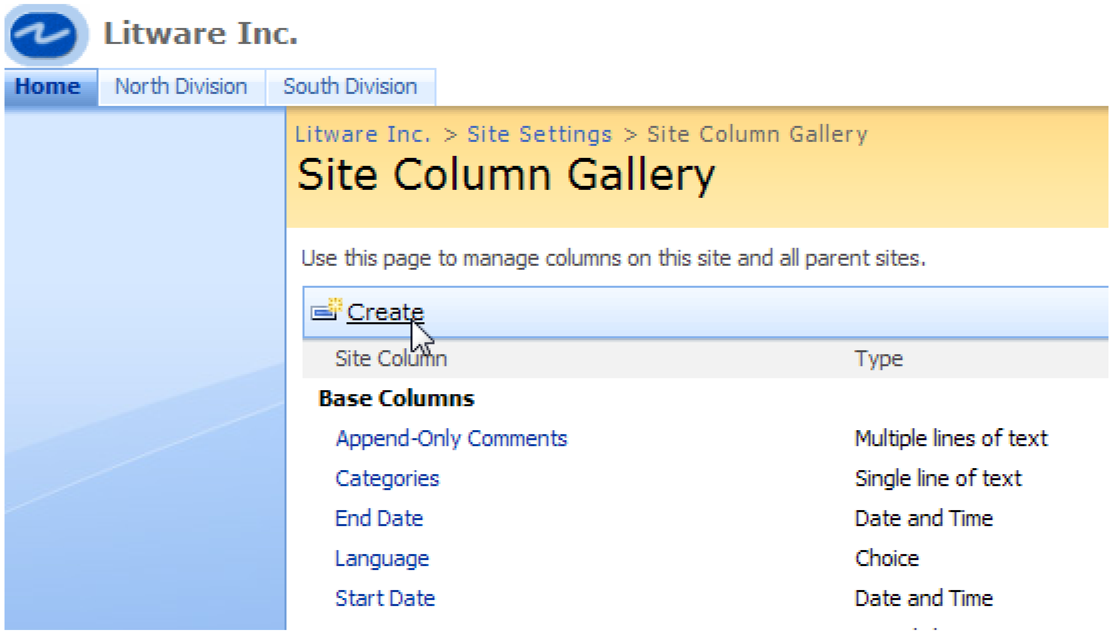
Note: To pick up the pace a little bit we are going to change the format of our directions. Instead of saying, "Go to the **Site Actions** menu and click **Edit Page,**" we will simply say, "Click on **Site Actions > Edit Page**. As we continue through the labs, we will start to cut down on steps that you have become familiar with.

This Lab should take approximately 45 minutes to complete.

Exercise 1: Create a site column for doing Project lookups

1) In this first exercise, you will create a site column in the top-level **Litware Inc.** site that performs lookups on the **Project** column of the **Projects** list.
   A) Start by navigating to the **Litware Inc.** site you created in the previous lab exercise (http://litwareinc.com/sites/ProjectManagementLab/default.aspx).
   B) Click on **Site Actions > Site Settings**
   C) Under the **Galleries** section**,** click on **Site columns**

D) Click **Create**



i) *Column Name: **Project.***

ii) *The type of information in this column is: **Lookup (information already on this site)**.*

iii) *Put this site column into: Select **New Group**, and enter the name **Litware***

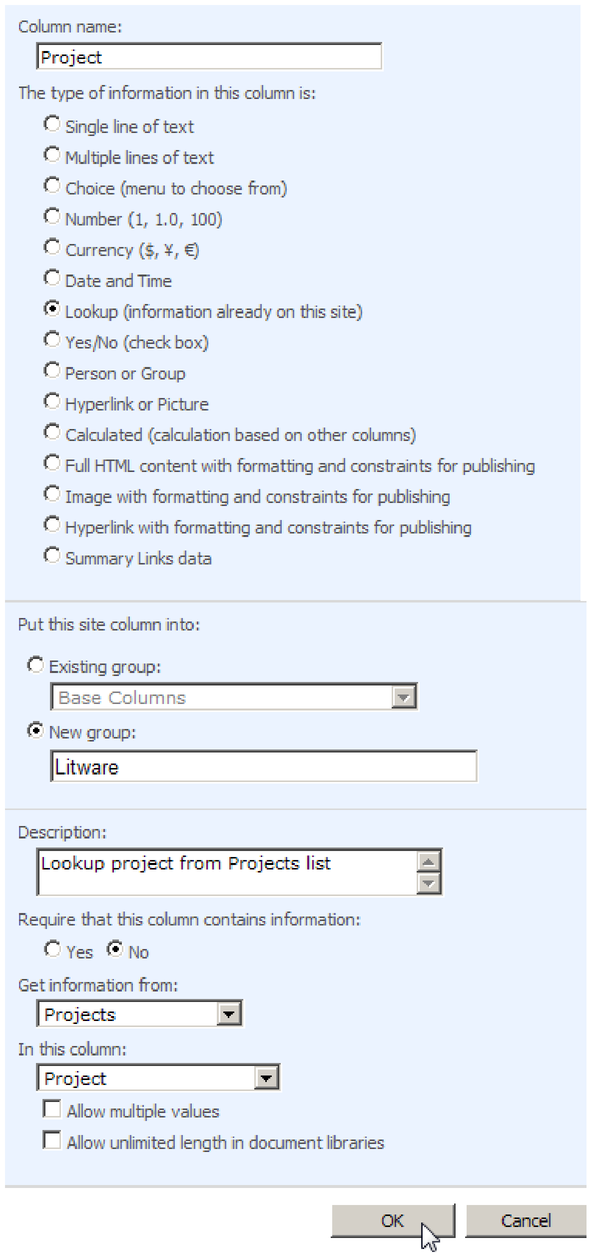
iv) *Description: **Lookup project from Projects list.***

v) *Require that this column contains information: **Yes***

vi) *Get information from: **Projects**.*

vii) *In this column: **Project***

viii) *When you are done filling out the **New Column** page and it looks like the one below, click **OK** to create the new site column. Navigate back to the **Home** page.*



Exercise 2: Create a custom list for tracking consultant timesheets

Now that you have created the Project site column, it's time to use it in a new list. You will create a list that uses this site column in the North Division site. This scenario will demonstrate how a site column can easily enable lookups across sites within a site collection.

1) Begin by navigating to the **North Division** site (click on the **North Division** tab in the global navigation).
2) Over the next few steps, you will create new a SharePoint custom list which we will then modify for tracking consultant timesheet information.
   A) Click **Site Actions > Create**
   B) Create a new list by clicking the **Custom List** link in the **Custom Lists** section. This will take you to a page that allows you to name the new list.
   C) Name the new list, **Timesheets,** and click **Create**.
   D) Once the **Timesheets** list has been created, click on the **Settings** drop-down menu and click on **List Settings**. This will take you to the list settings page that has a title of **Customize Timesheets.**
   E) Under the **General Settings** section, click on **Versioning Settings**.
   F) In the **Item Version History** section, select **Yes** for **Create a version each time you edit an item in this list?**
   G) Click **OK**.
   H) Now it's time to define the columns needed for the **Timesheets** list using the **Customize Timesheets** page. In this step you will modify the **Timesheets** list so its set of columns matches the set of columns defined below. You will follow the same steps you used in Lab 1 when you modified and created new columns for the **Projects** list.

Column Name	Type	Additional Settings
TimesheetID	Single Line of Text	Do not create this column as a new column. Instead, rename the **Title** column to **TimesheetID**.
Consultant	Choice	To simplify this lab, make this a choice column with three choices for the consultant. The choices should be "**Britta Simon**", "**John Rodman**" and "**Mike Fitzmaurice.**" In the **Additional Column Settings** section, go to the box where you can enter your choice values. Be sure to type each choice on a separate line. Under **Default Value**, clear the box so that no value is there.
Project	Lookup	This column should be based on **Project** site column created earlier in this exercise. Create this by clicking the **Add from existing site columns** link. This link will be on the **Site Settings page (do not create new column).** In the **Available site columns** box, scroll down to **Project**. Click **Add**. Click **OK.**
Submitted On	Date and Time	Format this column to show date only. Make this a required column and make the default value the current date (i.e. "**Today's Date**").
Hours	Number	Make this a required column and set the minimum value to 1 hour and maximum to 24 hours. The maximum is due to the fact that each timesheet item will be for only one specific day.
Hourly Rate	Currency	Make this a required column and set currency formatting to US dollar value
Created By	Person or Group	You do not have to create this column. It is automatically created when you create a new list
Modified By	Person or Group	You do not have to create this column. It is automatically created when you create a new list

I) For the first column, **TimesheetID**, you will not create a new column. Instead, you will edit the existing **Title** column.

   i) In the **Columns** section, click on **Title**. This will take you to the **Change Column: Title** page.

   ii) Change the column name to **TimesheetID**.

   iii) Click **OK**.

J) You will need to create the next four columns.

   i) In the **Columns** section, click on **Create column**.

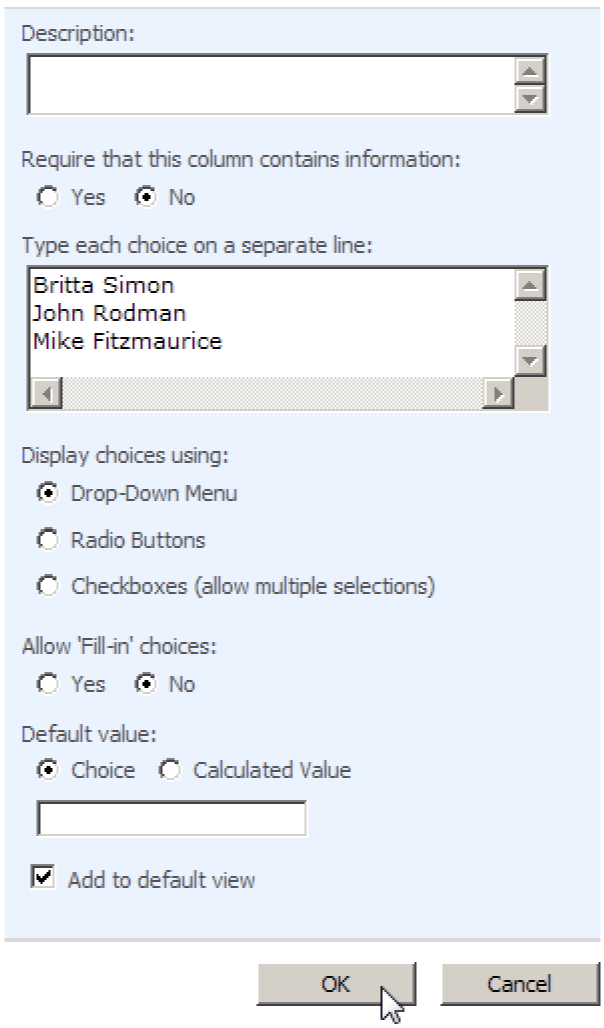
   ii) Column name: **Consultant**

   iii) The type of information in this column is: **Choice (menu to choose from)**

   iv) Type each choice on a separate line: **Britta Simon**, **John Rodman**, and **Mike Fitzmaurice**. Be sure to enter these choices on separate lines.

   v) Default value: Be sure that you delete the contents of this box. We do not want a default value for this column.

   vi) Click **OK**.



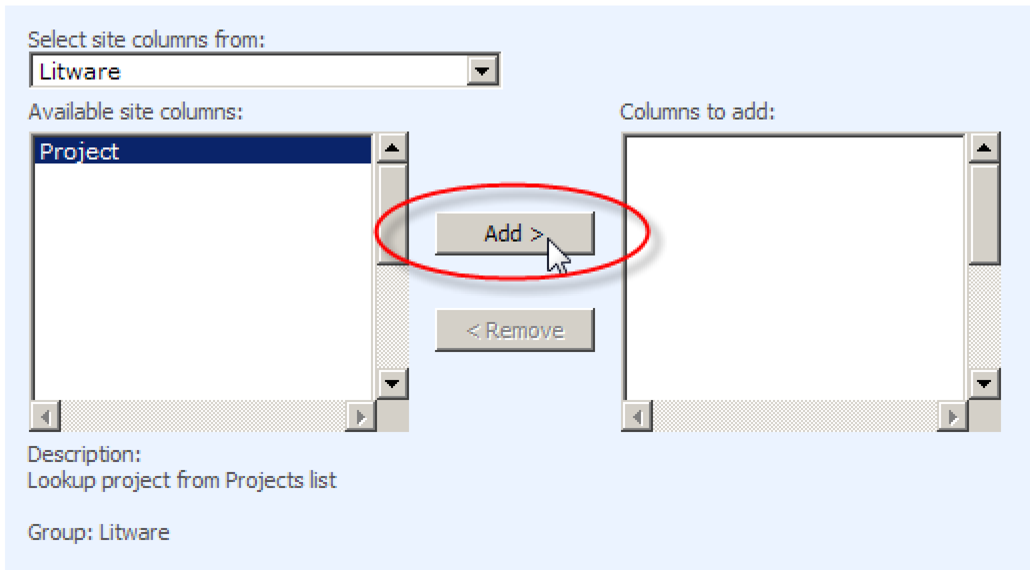
K) Next we will add the **Project** column. We are going to use the **Project** site column we created earlier.

i) In the **Columns** section, click on **Add from existing site columns**. This will open the **Add Columns from Site Columns: Timesheets** page. You will see three boxes/menus: **Select site columns from, Available site columns**, and **Columns to add**.

ii) In the **Select site columns from:** menu, select **Litware**. If you remember back to when you created the **Project** site column, we created the **Litware** location to store the new site column. When **Litware** has been selected, you will notice that the site columns available in the **Available site columns:** menu has been narrowed down to **Project**. That is because this is the only site column located in the **Litware** group.

iii) In the **Available site columns:** menu, click on **Project**.

iv) Click on **Add.**



v) You will notice that the **Project** site column selection has moved to the **Columns to add:** box.

vi) Click **OK**.

L) Next, you will create the **Submitted On** column.

i) Click on **Create column**.

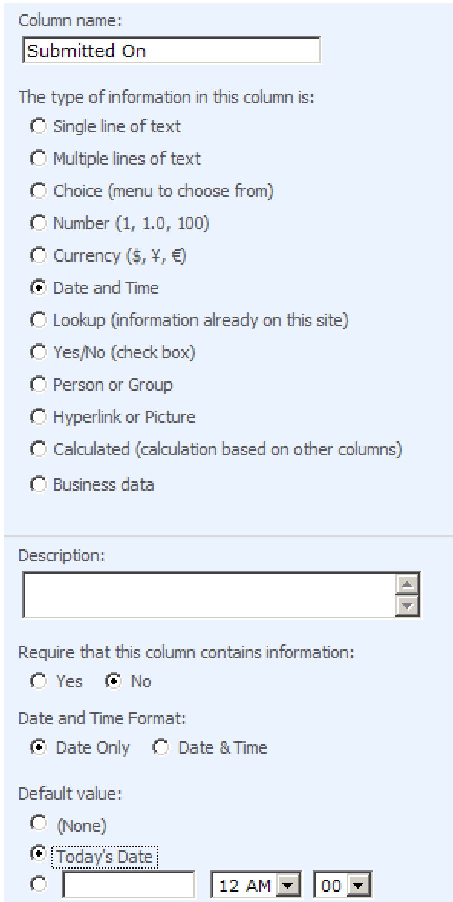
ii) Column name: **Submitted On**

iii) The type of information in this column is: **Date and Time**

iv) Require that this columns contains information: **Yes**

v) Date and Time Format: **Date Only**

vi) Default Value: **Today's Date**



vii) Click **OK**

M) We will now create the **Hours** column.

i) Click on **Create column**

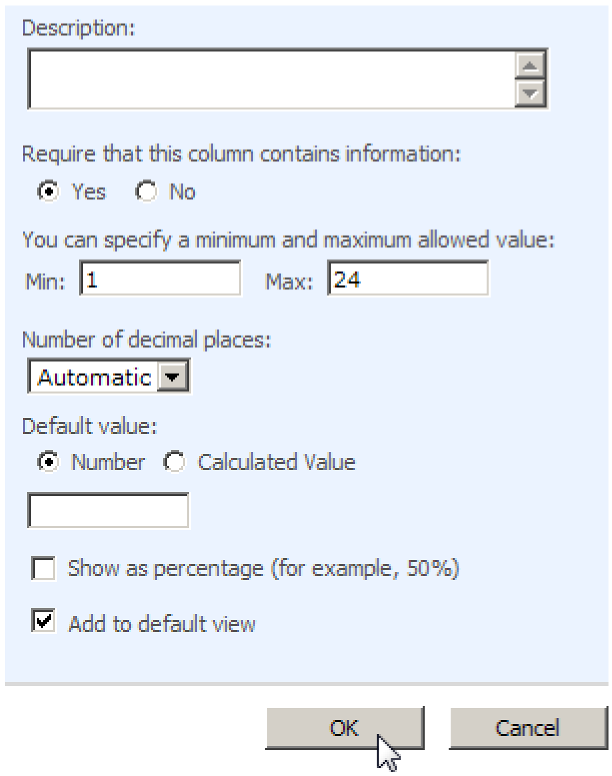
ii) Column name: **Hours**

iii) The type of information in this column is: **Number (1,1.0,100)**

iv) Require that this column contains information: **Yes**

v) You can specify a minimum and maximum allowed value: Min: **1** Max: **24**

vi) Click **OK**.



N) The last column we will create will be **Hourly Rate**.

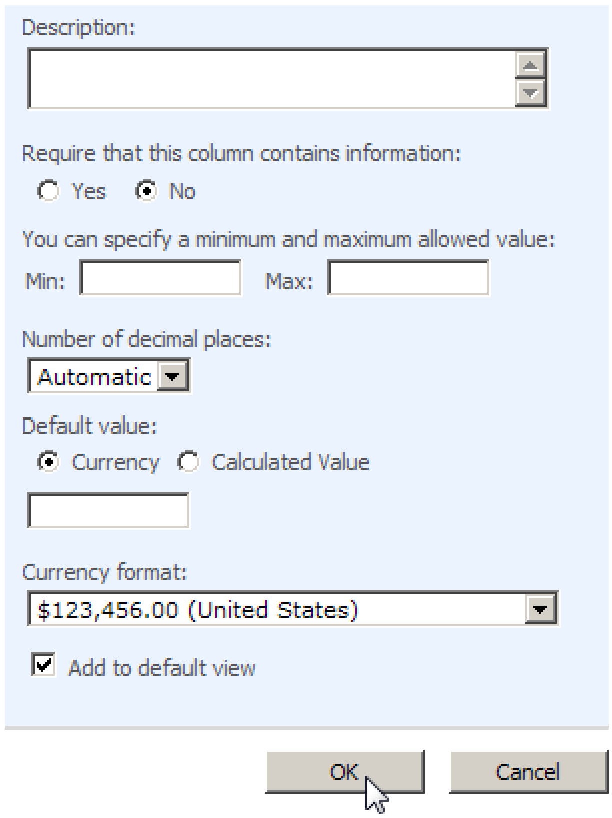
i) Click on **Create column**.

ii) The type of information in this column is: **Currency ($....)**

iii) Require that this column contains information: **Yes**

iv) Currency format: The default value should be **United States**. If it is not, set the value accordingly.

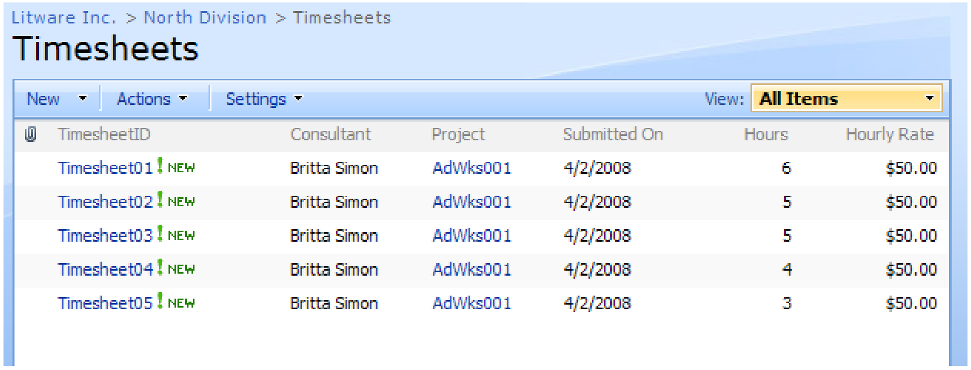
v) Click **OK**.



O) When you are done creating the **Timesheets** list structure, use the breadcrumb to navigate back to the **Timesheets** list and add five items so that you have some test data to work with. Add the items with the metadata given below. You should see that the **Project** column is performing lookup from the **Projects** list in the parent **Litware Inc.** site.

TimesheetID	Consultant	Project	Submitted On	Hours	Hourly Rate
Timesheet01	Britta Simon	AdsWks001	[Today's Date]	6	50
Timesheet02	Britta Simon	AdsWks001	[Today's Date]	5	50
Timesheet03	Britta Simon	AdsWks001	[Today's Date]	8	50
Timesheet04	Britta Simon	AdsWks001	[Today's Date]	4	50
Timesheet05	Britta Simon	AdsWks001	[Today's Date]	3	50

P) When you are finished, the **Timesheets** list should look like the image below.



TimesheetID	Consultant	Project	Submitted On	Hours	Hourly Rate
Timesheet01 ! NEW	Britta Simon	AdWks001	4/2/2008	6	$50.00
Timesheet02 ! NEW	Britta Simon	AdWks001	4/2/2008	5	$50.00
Timesheet03 ! NEW	Britta Simon	AdWks001	4/2/2008	5	$50.00
Timesheet04 ! NEW	Britta Simon	AdWks001	4/2/2008	4	$50.00
Timesheet05 ! NEW	Britta Simon	AdWks001	4/2/2008	3	$50.00

Note: in the **InfoPath** chapter (chapter 06) we will approach the problem of Timesheet Tracking from a different angle using InfoPath Forms

Exercise 3: Create a document library that uses custom content types

In this exercise, you will create a few new custom content types and use them within the Project Documents document library. First, you will create a content type named LitwareDocument that will serve as a base content type. Next you will create two more content types, LitwareProposal and LitwarePresentation, that derive from the base content type.

1) Start by navigating back to the **Litware Inc.** site (i.e. click on the **Home** tab near the top left of your screen).

2) Add new content types

   A) Click on **Site Actions > Site Settings**

   B) Under **Galleries,** click on **Site content types**

   C) Click on **Create**

D) On the **New Site Content Type** page, enter the following information:

i) *Name: **Litware Document***

ii) *Description**: Base content type for Litware documents***

iii) *Parent Content Type: **Document Content Types***

iv) *Parent Content Type: **Document***

v) *Group: Select **New Group** and name the new group **Litware***

E) Click **OK**

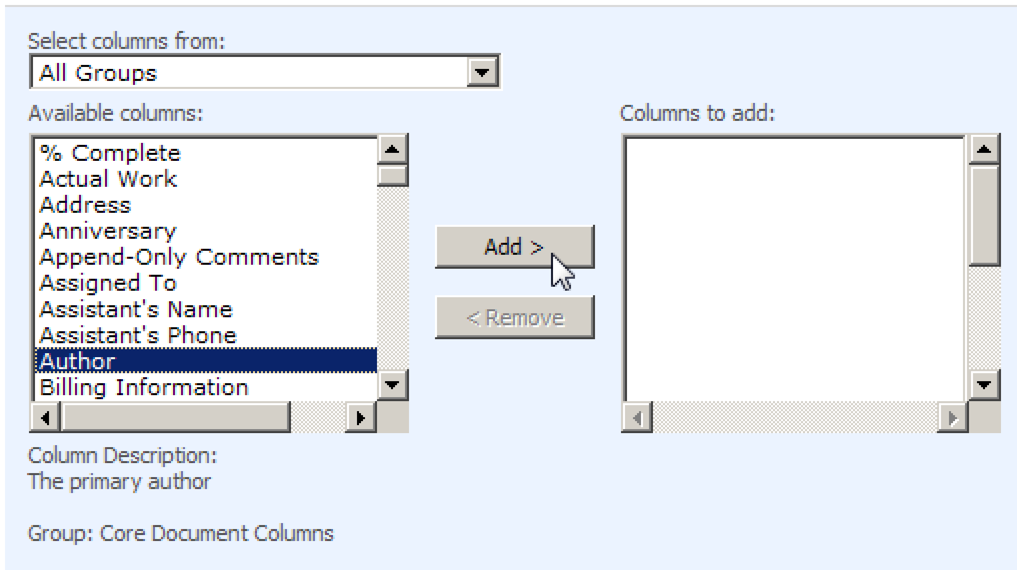
3) Next, on the **Site Content Type: Litware Document** page, add three columns to the new **LitwareDocument** content type. You will add them from the existing set of site columns. Note: You cannot create columns for a content type, you may only add site columns.

   A) In the **Columns** section, click on **Add from existing site columns**. You will be taken to the **Add Columns to Site Content Type: Litware Document** page. You will notice that it looks similar to the page from step 2 K of the previous exercise. As such, we will follow a similar procedure.

      i) Select columns from: **All Groups** (we are selecting from all groups rather than just the **Litware** group because two of columns that we want to add are not in the **Litware** group)

      ii) Available columns: Scroll down the list and click on **Author**.

      iii) Click **Add**.



      iv) We still have two more site columns to add

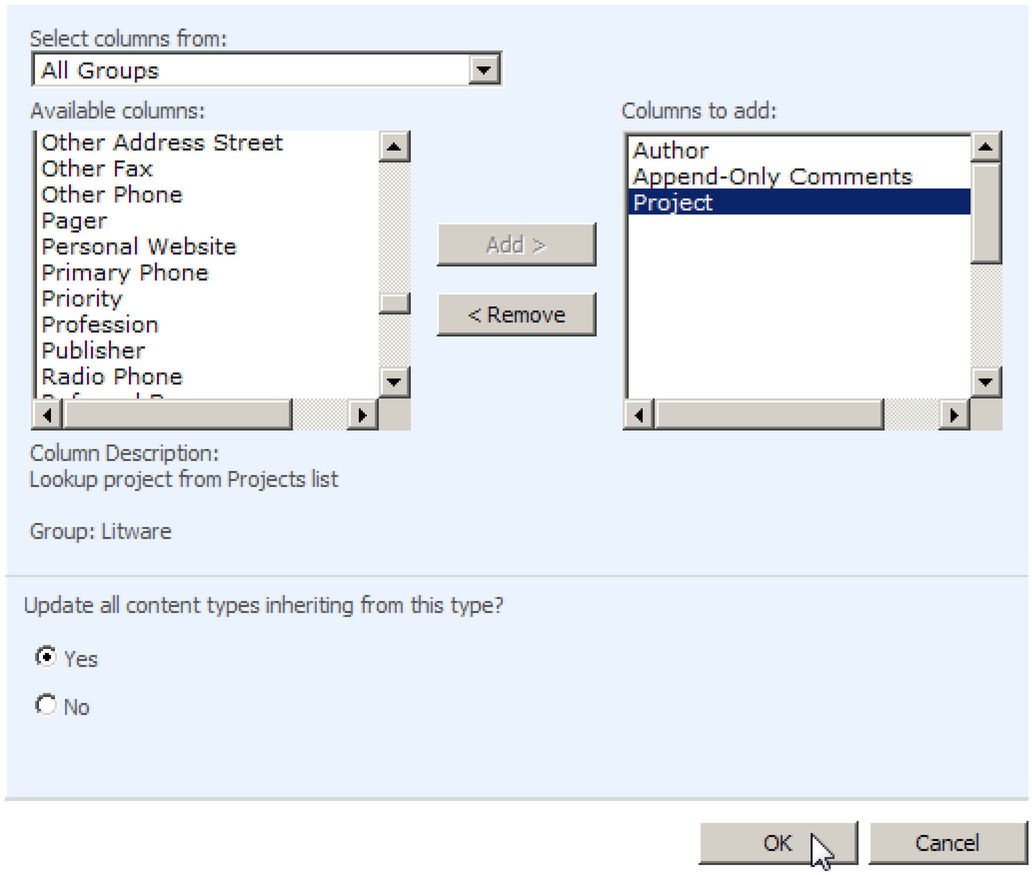
v) Available columns: Scroll and click on **Append-Only Comments**.

vi) Click **Add**

vii) Available columns: Scroll down and click on **Project**.

viii) Click **Add**.

ix) You should now have the three site columns in the **Columns to add:** box.



x) Click **OK**.

B) Navigate back to the **Site Content Type Gallery** using your breadcrumb.

4) Over the next few steps you will create two derived content types: **LitwareProposal** and **LitwarePresentation**. Both of these new content types will be derivatives of the **LitwareDocument** content type and as such, the new content types will inherit the settings and site columns from the parent content type. In addition, you will extend these two derived content types by giving them different document templates.

5) Create a new content type named **LitwarePresentation**. (You should still be on the **Site Content Type Gallery** from step 3.

A) Click on **Create** and fill in the **New Site Content Type** page with the information below.

*i) Name: **LitwarePresentation***

*ii) Select parent content type from: **Litware***

*iii) Parent Content Type: **Litware Document***

*iv) Put this site content type into: Select **Existing group:** and in the drop-down list, select **Litware**.*

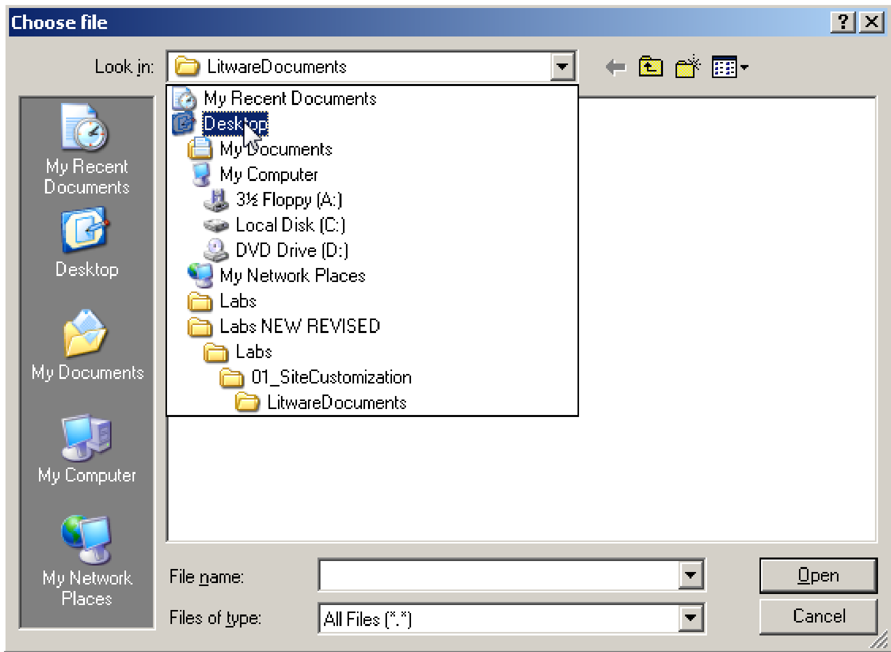
*v) Click **OK**.*

B) After you click **OK** to create the **LitwarePresentation** content type, you will be taken to a page that shows the settings and columns for this new content type (**Site Content Type: LitwarePresentation**). You should observe that the **LitwarePresentation** content type contains the same site columns that you defined in the base content type, **Litware Document**.

C) You will now load a template for the **LitwarePresentation** content type. Under the **Settings** section, click on **Advanced Settings**.

D) In the **Document Template** section, select **Upload a new document template:** and click on **Browse**.

   i) The **Choose file** window will pop-up. In the **Look in:** section, select **Desktop**.



   ii) Double click on the **Labs** folder.

   iii) Double click on the **Lab 2** folder.

   iv) Double click on the **LitwareDocumentTemplates** folder.

   v) Select the **LitwarePresentationTemplate.potx** file and click **Open**.

   vi) Back on the **Site Content Type Advanced Settings: LitwarePresentation** page, click **OK**.

E) Click on **Site Content Type Gallery** in the breadcrumb.

6) Create a second derived content type named **LitwareProposal** using the exact same steps you used to create the **LitwarePresentation** content type. The only thing you should do differently, other than giving this content type a different name, is to use **LitwareProposalTemplate.dotx** as the file for the document template instead of **LitwarePresentationTemplate.dotx**. When you are done with this step you will have two content types that you can now use within libraries and lists in the site collection (namely the document library named **Project Documents**).

7) Now you will modify an existing document library to utilize your new content types.

   A) Navigate back to the home **Litware Inc.** site (i.e. Click on the **Home** tab)

   B) Navigate to your document library named **Project Documents.** A link for this library should be in the current navigation on the left portion of the screen.

   C) Go to the **Document Library Settings** page for the **Project Documents** library (i.e. **Settings** drop-down > **Document Library Settings**).

   D) In the **General Settings** section, click the **Advanced Settings** link.

   E) **Allow management of content types?** Select **Yes**.

   F) Click **OK**.

8) Add the content types **LitwareProposal** and **LitwarePresentation** to the document library.

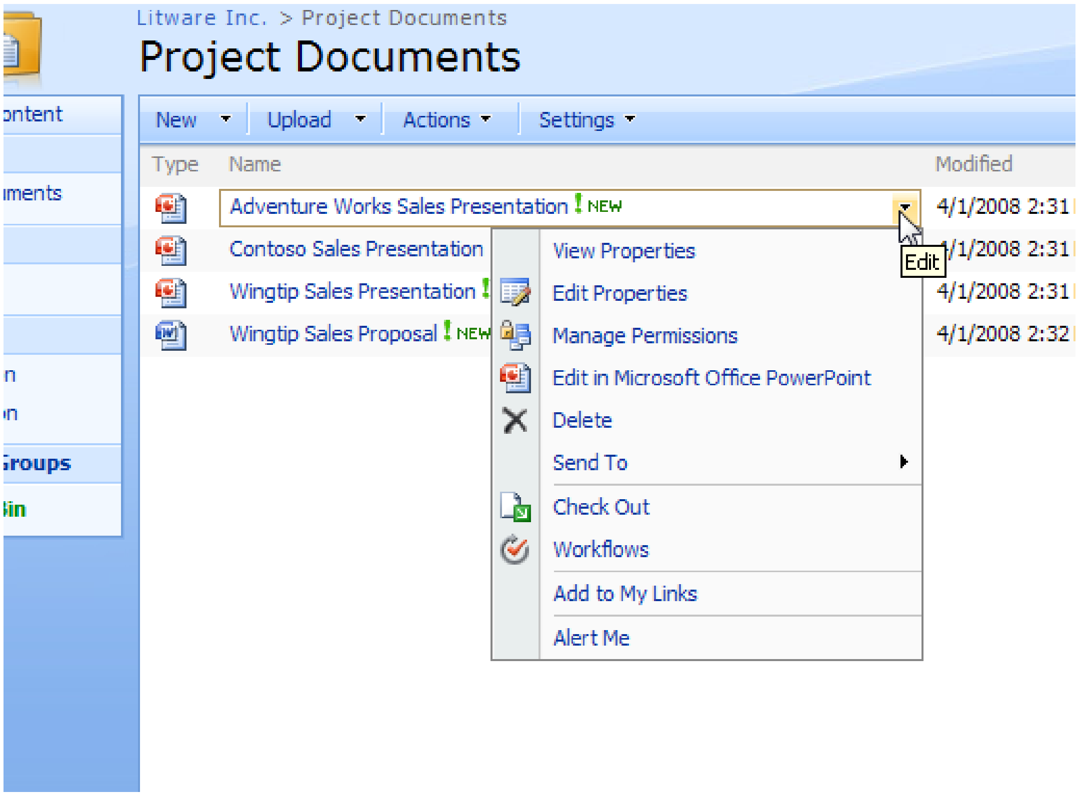
   A) In the **Customize Project Documents** page locate the **Content Types** section and click on the **Add from existing site content types** link.

   B) In the **Select site content types from** drop-down list, select **Litware**.

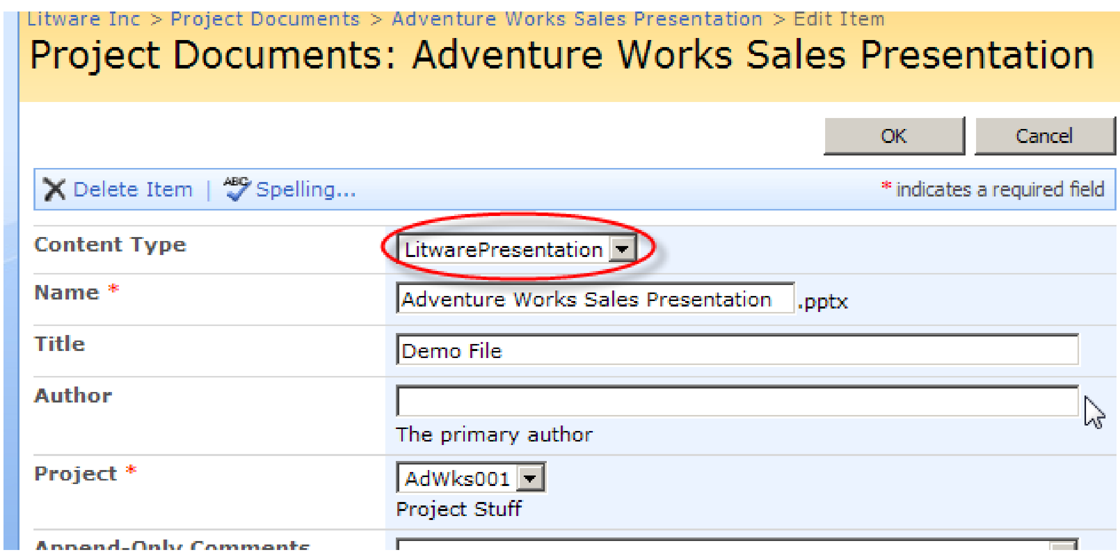
   C) In the **Available Site Content Types** list, select **LitwarePresentation** and **LitwareProposal** and click **Add**.

   D) Click **OK**.

9) Now, navigate back to your **Project Documents** page and examine the files that are already in the **Project Documents** document library. Move your cursor over the first document and click on the **Edit Properties** drop-down menu. Click on **Edit Properties**. This will bring you to a page that allows you to change the metadata for that specific item. You will need to change the content type metadata for each document in the library.



A) Change the content type for each document in the document library to either **LitwareProposal** or **LitwarePresentation** (**Hint:** Match up the names of the documents still assigned to the standard content type named **Document**. Click **OK** after you change the content type)



B) When you are done, be certain that there are no documents still assigned to the standard content type named **Document**.

10) Go back to the **Document Library Settings** page for the document library named **Project Documents** (**Settings** > **Document Library Settings**) and remove the original content type named **Document**.

A) On the **Customize Project Documents** page in the **Content Types** section, click on the **Document** content type. This will take you the **List Content Type: Document** page

B) Under the **Settings** section, click on **Delete this content type** and click on **OK** on the pop-up window that appears.

C) **Note**: you will not be able to remove the **Document** content type if there are still one or more documents in the document library that have this content type. If you have trouble removing the **Document** content type, go through each document in the **Project Documents** library and make sure they are configured with a content type of either **LitwareProposal** or **LitwarePresentation,** and not **Document**.

11) **IMPORTANT:** In a single machine virtual world (like our lab setup) you may encounter problems saving to the document library (weird error about how there is no connectivity) or using the document information panel to tie in with SharePoint (appears in each Office application near the top of the document). To fix this we must **stop** the **System Event Notification Service**.

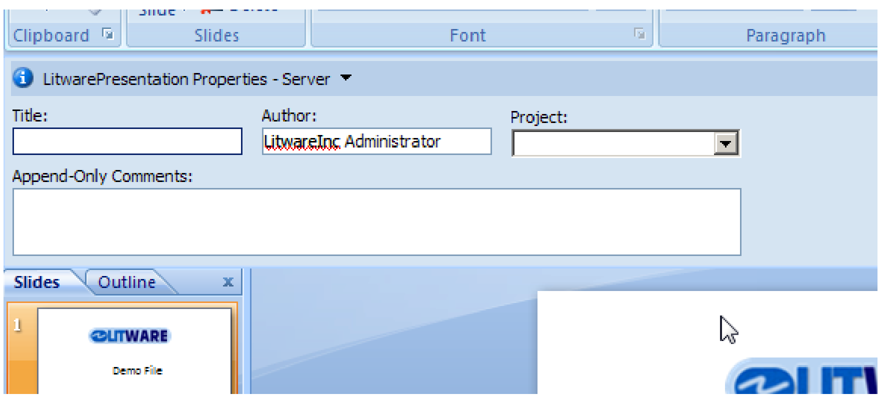
A) Open a command prompt (**start menu - run -** type **cmd -** press **enter**).

B) From the **cmd** prompt type **net stop sens** and press enter. Tthis will stop the System Event Notification Service and you should now be able to use the Office-SharePoint integration features. Close the command prompt. Navigate back to **Project Documents**.

12) Create and save a new Litware proposal and a new Litware presentation.

A) Click on the **New** drop-down menu. You will notice the new content type options. Use the **LitwarePresentation** content type and create a new presentation.

i) Microsoft PowerPoint will open up. You will see a new area. This area is automatically created for you to enter the corresponding metadata that is to go along with the new presentation.



ii) Title: **Presentation Test**

iii) Project: **NW001**

iv) Click on the save icon.

v) A **Save As** window will pop-up. Name the document **Presentation Test** and click **Save**.

vi) Switch back over to the browser and confirm the new presentation has been saved to the document library. Once this has been confirmed, close out of Microsoft PowerPoint.

B) Back in the **Project Documents** document library, click on the **New** drop-down menu. Click on the **LitwareProposal** content type. Microsoft Word will open up. Similar to the new presentation you added, Microsoft Word will create a new area for you to enter the metadata for the new proposal.

i) Title: **Proposal Test**

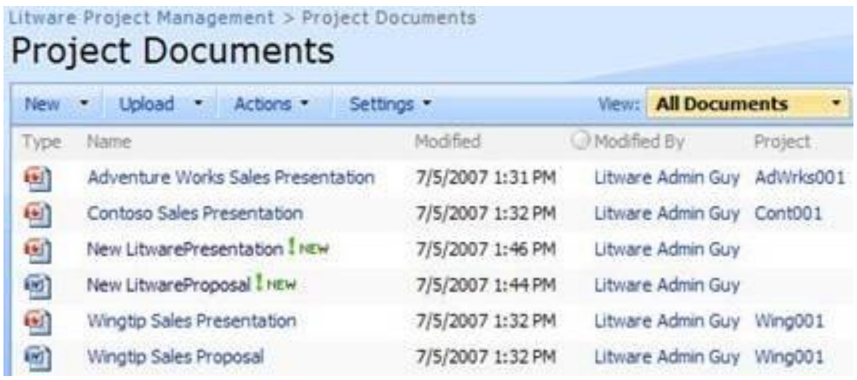
ii) Project: **NW001**

iii) Click on the save icon.

iv) A **Save As** window will pop-up. Name the document **Proposal Test** and click **Save**.

v) Switch back over to the browser and confirm the new proposal has been saved to the document library. Once this has been confirmed, close out of Microsoft Word.

C) When you have successfully completed the steps, the **Project Documents** document library will look like the image below.

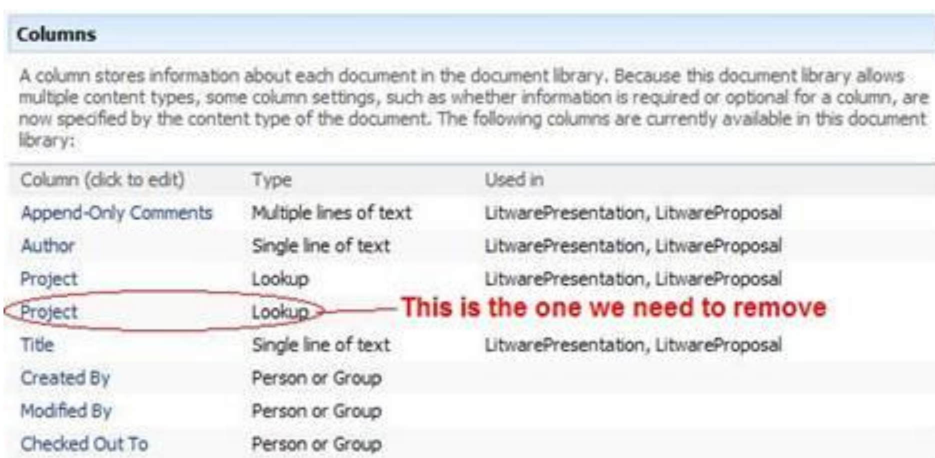


13) **Important:** You will notice that in this view, information in the **Project** column is only showing up for the previously uploaded documents and not for the two new ones you just added... let's investigate this behavior.

A) Navigate to the **Project Document Settings** page **(Settings** > **Document Library Settings)**

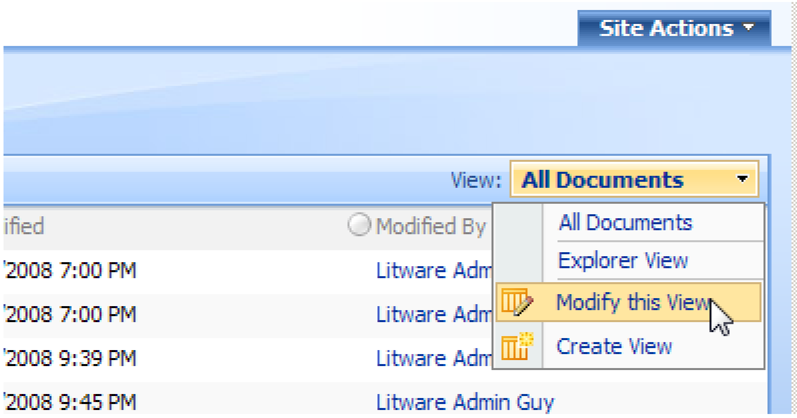
B) Look at the **Columns** section, note that there are two **Project** columns: One is a column you created when the document library was created, the other is a site column that was added when you added the two new content types.

C) To fix this you need to remove the **Project** column that is not needed. Click on the column indicated below.



D) Click **Delete**.

E) Using the breadcrumb, navigate back to the **Project Documents** document library. You will see that the **Project** column is no longer visible. This is because the one that was visible, you just deleted. We need to add the other **Project** column to the current view. Click on the **View:** drop-down menu and click on **Modify this view**.

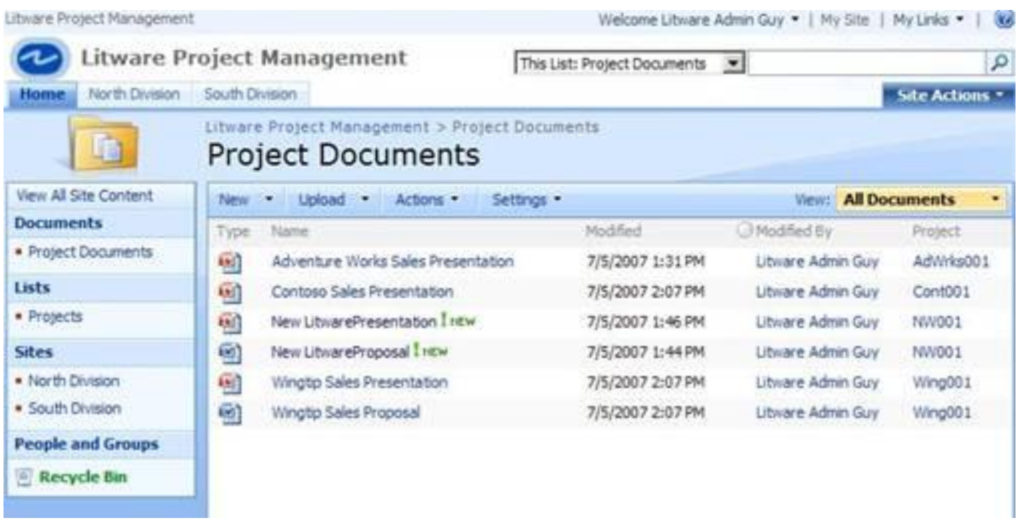


F) In the **Columns** section, check the box for **Project**.

G) Click **OK**. You will be sent back to the **Project Documents** document library. Notice that the **Project** column only has values for the two items you just added.

H) For the other items, you need to click on the **Edit** drop-down menu, click on **Edit Properties**, and enter the corresponding **Project** column metadata.

14) When you are finished, the **Project Documents** document library should look like this:



15) Close your browser.

Lab 03: Working with the SharePoint Designer

Lab Overview: In this lab you will work with the SharePoint Designer to customize a site by making changes to the Master Page and by adding and customizing Data View Web Parts. You will be making functional changes to the Master page such as adding a footer and one level of fly-out to the Quick Launch bar. Along the way you will modify a web part page by adding three Data View Web Parts and then establishing web part connections between them. The main point is that you learn how to create a user interface that allows a user to drill down on content.

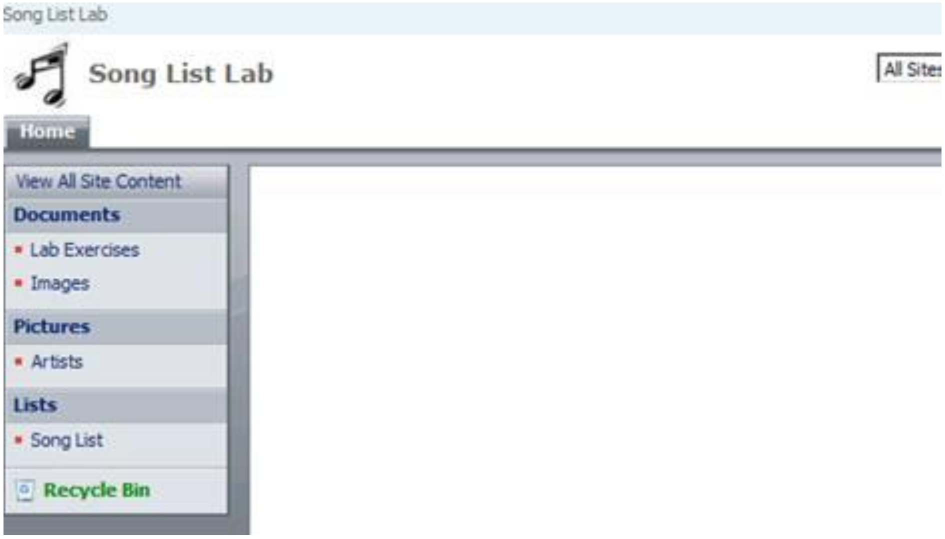
Lab Setup: Before you can begin to work on this lab, you must run a batch file to create a new site collection and top-level site which holds a list of songs and a picture library with profiles for the artists that performed these songs. Locate the directory in the Lab 3 folder that is in the Labs folder on your desktop. Look inside to find the batch file named RestoreSongListSite.bat. When you run this batch file, it creates a new site. Use the following URL to navigate to the new site: http://litwareinc.com/sites/SongListLab.

This lab should take approximately 60 minutes.

Exercise 1: Customizing a Master Page with SharePoint Designer

1) The first design change is to switch out the standard logo in the left hand corner with our logo. This can be done through the browser.
   A) If you do not already have it open, open http://litwareinc.com/sites/SongListLab in your internet browser.
   B) Click **View All Site Content > Create > Document Library**
   C) On the **New** page, name the Document library, **Images**, and click **Create.**
   D) Upload the **Music Note** file. You will find this file in the **Labs > Lab 3** Folder.
   E) Click on **Upload > Upload Document**
      i) Click **Browse**.
      ii) Look in: **Desktop**
      iii) Double click on **Labs > Lab 3**
      iv) Select the **Music Note.jpg** and click **Open**.
      v) Click **OK**.
   F) Right click the **Music Note** file and select **Copy Shortcut**.
   G) Click on **Home**.
   H) Switch out the logo in the left hand corner of the page. Click **Site Actions > Site Settings > Title, Description and Icon**.
   I) In the **Logo URL and Description** section, paste in the shortcut from the **Music Note.jpg** and click **OK**.
2) The second design change is to change the theme of the page. This is another change that can be done through the browser and is simple to do.
   A) You should still be on the **Site Settings** page from the previous step. If you are not, click on **Site Actions > Site Settings**.
   B) Under the **Look and Feel** section, click on the **Site Theme** link.
   C) On the **Site Theme** page, click through different themes. After you are done browsing, select the **Lacquer** theme and click **Apply**.
   D) Navigate back to the homepage.

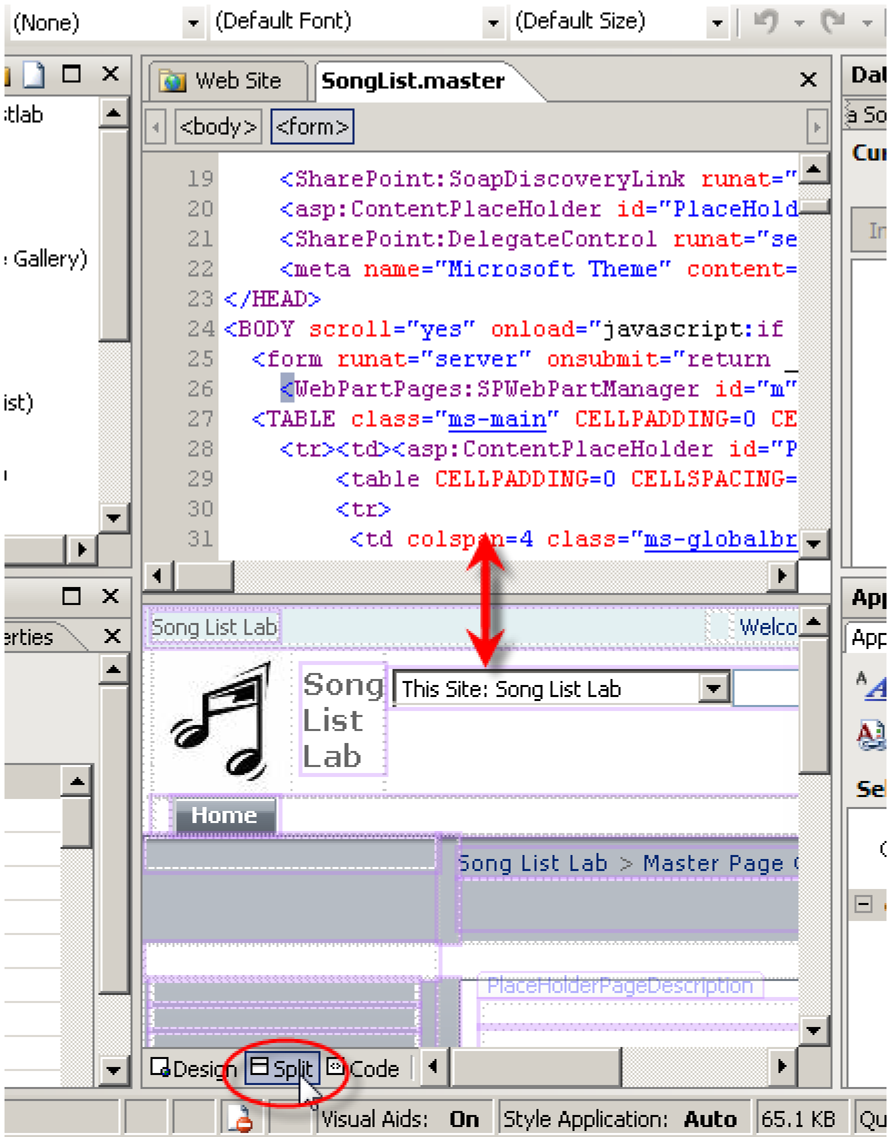
E) Just by these two quick changes we have given our site a brand new feel. The following steps will take you through adding one level of navigation fly outs to the quick launch bar, changing the font of the title of the page and adding a footer to the page by customizing the Master Page.



3) Launch SharePoint Designer and open the SongListLab site.
   A) Click **Start Menu > All Programs > Microsoft Office > SharePoint Designer 2007**
   B) Open the site http://litwareinc.com/sites/SongListLab
   C) Click **File > Open Site**
   D) Enter the following URL, http://litwareinc.com/sites/SongListLab , and click **Open**

4) Notice the folder structure in the upper left-hand side.
   A) Expand **_catalogs**
   B) Expand **masterpage (Master Page Gallery)**
   C) Locate **default.master**
      i) *Right click **default.master** and select **copy***
      ii) *Right click **default.master** and select **paste***
      iii) *You should now see a **default_copy(1).master**. Right click and select **rename**. Rename the file **SongList.master***

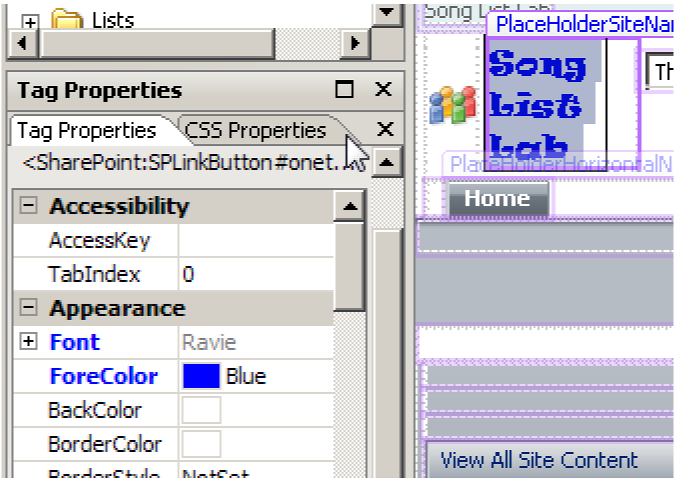
D) Double click on the file **SongList.master**. The file opens in design mode, at the bottom of the page select split. This allows you to see both design view and the code view at the same time. If you select an object in the design view it will take you to that object's reference in the code.



5) Change the Font of the Title of the page to Lucida Calligraphy.

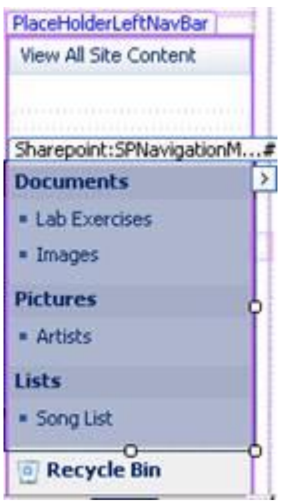
A) Select the cell containing the title: **Song List Lab**

B) On the lower left hand side of the screen you see a task pane titled **Tag Properties**, In the **Appearance** section, expand **Font** and change the **Name** tag from blank to **Ravie**. Also in the **Appearance** section, the **Forecolor** tag allows you to change the color of the font. Select the color **Blue**.



6) Change the Quick Launch Bar to one level of navigational fly-outs.

A) Select the quick launch bar as seen below. Notice in the code view a section of the code is highlighted.



B) In the code, view this section of Code (approximately line 306).

```
296 <SharePoint:AspMenu
297 id="QuickLaunchMenu"
298 DataSourceId="QuickLaunchSiteMap"
299 runat="server"
300 Orientation="Vertical"
301 StaticDisplayLevels="2"
302 ItemWrap="true"
303 MaximumDynamicDisplayLevels="0"
304 StaticSubMenuIndent="0"
305 SkipLinkText=""
306 >
307 <LevelMenuItemStyles>
308     <asp:MenuItemStyle CssClass="ms-navheader"/>
309     <asp:MenuItemStyle CssClass="ms-navitem"/>
310 </LevelMenuItemStyles>
311 <LevelSubMenuStyles>
312     <asp:SubMenuStyle CssClass="ms-navSubMenu1"/>
```

C) Change StaticDisplayLevels to 1

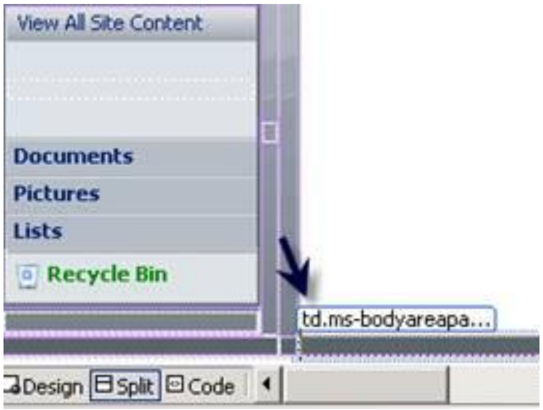
D) Change MaximumDynamicDisplayLevels to 1.

```
296 <SharePoint:AspMenu
297 id="QuickLaunchMenu"
298 DataSourceId="QuickLaunchSiteMap"
299 runat="server"
300 Orientation="Vertical"
301 StaticDisplayLevels="1"
302 ItemWrap="true"
303 MaximumDynamicDisplayLevels="1"
304 StaticSubMenuIndent="0"
305 SkipLinkText=""
306 >
307 <LevelMenuItemStyles>
```

E) Your quick launch bar should now look like the following:

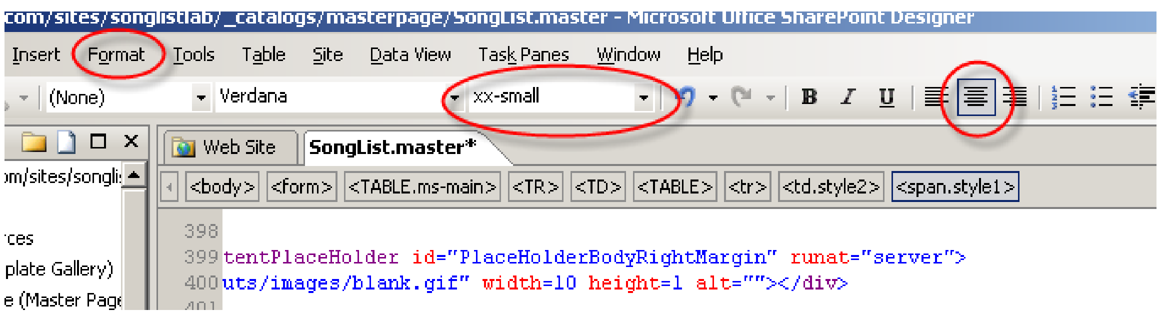
7) Add a footer to the bottom of the page that states "Copyright by Litware Inc on (Today)" Note: Replace (Today) with Today's Date.

A) Place your cursor in the following cell:



B) Type in the following in the cell: **Copyright by Litware Inc on (enter today's date)**

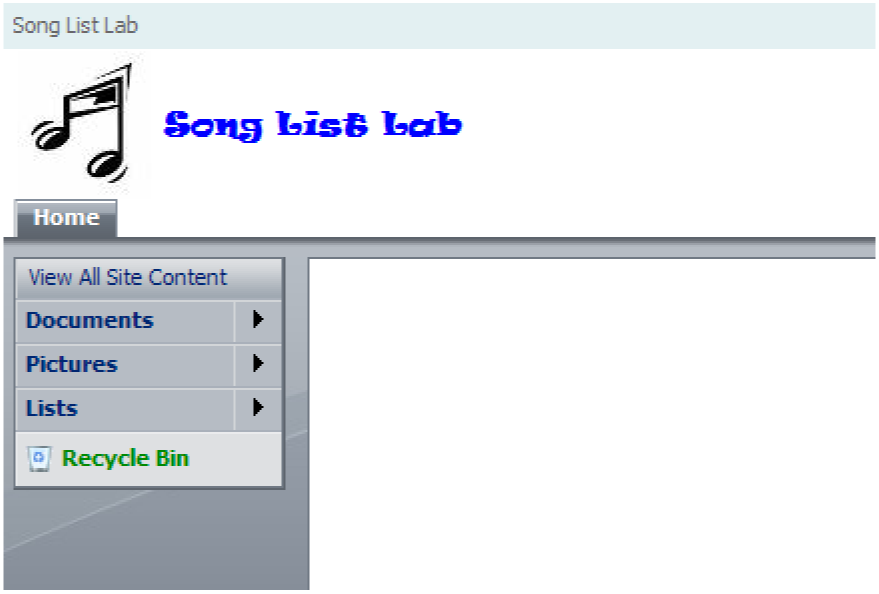
C) Change the font size to **xx-small**, make the text **bold, white,** and **center** the text in the cell. Use the tools from the tool bar at the top of the page.



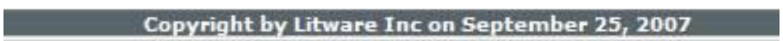
8) Notice before saving the file **SongLister.master** has an "*" next to its name. This indicates there have been changes that have been made but they have not been saved. Now click on the Save icon. The asterisk disappears and the file is saved.

9) In the folder list task pane, right click **SongList.master** and select **Set as Default Master Page**.

10) Go back to the site in the browser and click the refresh icon. You will now see all of your changes in the browser.



11) The footer you created should look like the one shown below.



Exercise 2: Creating DataView Web Parts with the SharePoint Designer

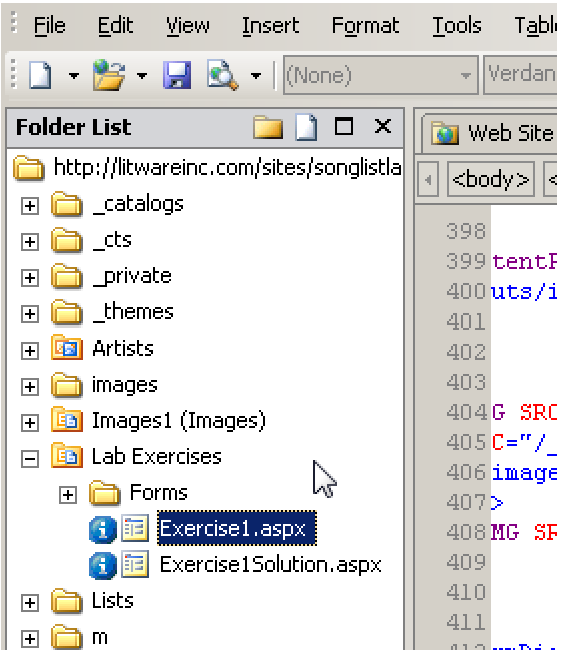
1) If you are not still there, navigate to http://litwareinc.com/sites/songlistlab/ Take a moment to inspect the content in the site.
   A) Click on **View All Site Content.**
   B) Look at the list titled **Song List**.
   C) Look at the picture library titled **Artists**.
   D) Look at the document library titled **Lab Exercises**. This document library contains web part pages that will be used in this lab.
2) Launch the SharePoint Designer application and use the **Open Site…** command from the **File** menu to open the site at http://litwareinc.com/sites/SongListLab. You may already have it open from the previous exercise.

3) Inspect the contents of the site using the **Folder List** view of the SharePoint Designer.

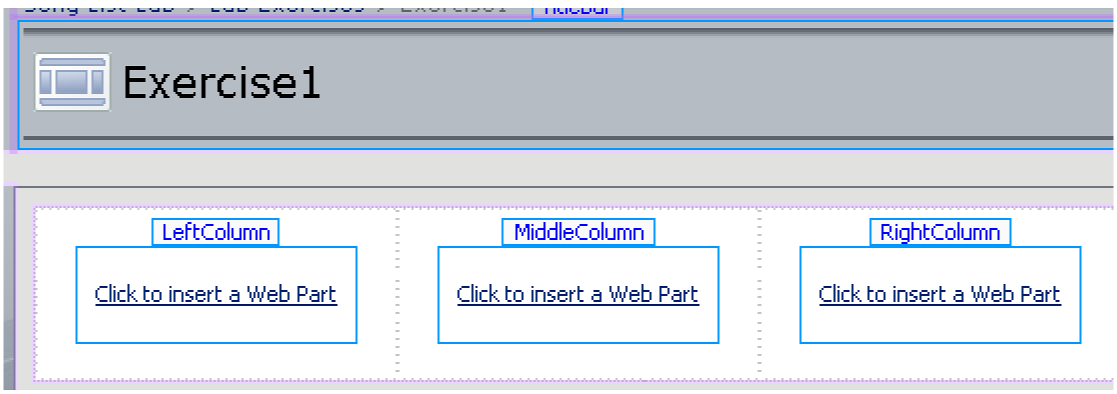
A) Expand **Lists >** Expand **Song List**. Note that you can see the forms (e.g. AllItems.aspx) that are used by the list but you cannot see anything inside the **Folder List** of SharePoint Designer that represents the actual list items themselves.

B) Expand the picture library titled **Artists** and look inside. The SharePoint Designer allows you to see a file for each Artist stored as a .JPG file.

C) Expand the document library title **Lab Exercises**. You should see two pages named **Exercise1.aspx** and **Exercise1Solution.aspx**. These two pages represent the starting point and the finished solution to this exercise.



4) Double click **Exercise1.aspx** to open the page in the page editor view in SharePoint Designer. When the page is opened, you should be able to see a layout with three empty Web Part zones as shown below. Practice moving between the three different page editing modes of **Design**, **Code**, and **Split** modes. You will want to start in **Design** mode.



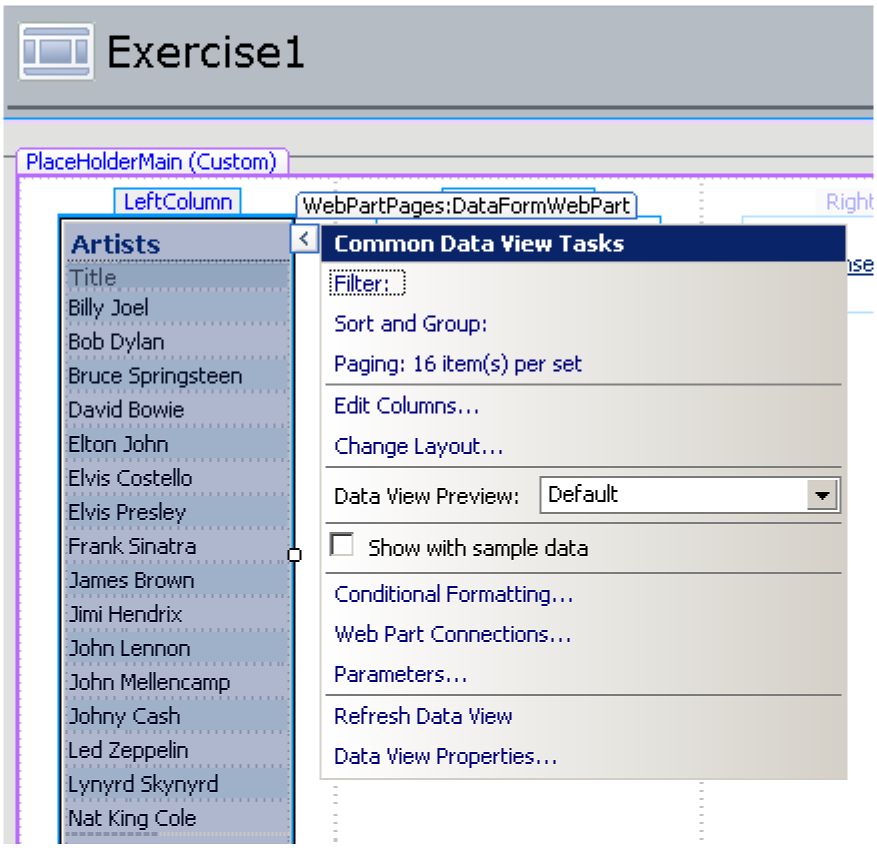
5) From the **Data View** menu, click on the **Manage Data Sources** command. This will display the **Data Source Library** tab in the task pane on the right-hand side of the SharePoint Designer's main window as shown below. The **Data Source Library** tab allows you to view, create, edit and delete data sources that can be used to create new instances of the **Data View Web Part**. There should already be data sources available for lists and libraries in the current site including **Song List**, **Artists** and **Lab Exercises**.

6) In this step you will create a **Data View Web Part** in the left web part zone showing all the artists from the **Artists** picture library. You will not show the picture in this first web part but instead you will only be interested in using the column named **Title** so you can display a list of artists.

   A) From within the **Data Source Library** tab, expand **SharePoint Libraries…** to locate the data source for the **Artists** picture library. Use the dropdown menu of the Artists picture library and choose the **Show Data** command.

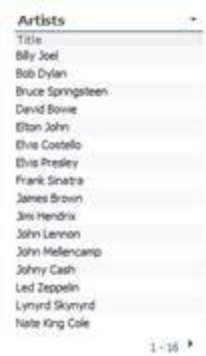
   B) Drag and drop the **Title** field onto the **Left Column** web part's design surface, you may need to deselect the fields the data source which are automatically selected.

   C) With the web part selected, on the **Common Data View Tasks** menu click on **Data view properties** (see image below). On the **paging** tab, select **Display items in sets of this size:** and enter the value, **16.** Click **OK.**



   D) Right click on the web part and select **<u>W</u>eb Part Properties…**. Expand the **Appearance** node and in the **Title** field name the web part **Artists**. Click **OK**.

E) Click the **save** icon and preview your work in your internet browser by navigating to the **Lab Exercises** library and double clicking the **Exercise1** page. You can get to the **Lab Exercises** library by clicking on **View All Site Content**.



7) Back in SharePoint Designer, in the middle zone, you will create second **Data View Web Part** which will show an Artist Profile including the **Title** and the **Description** columns.

A) Create a new web part in the middle web part zone by dragging and dropping the **Title** column. If you are not on the **Data Source Details** tab in the web parts task pane, you will want to navigate back to it.

B) Go to **Web Part Properties…** and change the **Title** of this Web Part to **Artists Profile** (Recall step 6 D)

C) Go to the **Common Data View Tasks** menu and click on **Data View Properties…** and on the **Paging** tab, select **Limit the total number of items displayed:** and set it to 1. Click **OK**.

D) Next, insert the cursor inside the new web part and add a line break after **Billy Joel**. Next, drag and drop the **Description** column in the extra line you just added.

E) Select **Billy Joel**, and using the tool bar at the top of the page, change the font size to **medium** and the font color to **blue**.

F) Select **The Uptown Boy** and change the font size to **x-small** and the font color to **red**.

G) After the Description column, add another line break. Over in the **Data Source Details** tab in the task pane, locate the column named **URL Path**. Right click the Url Path column and select **Insert as a Picture**. On the **Confirm** message, click **Yes.**

H) Now we will assign a height to the image so it does not get any bigger that 200px. Switch to **Split** view. When you click on the picture it will select this piece of code.

****

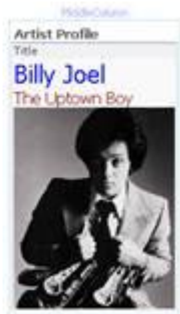
I) Add in the following code

alt="{@FileRef}" height="200px"

J) The resulting tag in code should look like this:

****

K) Go back to **Design** mode and verify that the picture has reduced in size.

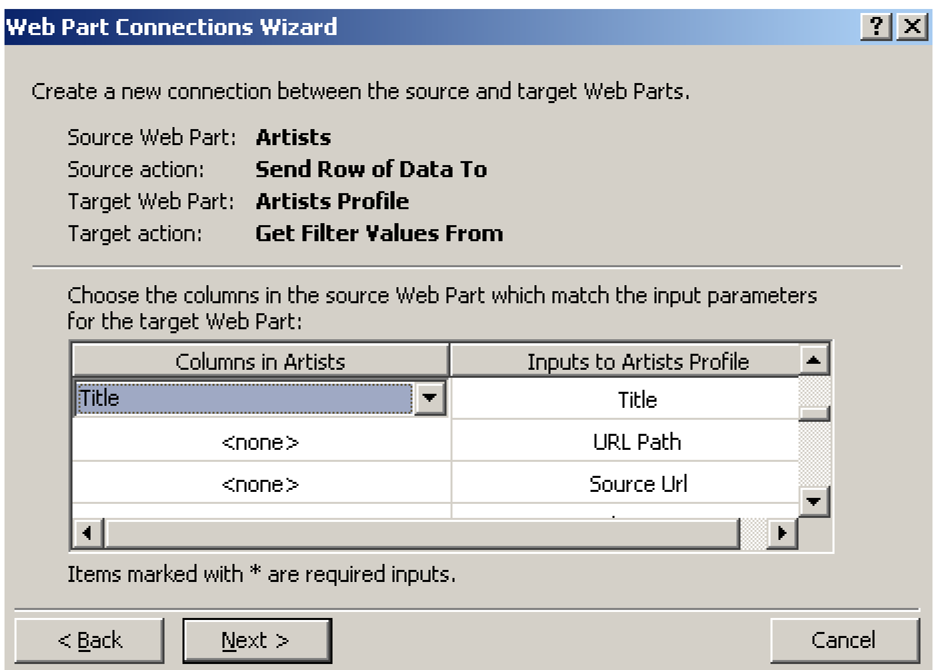


8) Create the web part connection between **Artists** and **Artist Profile**. You will be sending the title column from **Artists** to the **Artists profile**.

A) Start by right-clicking in the **Artists** web part and choose the **Web Part Connections…** command.

B) Click **Next > Next > Next**

C) Scroll down to locate the **Title** column under the **Inputs to Artists Profile**. Under **Columns in Artists** change from **<none>** to **Title**. Click **Next > Next > Finish**



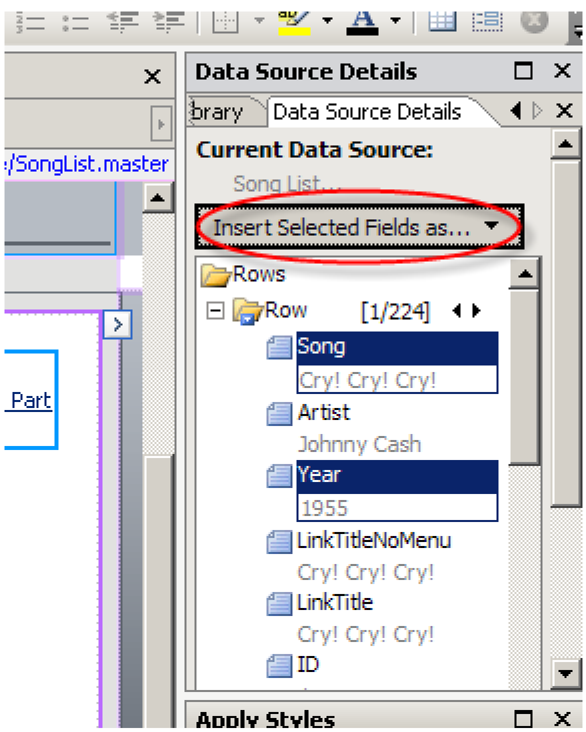
D) Save and preview your changes in the browser. Don't forget to click on the refresh icon to view the changes.

E) When you are done, you should see the same results as shown below. When you click on an Artist on the left, the profile for that artist should then be shown in the **Artist Profile** web part.

9) In this step, you will add a third web part to the right web part zone. This web part will show two columns: **Artist** and **Year**

A) Navigate to the **Data Source Library** task pane in the upper right-hand corner and expand **SharePoint Lists**. Click on the **Song List** drop-down menu and select **Show Data**.

B) Select the right web part zone. In the **Data Source Details** task pane, select both the **Song** and **Year** Columns. Click **Insert Selected Fields as…** and select **Multiple Item View**.



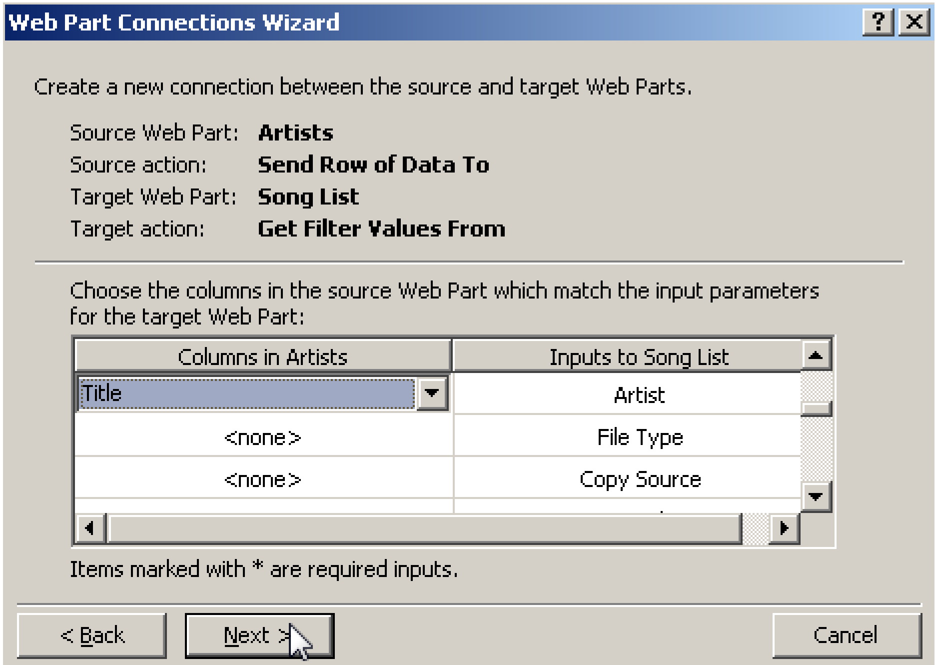
C) Follow the steps in 6D to rename the web part **Song List**.

D) Establish a web part connection where the **Artists** web part sends a row of data to the **Song List** web part. Right Click the **Artists** web part and choose the **Web Part Connections…** command. Click on **Add…**.

E) Click **Next > Next**

F) Target Web Part: **Song List**. Click **Next**.

G) Under the **Inputs to Song List**, scroll down and select **Artist**. Under the **Columns in Artists**, select **Title**.



H) Click **Next > Next > Finish**

I) Save and view your results in the browser. You should now have a finished page that looks like the one below.

Lab 04: Creating and Customizing a Corporate Portal Site

Lab Overview: In this lab you will create and grow out a new site collection created from the collaboration portal site template. This will give you an opportunity to see how working with a MOSS site template adds quite a bit of functionality on top of the site templates included with WSS such as Blank Site and Team site.

Back Story: Litware Inc. wants to use Sharepoint 3.0 to improve awareness for its employees. You will create a top-level site and customize the navigation to fit Litware Inc.'s needs. You will also be customizing the master page for the site. In addition, the Human Resources department needs you to implement a new item form regarding employee information.

This lab will take approximately 60 minutes to complete.

Exercise 1: Creating a new Corporate Portal site

1) You will begin by creating a new site collection with a top-level site based on the corporate portal site template. This corporate portal site will be used as an intranet site to provide information to Litware employees.

   A) Make sure you are logged onto the VPC as **LITWAREINC\Administrator**.

   B) Open **SharePoint 3.0 Central Administration** and navigate to the **Application Management** page.

   C) Click on **Create site collection**.

D) Create a new site collection using the following values.

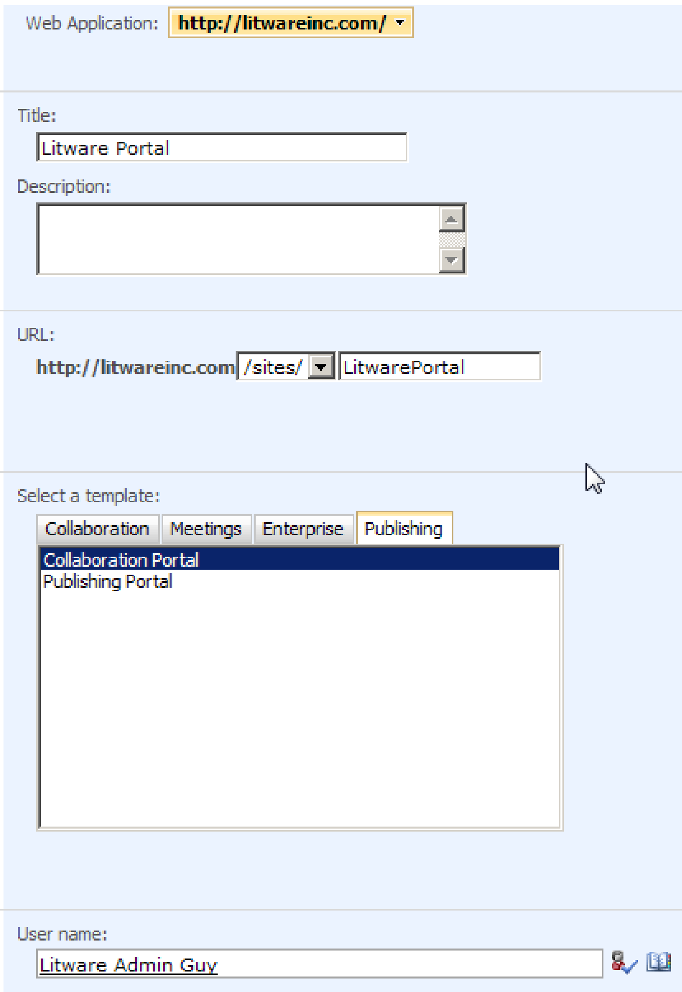
*i) Web Application: **http://litwareinc.com***

*ii) Title: **Litware Portal***

*iii) URL: **LitwarePortal***

*iv) Select a Template: Under the **Publishing** tab, select **Collaboration Portal**.*

*v) Primary Site Collection Administrator: **LITWAREINC\Administrator**. (Remember to validate the user/group by keying **CTR + K** or by clicking on the little icon)*



E Click **OK** to create the new portal site collection.

F) Once the site has been provisioned, click the link in the Central Administration site to navigate to the site at **http://litwareinc.com/sites/LitwarePortal**. Close the window for Central Administration.

2) Once you have opened the site, take a moment to explore what is inside.

A) Click on the **View All Site Content** link on the top of the quick launch bar to navigate to the page which displays the lists, document libraries and child sites that exist on this site. This page is referred to as the standard WSS application page. It is important to note the lists and libraries that are created with each site template. Answer the following questions.

i) What lists have already been created in this top level site?

ii) What document libraries have already been created in this top level site?

iii) What child sites have already been created?

B) Drop down the **Site Actions** menu and inspect the way the menu commands are structured. You should notice that the corporate portal site has a **Site Actions** menu structure that is very different from a standard WSS site. This is due to the fact that the corporate portal site template automatically activates a feature named **Office SharePoint Server Publishing**. This feature adds quite a bit of additional functionality on top of what is contained in a standard WSS site.

C) Click on **Site Actions > Site Settings > Modify All Site Settings**. This allows you to navigate to the standard WSS site settings page (_layouts/settings.aspx). However, you should notice that the links are arranged differently than in a standard WSS site.

*i) Some standard WSS links have disappeared from the **Site Settings** page. For example, you should notice there is no longer a standard link to modify the Top link bar or the Quick Launch menu. That's because SharePoint Server provides a different way to modify navigation links with this site.*

*ii) Many new links have been added to the **Look and Feel** sections as well as the **Site Administration** section and the **Site Collection Administration** section.*

3) Add the users **LITWAREINC\BrianC** and **LITWAREINC\PatriciaD** as visitors of the site.

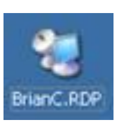
A) From the **Site Settings** page, click the **People and groups** link under the **Users and Permissions** section.

B) Click on the **New** drop-down menu and click **Add Users**.

C) Add the user accounts **LITWAREINC\BrianC** and **LITWAREINC\PatriciaD** as new members of the **Litware Portal Visitors** group. When your page matches the image below, select **OK.** (Note that SharePoint will change the account name to its display name of Brian Cox and Patricia Doyle when it has resolved the account against Active Directory).

4) Log in as Brian Cox and access the new corporate portal site. This will allow you to see what the site looks like to a user that has no permissions to add and modify content.

A) Minimize all Windows so you can see the desktop. You should be able to see four shortcuts that allow you to start remote desktop sessions under the identities of different users. Click the shortcut with the caption of **BrianC.RDP** to launch a remote desktop session for the user Brian Cox.



B) While running in the remote desktop session for Brian Cox, access the new portal site at **http://litwareinc.com/sites/LitwarePortal**. You should be able to access the home page of the Litware Portal site and navigate to the various lists, document libraries, and child sites.

C) While running as Brian Cox, you should note that you cannot see the **Site Actions** menu. However, you do have navigation menus that allow you to move around the site and examine its content.

D) Do not close out Brian's session. Leave it open so you can return to it later. Minimize the remote desktop window so you can resume running as the Litware Administrator. The desktop background should be bright blue versus Navy blue for Brian's desktop.

5) While running as LITWAREINC\Administrator, return to the Litware Portal site. Now it is time to create a new child site for Litware Human Resources department.

A) Make sure you are at the top-level site at **http://litwareinc.com/sites/LitwarePortal.**

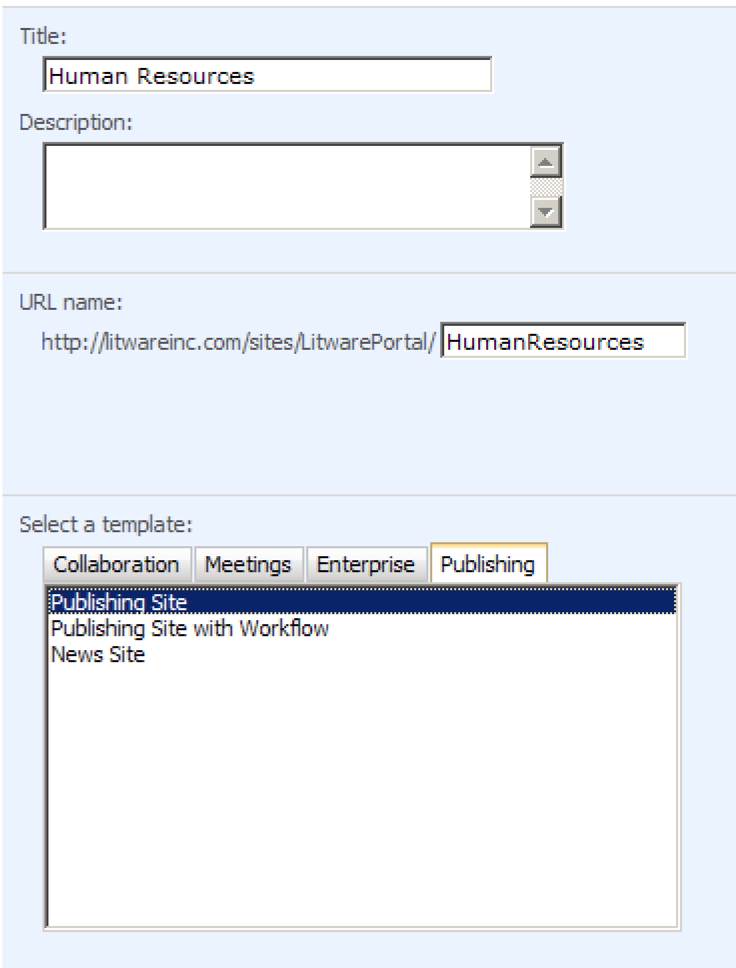
B) Click on **Site Actions > Create Site**

C) Create the new child site using the following settings.

*i) Title: **Human Resources**.*

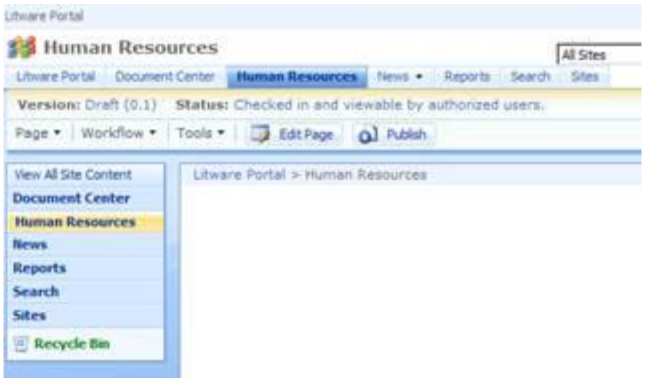
*ii) URL: **HumanResources***

*iii) Select a template: Under the **Publishing** tab, select **Publishing Site.***



D) Click the **Create** button to create the new child site.

E) Once SharePoint has created the new site, you will see the landing page for the site as shown below. Notice there is a new toolbar known as the **Page Editing Toolbar** it allows an authorized user to approve the site so it can be seen by site members. Also note that a new link has been added to the top-link bar so users can navigate to the new Human Resources site. Do not click on the **Publish** link until you are instructed to do so.



F) Click the **Edit Page** button to take the current page into editing view. Find the field control with the caption of **Page Content** and click the **Edit Content** link to go into editing mode. Add some text that would be a typical announcement on a page within a Human Resources site. When you are done editing the text, find and click the button on the **Page Editing Toolbar** with the caption **Check In to Share Draft**.

G) Return to the remote desktop Session for Brian Cox and refresh the browser window showing the portal site. Note that you should not yet see the new child site titled **Human Resources** because it has not yet been published. An authorized user must publish this site before it can be seen by visitors such as Brian Cox.

H) Leave the remote desktop Session for Brian Cox and start running as the Litware Administrator again.

I) Now, it is time to make the new page and the entire Human Resource site visible to all site users. Click the **Publish** button on the **Page Editing Toolbar** to make the **Human Resource** site visible to everyone.

J) Return to the remote desktop session for Brian Cox and refresh the browser. Now this user should be able to see and navigate the Human Resources site and see the content you added to the home page.

K) Leave the remote desktop session for Brian Cox and start running as the Litware Administrator again.

6) Now it's time to create a new page within the Human Resources site.

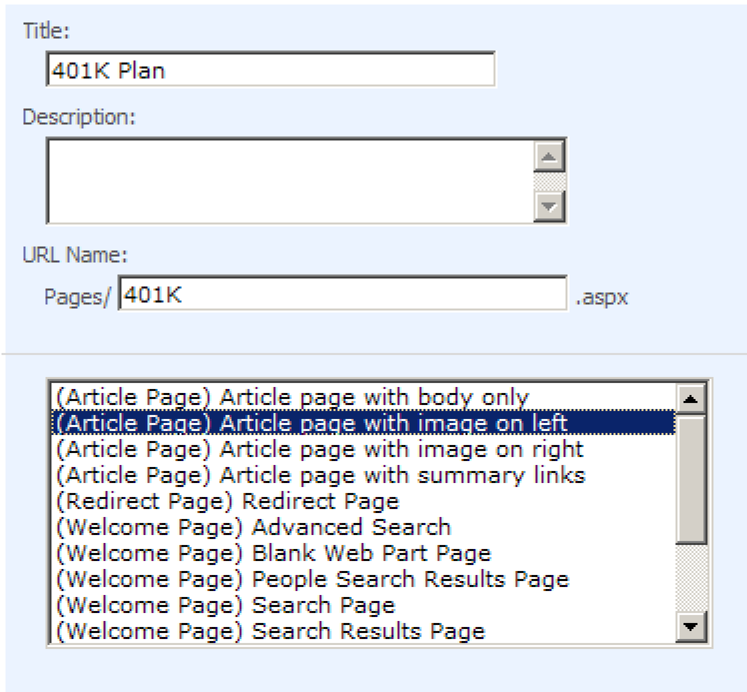
A) Click on **Site Actions > Create Page**.

B) On the **Create Page** page, fill in the following information.

   *i) Title: **401K Plan**.*

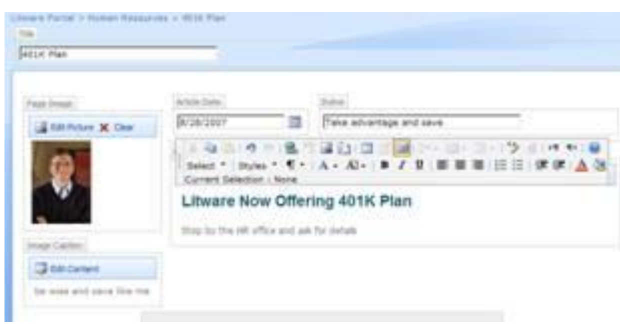
   *ii) URL: **401K**.*

   *iii) Page Layout: **Article page with image on left**.*



C) Click the **Create** button to create the page.

D) Once the page is created, you will find yourself in edit mode. Fill in content within the field controls with something similar to the sample content shown below. Note that you can upload pictures into the portal site from **C:\\LitwareFileShare\Pictures** or **C:\LitwareFileShare\LitwareGraphics**.



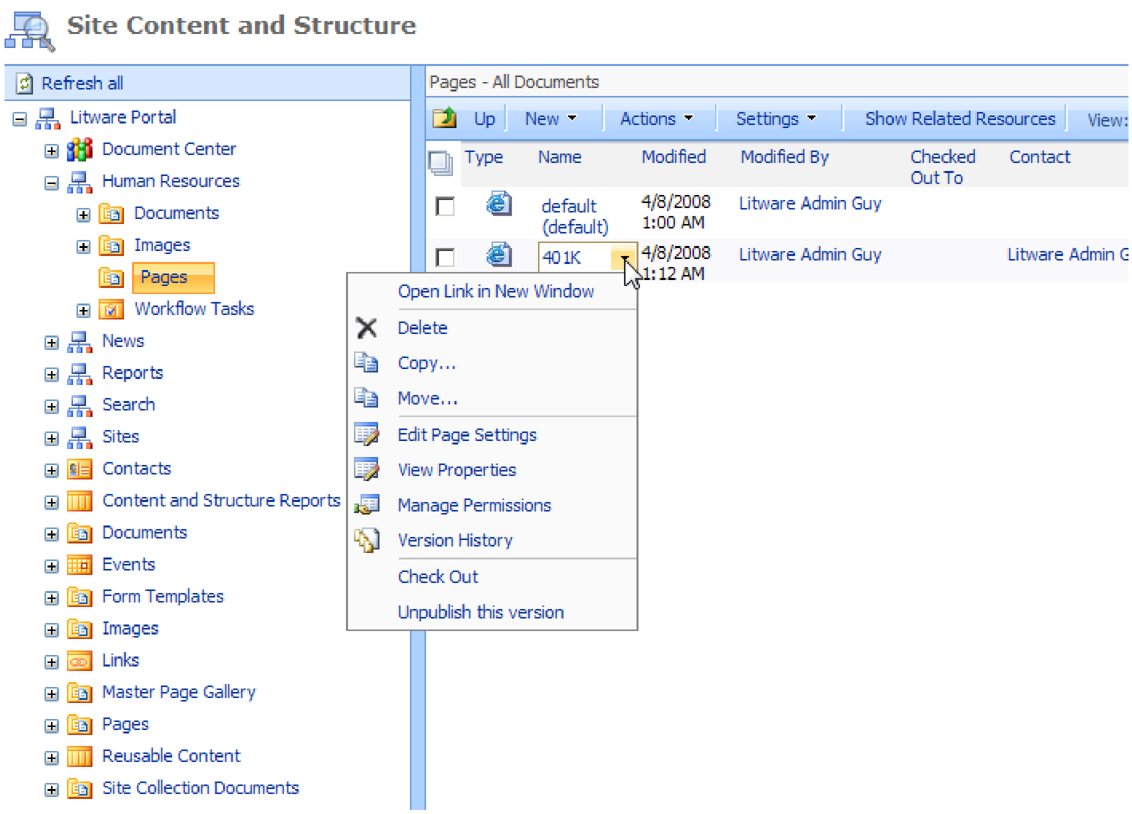
E) Click the **Publish** button on the **Page Editing Toolbar** so that the page can be seen by all users.

7) On the top-left portion of the browser window, click on the **Litware Portal** link to return to the portal's top-level site. From the **Site Actions** menu, click the **Manage Content and Structure** command.

A) On the **Site Content and Structure** page, use the **Tree View** control on the left-hand side to drill down into the Human Resources site.

B) Look inside the **Pages** document library and locate the page you just created named 401k.aspx.

C) Move your cursor over the 401k.aspx document and click on the drop-down menu and see what commands are available.



Exercise 2: Customizing the Navigation

1) In this exercise we will be customizing the navigation of the top link bar, your company is currently not using the **Document Center** or the **Reports** sites so we will be hiding them. You have decided not to delete them because you are unsure if they may be needed in the future. You would also like to add a link to the SongListLab Site because it is very popular.

A) Navigate back to http://litwareinc.com/sites/litwareportal

B) Click on **Site Actions > Site Settings > Modify Navigation**

C) In the **Navigation Editing and Sorting** section, click once on **Reports** under the **Global Navigation** heading. The global navigation is the top link bar. Notice when you click on it, you have the option to move the link up or down. Click **Hide**

D) Repeat step C to hide **Document Center**

E) Repeat step C for both **Reports** and **Document Center** under the **Current Navigation** heading. current navigation refers to the quick launch bar.

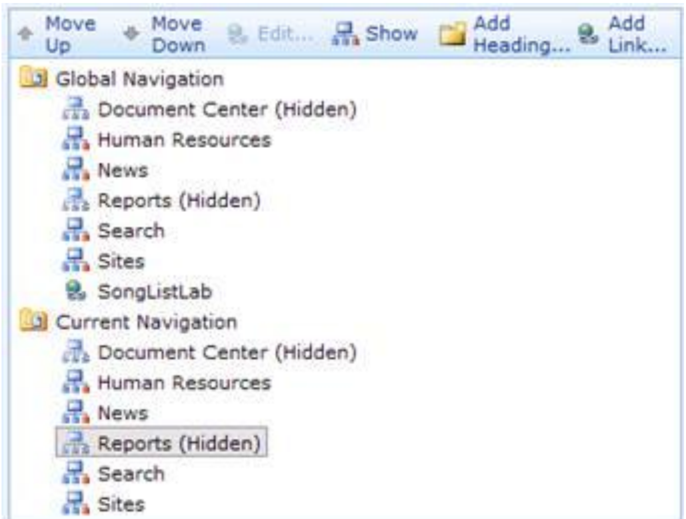
F) Click on **Global Navigation**, Select **Add Link…**

i) Title: ***SongListLab***

ii) URL: http://litwareinc.com/sites/songlistlab

Note: you have the option on in this dialog box to open the link in a new window and/or target the link to a specific audience.

iii) Click ***OK***



G) Click **OK.** Your page should now look like the following:

2) For ease of navigation for the user, sometimes it is important to break navigation and only show sites below a site.

A) Navigate to the **Human Resources** site.

B) Click on **Site Actions > Site Settings > Modify Navigation**

C) Under the **Global Navigation** section select **Display the navigation items below the current site**

D) Under the **Current Navigation** section select **Display only the navigation items below the current site**

E) Click **OK**. Your page should now look like the following:

3) Click around your portal to see how the navigation changes you made would affect your users. When you are finished, navigate back to the portal homepage.

Exercise 3: Applying a custom Master page

1) The first step is to download a copy of the master page we created in Lab 3 to your desktop.

A) Navigate to the Song List Lab site, http://litwareinc.com/sites/songlistlab

B) Click on **Site Actions > Site Settings**

C) In the **Galleries** section, select **Master pages**

D) Hover over **songlist.master**, click the **dropdown**, click **send to**, and then select **download a copy**

E) Click **Save**. Browse to your desktop and select **save**.

F) Click **Close**.

2) Next you will upload the master page to your intranet

A) Navigate back to your intranet: http://litwareinc.com/sites/litwareportal

B) Click on **Site Actions > Site Settings > Modify all site settings**

C) Under the **Galleries** section, click on **Master pages and page layouts**

D) Click **Upload**. Browse to the **songlist.master** file (It should be on the desktop), click **Open**, and finally **OK**.

E) Click **Check in**

F) The file is still not ready. The master page needs to be approved before it can be used. Locate **SongList.master** in the **Master Page Gallery**, click on the **Edit** drop-down menu and select **Publish a Major Version** and then **Ok**.

G) Again scroll down to the **SongLIst.master** and on the **Edit** drop-down menu, select **Approve/Reject > Approved > OK**

3) Apply the Master Page to your entire Portal

A) Click on **Site Actions > Site Settings > Modify all site settings**

B) Under the **Look and Feel** section, click on **Master Page**.

C) In the **Site Master Page** section, select **songlist.master** from the dropdown. Check the box **Reset all subsites to inherit this Site Master Page setting**.

D) Click **OK**.

E) You still need to change the theme. Click **Site theme** under the **Look and Feel** section. Select **Lacquer**, and click **Apply**.

F) Navigate back to the portal homepage. You should see the font and quick launch fly-outs change:

Exercise 4: Creating a Custom New Item Form

1) A typical request in an environment is to be able to customize the new item form on a list. Users would like to add special instructions or even formatting to the list. You can create a new form and associate it with the list using SharePoint Designer.

A) To begin, navigate to the **Human Resources** site. Click **View all site Content > Create.** Under the **Communications** section, select **Contacts**.

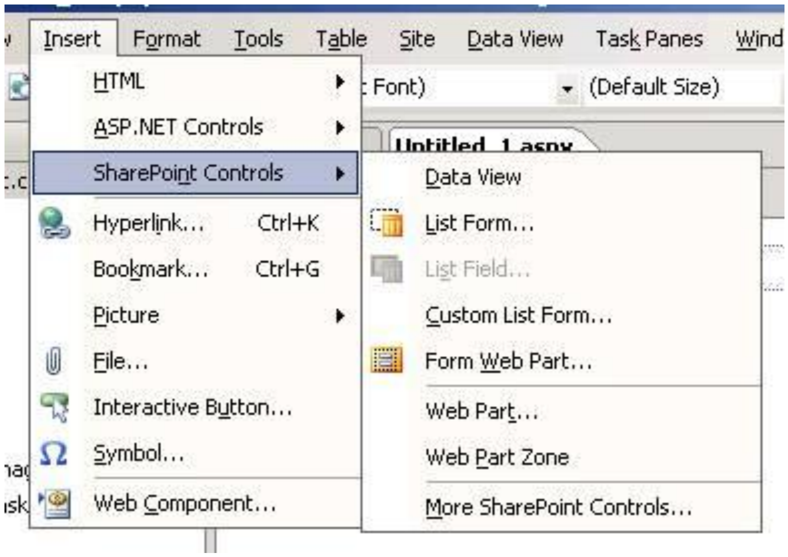
i) *Title: **Employee List***

ii) *Click **Create***

B) Open **SharePoint Designer** and open the **Human Resources** site: http://litwareinc.com/sites/litwareportal/humanresources

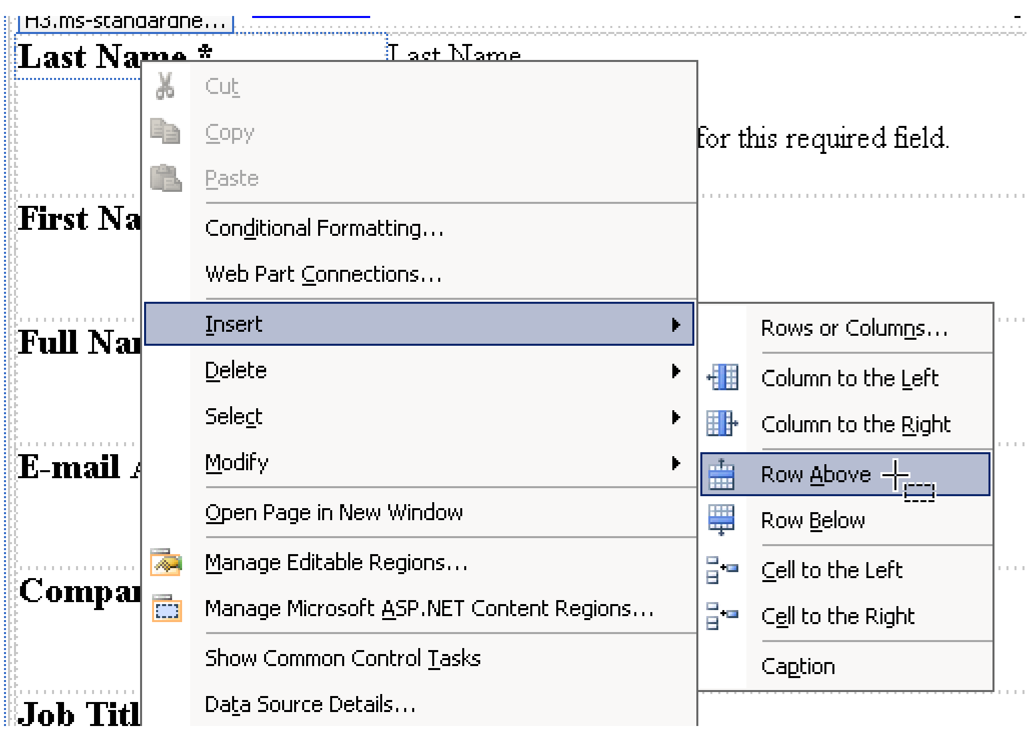
C) Click **File > New > ASPX**

D) On the **Insert** menu (at the top on the screen), click on **SharePoint Controls > Custom List Form…**



E) In the **List or Document Library Form** dialog box, select **Employee list** for the first dropdown and **contact** for the second drop down. Type of form to Create: **New item form.** Click **Ok.**

F) Click on **Last Name** (on the left), Right click and select **Insert > Row Above**



G) In the new row type: **All Fields in Green must be completed by the HR department**. Make the the word "Green" **Green** and all of the text **Bold**.

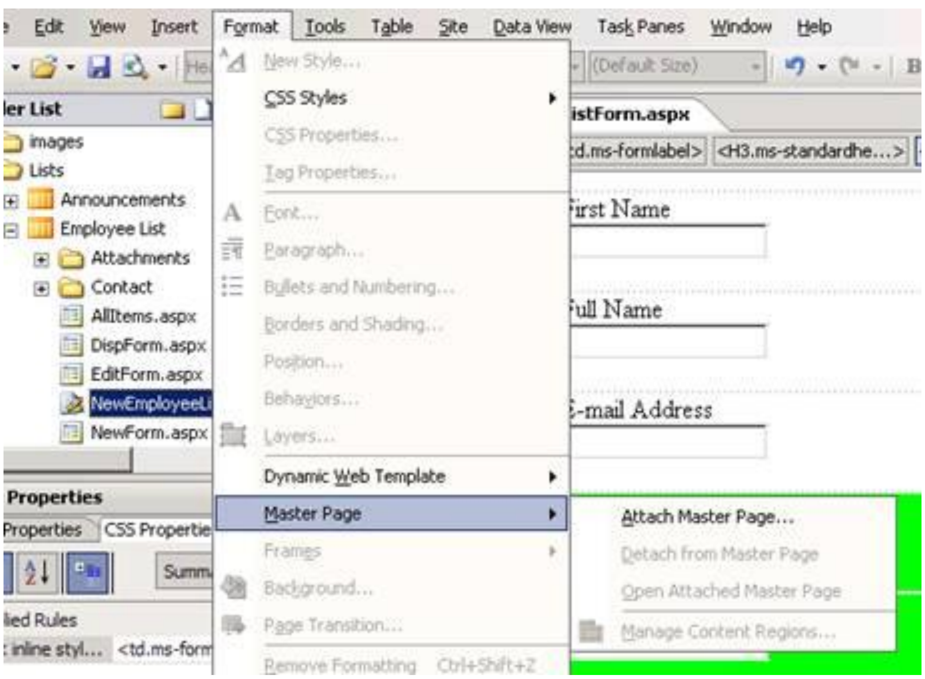
H) Select the row for **Company**, right click and select **Cell properties**.

Add a border, **size 3** and **color Green**. Click **OK.**

I) Repeat the steps for **Job Title** and **Web Page**

J) Click on the save icon. Navigate to the **Employee List**, by double clicking **Lists** and then double clicking on **Employee List**. Title the file: **NewEmployeeListForm.aspx**. Click **Save**

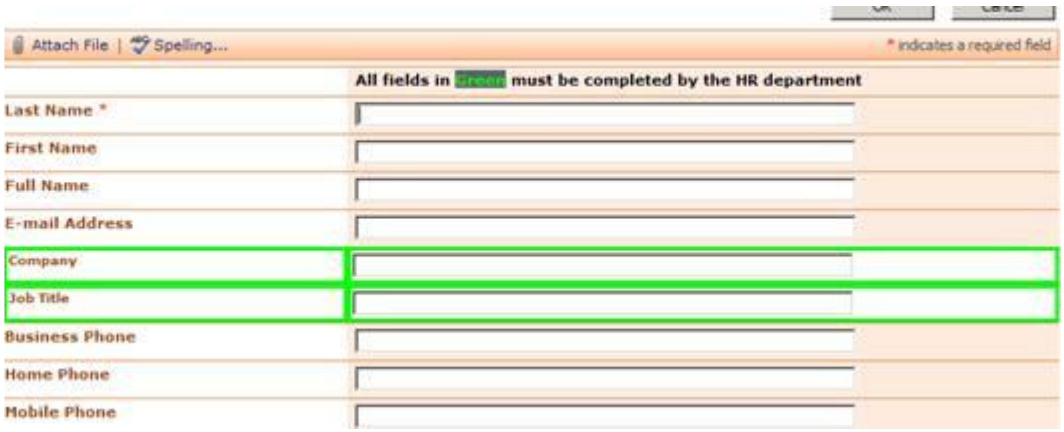
K) In the **Folder List** on the left, expand **Lists** and then **Employee List** to locate your custom form. Click on the **NewEmployeeListForm.** In the menu bar at the top on the page click on **Format > Master Page > Attach Master Page.** If you get a warning, click **OK.**



L) From the **Select Master Page** dialog box, choose the second option, **Custom Master Page.** Click **OK, OK, OK.** Save the file again. If you get a pop-up letting you know that a recent version has been saved, make sure you select to overwrite this document from a past step.

M) The final step is to associate the new form with the list. In the **Folder List** pane, right click on **Employee List** and select **Properties….** Select the **Supporting Files** tab and for the **New Item Form** browse to **NewEmployeeListForm.** (Remember that it is located in the Employee List) Click **OK, OK.**

N) In the Internet explorer, navigate to the **Employee List** on the Human Resources site. Click **New.**



O) Fill out some data in the form to test it out.

P) When you are finished, close out your browser and out of SharePoint Designer.

Lab 05: User Profiles and Search

Lab Overview: Management from Litware Inc. would like to customize their search and data to improve accessibility for employees. Your task will be to use properties from the users' profiles to target content. This will personalize the site to each individual user. You will also need to create a search scope and assign a keyword and best bet so that users can locate files/documents with ease.

Lab Setup: As long as you are using the VPC images named MOSS.VHD, you can assume the SharePoint administrator has already done the profile import for you for this lab.

This lab will take approximately 60 minutes.

Exercise 1: Utilizing User Profiles for Targeting and Filtering Content

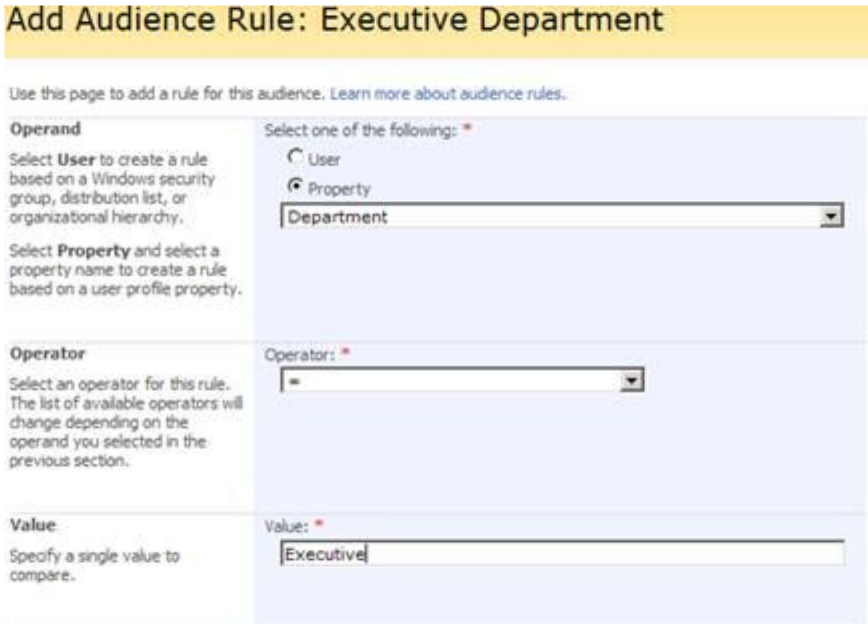
1) Create an Audience based on the Executive Department
   A) Click **Start > Administrative Tools > SharePoint 3.0 Central Administration**
   B) On the left hand side, under **Shared Services Administration**, click on **Litware SSP**
   C) In the **Audiences** section, click on **Audiences**.
   D) Notice there is already an audience created. This audience is the **All site users** audience.
   E) Click **Create Audience**
      i) *Name:* ***Executive Department***
      ii) *Description:* ***This audience is for targeting content at members of the executive department***
      iii) *Owner:* ***LitwareInc\administrator***

      iv) *Click* ***OK***

*v) For Operand select **Property** and from the dropdown list select **Department***

vi) Operator: =

*vii) Value: **Executive***



*viii) Click **OK***

F) Before the audience can be used, it needs to be compiled. Under **Audience Properties**, click on **Compile audience**.

2) There currently is not a crawl schedule set up on you portal. To ensure later portions of this lab work, we will start an incremental crawl now.

A) Click **Litware SSP** on the left

B) Under the **Search** section, select **Search settings**

C) Click **Content sources and crawl schedules**

D) On the drop down for **Local Office SharePoint Sever Sites**, select **Start Incremental Crawl**

E) Continue with the lab, you may experience slightly slower performance than normal while it is crawling.

3) Earlier an earlier lab, you added a link to the Song List Lab site. Now in this section, instead of showing it to everyone it you will be targeting it to the Executives using the executive department audience.

A) Navigate back to http://litwareinc.com/sites/litwareportal

B) Click on **Site Actions > Site Settings > Modify Navigation**

C) In the **Navigation Editing and Sorting** section, click on **SongLIstLab** under the **Global Navigation,** from the menu bar select **Edit…** If **SongListLab** is not under the **Global Navigation**, click **Add Link** and follow the steps below. (If **SongListLab** is under **Global Navigation**, go to step **D**)

*i) Title: **SongListLab***

*ii) URL: **http://litwareinc.com/sites/SongListLab***

*iii) Audience: **Executive Department**. Validate.*

*iv) Click **OK***

D) Type **Executive Department** for **Audience,** and hit the **Return** or **Enter** key.

E) Click **OK**, **OK**

F) Notice as the Administrator, you are a member of IT, so you should see:

G) To double check the targeting is working, open the **PatriciaD.RDP** located on the desktop. Patricia is a member of our executive department. (Note: When you are successfully logged on to Patricia's desktop, the background color will be orange instead of blue)

H) On Patricia's desktop, open up Internet Explorer and navigate to http://litwareinc.com/sites/litwareportal. Patricia should see the link to SongListLab.

I) Log off of the PatricaD.RDP

4) To create audiences, you need to be the SharePoint Administrator or have them created for you. In this next step, you will utilize the current user web part to filter links for the appropriate department.

A) Navigate to the **Human Recouces** site to create a **Training l**inks list.

B) Click **View all Site Content**

C) Click **Create**

D) Under the **Tracking** section, click on **Links**

E) Name: **Helpful Links**

F) Click **Create**

G) On the **Settings** menu, select **Create Column**

*i) Name: **Department***

*ii) Type: **Choice***

*iii) Choices**: IT, Sales, and Executive** (Note: Be Sure to Return between each choice, so they are each on their own line*

iv) Clear the default value so that the box is empty

*v) Click **OK***

H) Create 3 Links as Follows (Leave the **Notes** field blank):

URL	Description	Department
http://www.tedpattison.net	*Management Tips*	*Executive*
http://www.tedpattison.net	*Closing The Deal*	*Sales*
http://www.tedpattison.net	*Awesome SharePoint Training*	*IT*

I) The links will be displayed on the Human Resources Page. Click on **Human Resources** in the top link bar.

J) Click on **Site Actions > Edit Page**

K) In the **Top Zone**, add the **Helpful Links** web part

L) In the **Right Column**, add the **Current User Filter** web part

M) On the **Helpful Links** web part, click on the **edit** drop-down menu and click on **Modify Shared Web Part**

N) Click **Edit the current view**

*i) Add the **Department** column to the View by checking the box next to it.*

*ii) Expand the **Style** section and select **Basic Table***

*iii) Click **OK***

O) Bring the page back into edit mode, by clicking **Edit Page** in the **Page Editing Toolbar**.

P) On the **Current User Filter** web part, click on the **edit** drop-down menu and click on **Modify Shared Web Part**.

Q) In the section **Select value to provide**, select **SharePoint profile value for current user. F**rom the drop-down menu select **Department** and click **OK**.

R) Finally, you need to connect the two web parts. On the **Current User Filter** web part, click on the **edit** drop-down **> Connections > Send filter values to > Helpful Links**

S) On the pop up dialog box, select **Department** for **Consumer Field Name** and click Finish. (Note: If the popup box does not appear, pop ups may be blocked. Click the information bar at the top of the screen and select temporarily allow pop ups)

T) Click **Publish.** You may have to first click **Save and Overwrite Existing Content (**SharePoint does not like to refreshed)

U) As a member of the IT department, you should see:

Exercise 2: Configuring Search: Scopes, Keywords

1) Creating a scope can help your users to return more specific and relevant results. In this step, you will create a scope for the **Song List** on the Song List Site we previously created.

A) Navigate to http://litwareinc.com/sties/litwareportal

B) Click on **Site Actions > Site Settings > Modify All Site Settings**

C) Under the **Site Collection Administration** section, click on **Search scopes**

D) Click **New Scope,** on the **Create Scope** page fill it in as follows:

*i) Title**: Song List***

*ii) Display Groups**:** Select both **Search Dropdown and Advanced Search***

*iii) Click **Ok***

E) Notice that even though the scope has been created it currently does not have any rules associated with it. Click **Add rules**, and fill it in as follows:

Click **OK.** Click on **Site Settings** in the breadcrumb to navigate back to the **Site Settings** page.

It will take approximately ten minutes for the scope to be ready. We will try out the scope at the end of the lab.

2) It has been noticed that users are searching for members of the Beatles and not returning any results even though we have pictures and songs listed on our site. To improve the user experience we will be creating a **Keyword** and **Best Bet**.

A) Under **the Site Collection Administration** heading, select **Search Keywords**

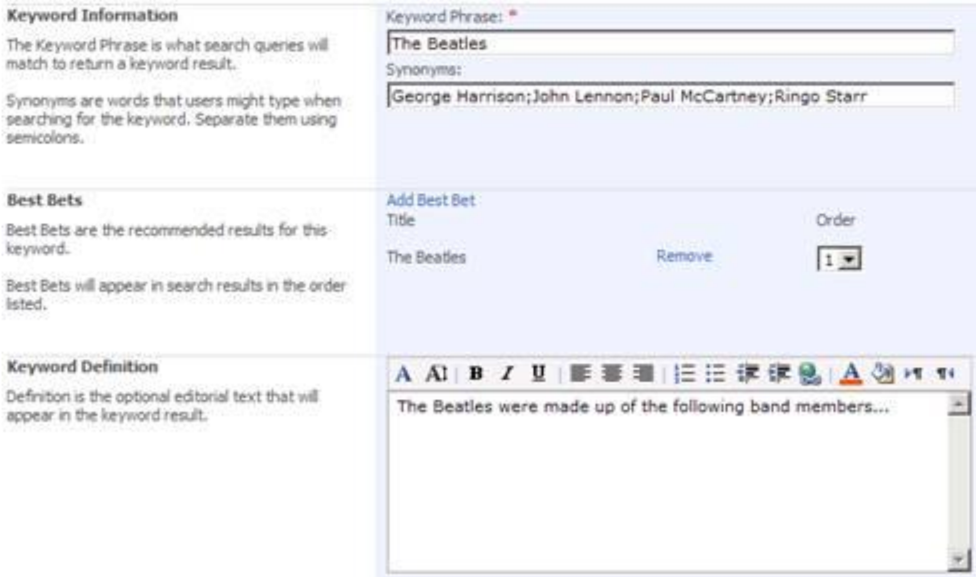
B) Click **Add Keyword**, and fill it in as follows: (Note for the best bet URL, open another browser and navigate to http://litwareinc.com/sites/SongListLab/Artists, right click on the Beatles picture, click on **Properties**, and grab the URL.)

C) Click **Add Best Bet**.

i) URL: *Paste the URL from The Beatles' picture*

ii) Title: ***The Beatles***

iii) Click ***OK***

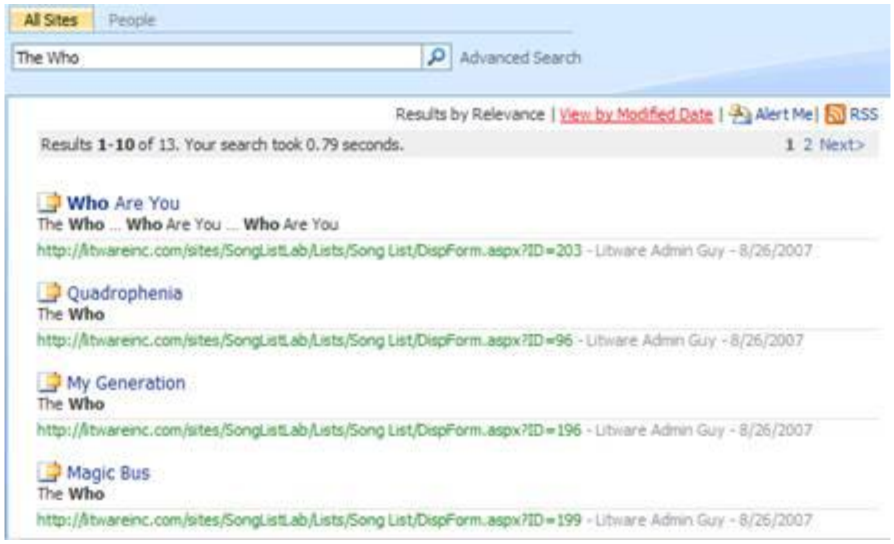


D) Click **OK.**

E) Click on **Search** in the top link bar.

F) In the search dialog box, type **Ringo Starr**, click the **search icon**. Your results should be:

G) Click on **Litware Portal** in the left hand corner. In the drop-down list next to the search box, select **Song List**. Type **The Who** in the search box and click on the search icon. The scope still may not be ready, wait a few minutes and try again. Your results should be:


All Sites
People
The Who
Advanced Search
Results by Relevance | View by Modified Date | Alert Me | RSS
Results 1-10 of 13. Your search took 0.79 seconds.
1 2 Next>
Who Are You
The Who ... Who Are You ... Who Are You
http://litwareinc.com/sites/SongListLab/Lists/Song List/DispForm.aspx?ID=203 - Litware Admin Guy - 8/26/2007
Quadrophenia
The Who
http://litwareinc.com/sites/SongListLab/Lists/Song List/DispForm.aspx?ID=96 - Litware Admin Guy - 8/26/2007
My Generation
The Who
http://litwareinc.com/sites/SongListLab/Lists/Song List/DispForm.aspx?ID=196 - Litware Admin Guy - 8/26/2007
Magic Bus
The Who
http://litwareinc.com/sites/SongListLab/Lists/Song List/DispForm.aspx?ID=199 - Litware Admin Guy - 8/26/2007

Lab 06: Working with InfoPath Forms

Lab Overview: In this lab, you will learn how to create and deploy an InfoPath Form.   In Exercise 1, you are responsible for creating an InfoPath template that will be used by the Litware consultants to fill in their daily timesheets. In Exercise 2, you will configure data connections back to SharePoint to facilitate efficiently filling in these forms. In Exercise 3, you will deploy the template so that the consultants will use the InfoPath smart client application to fill in the timesheet data.

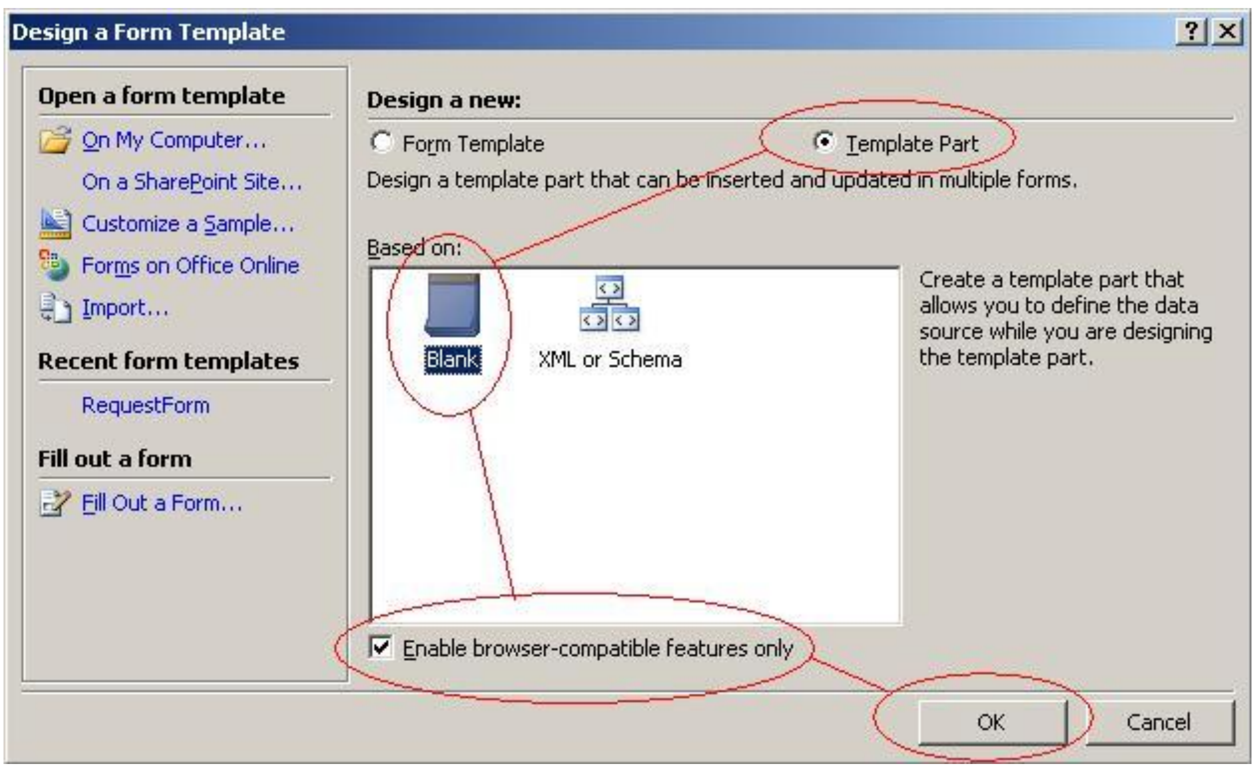
This lab will take approximately 75 minutes to complete.

Exercise 1: Creating an InfoPath Form to capture timesheet info

1) As a starter, you are going to create two InfoPath template parts - one for the Litware banner and one for a footer containing the text Litware uses on all of its internal documents. Template parts are reusable pieces of content. A logo and footer are great examples, rather than recreate them for each form, you can pull from previously created parts.

   A) Click **Start > Microsoft Office > Office InfoPath 2007**. In the **Getting Started** dialog, choose the **Design a Form Template** link.

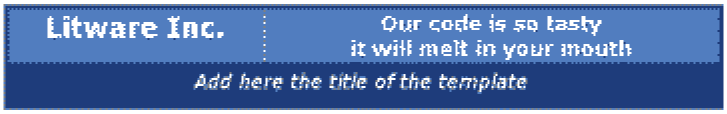
   B) In the **Design a Form** dialog, select the option to create a **Template Part** based on the **Blank** template and also check the **Enable browser-compatible features only** since you will later examine issues with Forms Server deployment. Click **OK** to close the dialog.



   C) In the **Design Tasks** pane, select **Layout** and double-click the **Two-Column Table** option.

   D) In the first cell, add **Litware Inc** as text and in the second one **Our code is so tasty, it will melt in your mouth**. Center the Text in both cells. Apply some border and shading  to the table.

E) Add a second row to the table. Under **Merge and split cells**, click on **Add Table Row**. Next, click on **Merge Table Cells**. Add **Add here the title of the template in the merged cell**.



Your form will look different than the one above. We have customized our banner by editing the bordering, shading, and color.. Do not worry about this at this time. It's more important to learn the functionality.

F) Save the template part in your **Desktop/Labs/Lab 6** folder as **Banner.xtp** and close InfoPath.

G) Open InfoPath and follow the steps A and B again to create the second template part.

H) In the **Design Tasks** pane, select **Layout** and double-click the **One-Column Table** option.

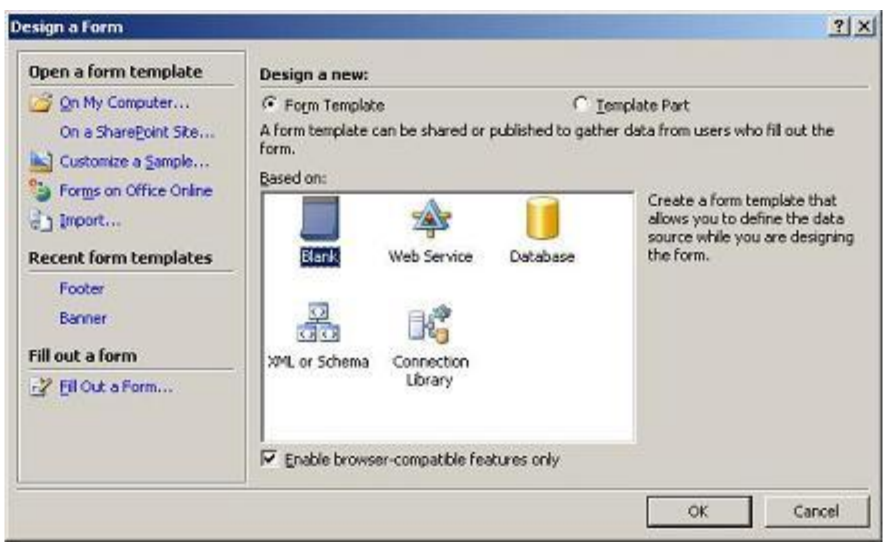
I) Add the text **Litware Inc. Internal Document - All Rights Reserved**. Use the font and italic option to change the look and feel.

J) Save the template part in your **Desktop/Labs/Lab 6** folder as **Footer.xtp** and close InfoPath.

2) Now that you have your two re-usable InfoPath blocks, you will start to create the main InfoPath template to capture the timesheet information. In the first instance, you just have to take care of the layout and the controls.

A) Reopen InfoPath and click on **File**. Click on **Design a Form Template**.

B) In the **Design a Form Template** dialog, select the option to create a **Form Template** based on the **Blank** template and also check the **Enable browser-compatible features only** since you will later deploy for a Forms Server site. Click **OK** to close the dialog.

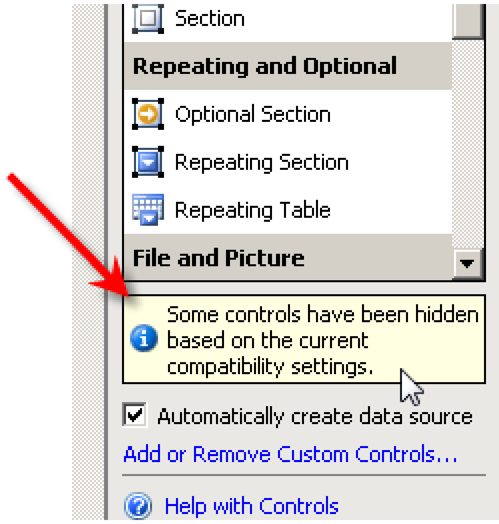


C) In the **Design Tasks** pane, click on **Controls**. Review the controls you can use.

Q: Why are there so few controls?

A: Because we are mandating that this form be usable both in InfoPath 2007 and Forms Services via the web, our control choices are limited to those that are usable both places

D) Click on the **Some controls are not compatible with the current form and have been hidden box at the bottom of the pane**. Review the message box.



E) Click on the **Add or Remove Custom Controls** link at the bottom of the pane.

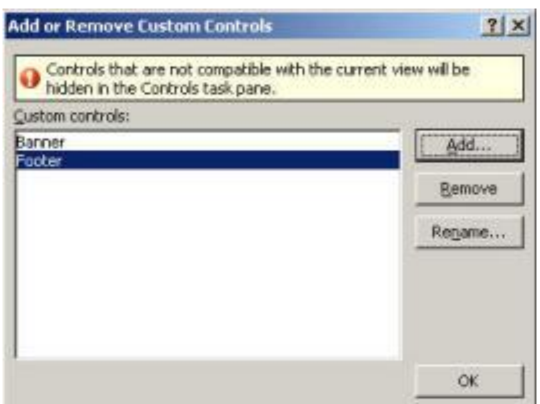
F) **Add** the two template parts (**Banner.xtp** and **Footer.xtp** located in your **Desktop/Labs/Lab 6** folder you created in step 1.

*i) In the **Add Custom Control Wizard**, select **Template Part** and click **Next**.*

*ii) Click **Browse**. Navigate to your **Desktop/Labs/Lab 6** folder and select the banner and footer you created earlier in this lab (you will have to add them one at a time).*

*iii) Click **Finish > Close***

*iv) After you've added both templates, click **OK.***



G) The two template parts are now located under the **Custom** header in the **Controls** tool box. Drag and drop the **banner** on the blank view

H) Press **Enter** 2 times to add two blank lines

I) Drag and drop the **footer**

J) Add **Daily Timesheet Report Form** as the text in the banner for the second row.

K) Place your insertion point (the flashing vertical line on the screen) in the first blank line (i.e. using the mouse click on the first blank line.)

L) Go back to the **Design Tasks** pane and select **Layout**.
Hint: on the right hand side of your InfoPath design window there is the Controls list. At the top of this list is a link that says "**Design Tasks**" click on this to return to the main **Design Tasks** pane and then select the **Layout** choice from this main screen.

M) Add a **Custom Table** with 4 columns and 3 rows between the banner and footer.

*i) Add **Consultant:** in the first cell of row 1*

*ii) Add **Email:** in the first cell of row 2*

*iii) Add **Date:** in the third cell of row 1*

*iv) Add **Phone:** in the third cell of row 2*

*v) Add **Hourly Rate:** in the first cell of row 3*

N) Merge  the other three cells of row 3 into 1 cell.

Hint:

i) Highlight the three cells

ii)Click the  *button for **Merge Table Cells**.*

O) Go back to the **Design Tasks** pane and select **Controls**.
Hint: on the right hand side of your InfoPath design window there is the Controls list. At the top of this list is a link that says "**Design Tasks**" click on this to return to the main **Design Tasks** pane and then select the **Controls** choice from this main screen.

P) Add the following controls to the view:

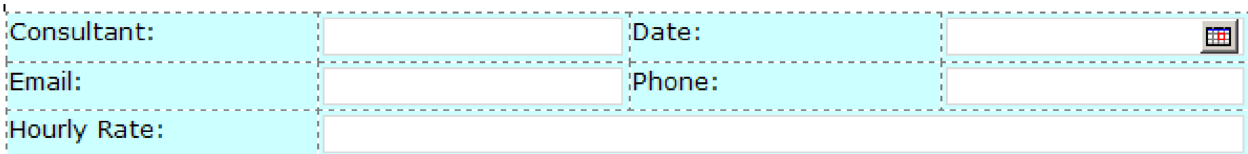
*A **Text Box** in the second cell of row 1*

***Text Boxes** in the second and fourth cells of row 2*

***Text Box** in the second cell of row 3*

*A **Date Picker** in the fourth cell of row 1*

Q) Select the table and use the border and shading  to create a nice looking table.



R) Place your insertion point (the flashing vertical line on the screen) in the second blank line (i.e. using the mouse click on the blank line immediately beneath the table.)

S) Add a **Repeating Table** with **4 columns** after the table you just created.
Hint: from your **Insert** menu select **Repeating Table...**

T) Add **Project**, **Task**, **Description** and **Hours** as headers.

U) Right-click the **Text Box** under **Project** and **Change To Drop-Down List Box**.

V) Click the **Preview** button in the toolbar to check the result of your work.

W) Close the preview.

X) Save the template as **TimeSheet.xsn** in your **Desktop/Labs/Lab 6** folder.

3) You have started really from scratch. The only thing to do now is make changes to the default names and types.

A) Go back to the **Design Tasks** pane and select **Data Source**.

B) Double-click each the elements in the data source and make the following changes:

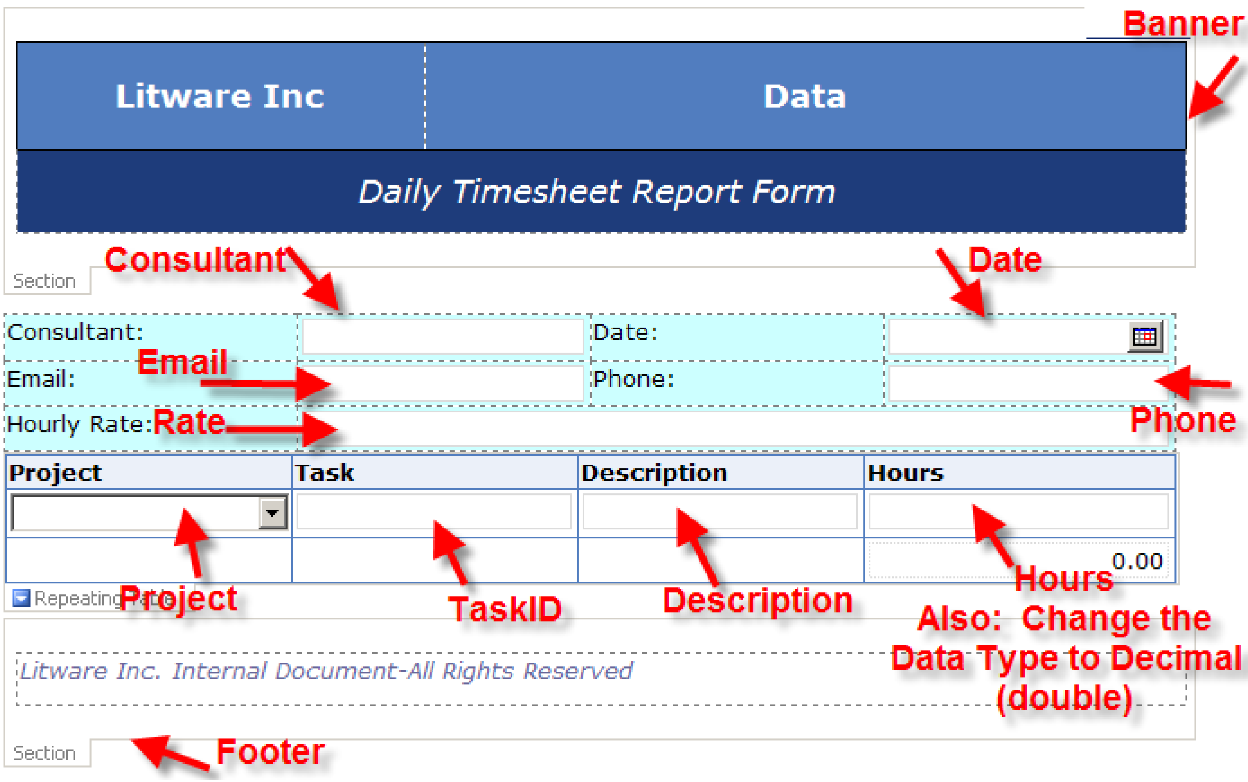
Hint: You may need to expand the nodes to locate

i) rename ***myFields*** *to* ***timesheet (just double click on the field, a new window will pop-up, and you can edit the field name)***

ii) rename ***group1*** *to* ***items***

iii) rename ***group2*** *to* ***item***

iv) Using the image below rename the remaining items as follows, you can do this through the ***Data Source Tool Pane*** *or by double clicking on the individual field fields on the form itself. I find that the latter option is easier.*



C) Next add a group under the **Timesheet** element called **Header** (use the **Move Up** to position the new group) **Hint:** on the right side of the screen using the **Data Source** panel, expand the drop-down off of timesheet and click **Add...**

i) Name: ***Header***

ii) Type: ***Group***

iii) Click ***OK****.*

D) Move the Consultant, Date, Email, Phone, and Rate fields to the Header group.

E) Move the Banner and the Footer to all the way at the bottom.
Hint:

*i) In the Data Source Panel select **Banner** and then select **Move Down** off the drop down menu.*

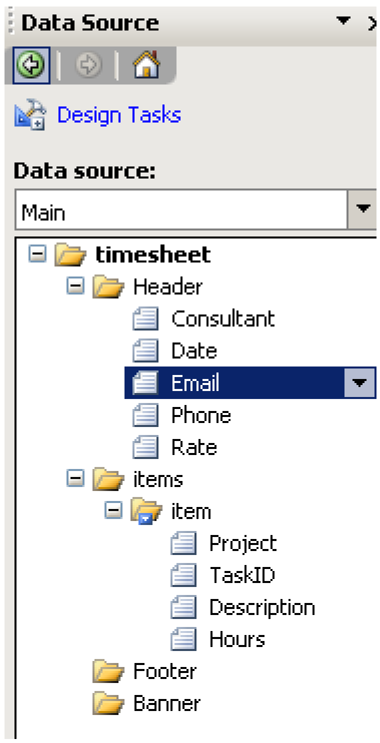
*ii) Repeat for the **Footer**.*

*iii) Select **Header** and then select **Move Up** off the drop down menu.*

*iv) select the **Date** field and select **Move...** off the drop down menu select the **Header** folder and*

*v) Then select **OK**.*

*vi) Your **Data Source Main** should look as follows:*



F) Right-click on the repeating table and open the **Repeating Table Properties**. On the **Display** tab check the **Include Footer** checkbox. Click **OK**

G) Add an **Expression Box** in the **Hours** column in the footer row. Use the formula editor to insert a **Sum** function for the **Hours** field. Change the type of the expression box content to **Decimal**.
Hint:

*i) Select **Design Tasks** in your **Data Source** panel and then select **Controls***

ii) Place your insertion point in the last cell in the last row of your repeating table (i.e. 4th coulumn, row 3)

*iii) Select **Expression Box** from the Controls Panel*

iv) Click on the Function button 

*v) Select **Insert Function...***

*vi) Click on **Insert Function… > Sum > OK***

*vii) Select **sum** and click **OK**.*

*viii) **double click to insert field** and pick the **Items - Item - Hours** field*

*xi) Click **OK, OK, OK***

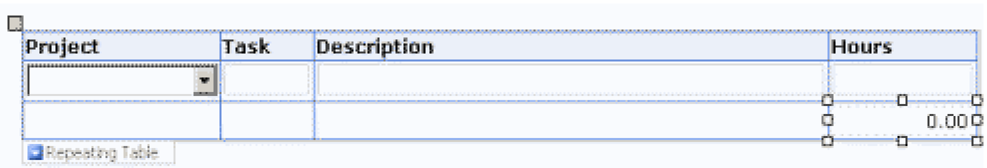
*x) Right click the expression box, select **Expression Box Properties….** In the **Result** section **Format as:** drop down box select **Decimal*** *xi)Click **Format…** and Change the **Decimal Places** to 2*

*xii) Click **OK***

*xiii)On the **Display** tab, change the **Alignment** to **Right***

*xiv) Click **OK***

H) Be sure to format both the **Hours** Repeating field so that it has a Right Alignment and always display 2 decimal places.



I) Save the template to your **Desktop/Labs/Lab 6** folder. If any windows pop-up, click **OK**.

Exercise 2: Using a SharePoint List to populate the Drop Down List Box Choices

In this exercise, you'll need to create a data connection for the list of projects as well. This time you'll be using a SharePoint list as the starting point (this list should already exist on your Litware Inc. site

http://litwareinc.com/sites/ProjectManagementLab/Lists/Projects). This will allow the drop down list choices to dynamically change as the **Project List** is updated with the current projects.

1) The first step is to create the data connection between InfoPath and the SharePoint list.

A) First add a connection to receive data of type SharePoint library or list. Click on the **Tools** menu **> Data Connections… > Add...**

B) Select **Create a new connection to: Receive data** and click **Next**.

C) Select **SharePoint Library or List** and click **Next**

D) Use a path of **http://litwareinc.com/sites/ProjectManagementLab/** and click **Next**.

E) Select the **Projects** list and then click **Next** to advance to the column selection page.

F) Uncheck all of the columns except **Project** and click **Next** twice then **Finish** to create the new connection.

G) Click **Close** to close the **Data Connections** window.

2) Now you will connect the **Project** field drop-down on the form to the data connection created in the previous step.

A) Right click the **Project** drop-down and select **Drop-Down List Box Properties**.

B) In the List box entries section, select **Look up values from an external data source** and select the **Projects** data source.

C) Next click the button to the right of the **Entries** text box and expand the nodes to select the **:Project** node.

D) Click **OK (two times)** to assign the connection.

3) Now that the data is populated, you'll need to perform some validation checks on the data entered into the form.

A) Set today's date as the default date

*i) Double click on the **Date** field (to the right of the **Date:** title field).*

ii) Click the  *button.*

*iii) Click on **Insert Function...** button*

*iv) select the **Today** function from the **Most Recently Used** Category*

*v) Click **OK** three times*

B) Create a data validation rule for the date field. Restrict users from entering a date in the future.

*i) **Double click** on the **Date** field (to the right of the **Date:** title field).*

*ii) Click on **Data Validation...** then click on **Add...***

*iii) Set the condition **Date is greater than** and then from the third drop down box select **Use a formula...***

*iv) type **today()** for the formula and click **OK***

*v) set the **Screen Tip:** to **You cannot select a date in the future***

*vi) set the **Message:** to **You cannot record work for a future date... All work recorded must be for Today or earlier dates.***

*vii) click **OK** (three times)*

C) Change the font color of the expression box that calculates the total of hours to red if the amount is bigger than 8

*i) Right Click on the **Total Hours Expression Box** (i.e. the one with **0.00** in it) and select **Expression Box Properties...***

*ii) On the **General** tab select the expression in the **XPath:** box and copy it (i.e. use **Ctrl+C**)*

*iii) Select the **Display** tab then click on **Conditional Formatting...** then click **Add...***

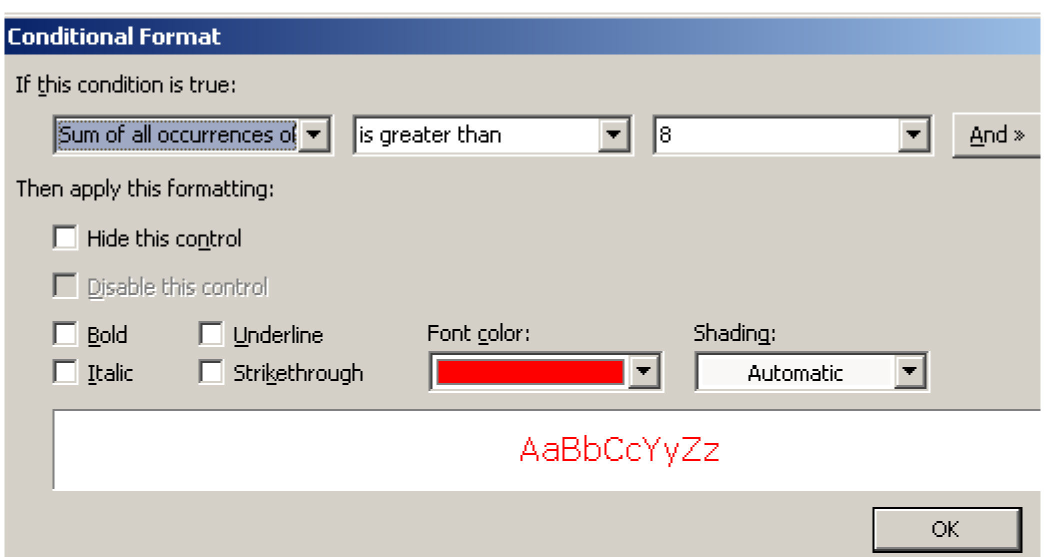
*iv) Set the condition to **The Expression***

*v) Set the condition Text box to **sum(my:Items/my:Item/my:Hours) > 8***

Hint:** Put your insertion point into this text box and press **Ctrl+v** to paste your formula in and then add **> 8

*vi) If this condition is true set the **Font color:** to a shade of **Red***

*vii) Click **OK** (Three times)*



4) Click the save icon. Test your form by clicking the **Preview** button.

Note: You will be Informed about a potential security concern, click **Yes**.

If you are also questioned about working offline select the **Try to connect** button in response to this. Close the preview.

5) The last part of this exercise is to prepare to save the data in the InfoPath form into a SharePoint Form Library. To do this, you'll need to create a new **Form Library** named **Daily Timesheets** in the

http://Litwareinc.com/sites/ProjectManagementLab/SouthDivision site.

A) Navigate to the **South Division** site using the URL from above.

B) Click on **Site Actions > Create > Form Library**

C) Name the new library **Daily Timesheets**

D) Click **Create**

6) As a final step you add a button control to the view that will be used to submit all of the data to SharePoint document library.

A) Switch back to InfoPath, and add a new **Data Connection** using the **Tools** and then **Data Connections** in the InfoPath menu. Click **Add**.

*i) This one will be a connection to **Submit data** (Create a new connection to: Submit data)*

*ii) Click **Next***

*iii) Select **To a document library on a SharePoint site***

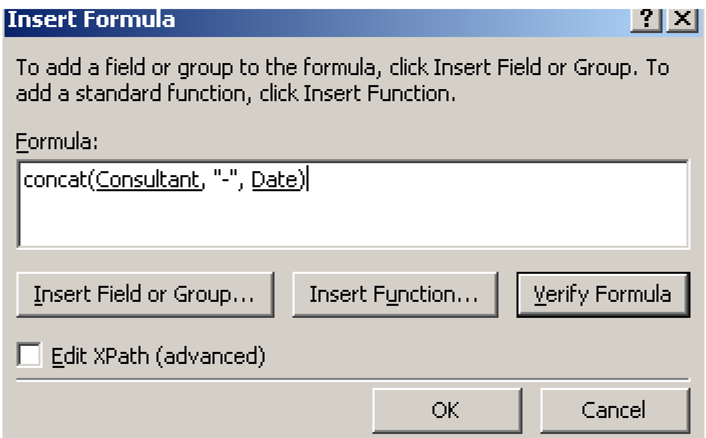
*iv) Click **Next***

v) Enter the URL to the document library

http://litwareinc.com/sites/ProjectManagementLab/SouthDivision/Daily%20Timesheets/

*vi) Click the **fx** button to the right of the filename to reset the name of the saved form*

*vii) Set the name of the form to **concat(consultant, "-", date).** You'll need to build this string, you cannot paste into the text box. Once you have created it, click **OK**.*



*Viii) Check the **Allow overwrite if file exists***

*ix) Click **Next** and **Finish** and then **Close the wizard**.*

B) Drop a **Button** control on the form between the repeating table and the footer.

C) Double-click the control and change the **Label** and **ID** to **Submit**.

D.)Use the **Rules** button to add a new rule with no condition but with the following action:

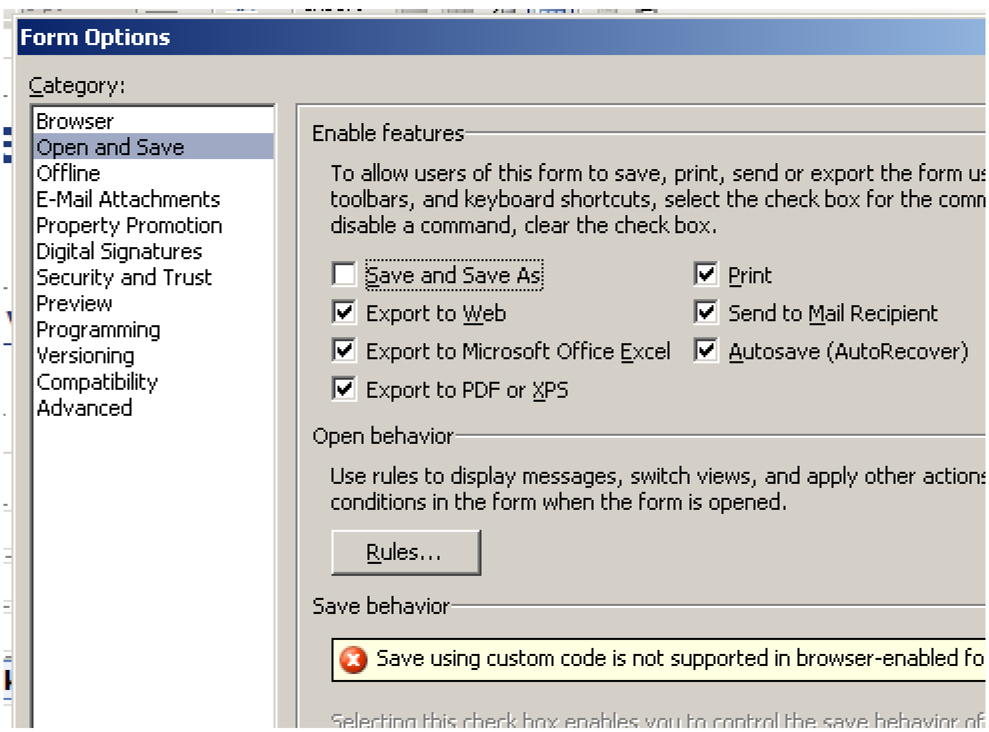
- **Submit using a Data Connection** - the one you have created in step 6A and click **OK** three times.

E) Save the template, if a warning message pops up click **overwrite**.

Exercise 3: Publish form to WSS forms library

In this exercise, you are playing the role of the administrator who is responsible for the deployment of the InfoPath template. You will be deploying the template to a SharePoint forms library and make it available via the Forms Server for those consultants that do not have InfoPath installed on their laptops (i.e. you will begin utilizing MOSS Forms Services)

1) Since you'll be using **Forms Services** to render this form, you'll need to make some changes to the submission process
   - A) Configure the submit options using **Tools > Submit Options**.
   - B) Check **Allow users to submit this form**
   - C) Select **Send form data to a single destination** with a destination of **SharePoint document library**.
   - D) Select **SharePoint Library Submit** as the data connection to use. Click **Add**
   - E) Enter the URL for the **Daily Timesheets** form library and click **Next > Finish**.
   - F) Click **Advanced >>** and select **Close the form** in the **After submit** drop down list.
   - G) Click **OK** to apply the changes
2) Next you'll need to disable the save option on the form to force the user to submit, not save.
   - A) Open **Tools > Form Options**
   - B) Select the **Open and Save** pane.
   - C) In this pane uncheck **Save and Save As** to disable saving.



   - D) Click **OK**
3) In the **Design Tasks** pane (right side of InfoPath screen) click on the **Design Checker**. You should not see any red icons indicating a compatibility error. You might see one or more blue icons indicating a warning.

4) Go back to the **Design Tasks** pane and click the **Publish Form Template** link. This wizard will guide you through all the needed steps to make your template available via SharePoint.

A) Click **OK** to the modification message

B) Select **To a SharePoint server with or without InfoPath Forms Services**

C) Click **Next**

D) Give the URL to the SharePoint server (**http://litwareinc.com/sites/ProjectManagementLab/SouthDivision/**)

E) Click Next
Note: if you have a problem publishing to your site you may have to run "net stop sens" from a cmd prompt. This is only an issue on a single machine development environment and only affects Office 2007 items interacting with SharePoint.

F) You will note that you cannot currently enable this form to be filled out using a browser this is controlled via a MOSS site collection feature.

i) Keep your InfoPath Design window open and in a browser navigate to ***http://litwareinc.com/sites/ProjectManagementLab/***

ii) Select ***Site Actions > Site Settings > Site collection Features*** *(from the* ***Site Collection Administration*** *column)*

iii) Locate and ***Activate*** *the* ***Office SharePoint Server Enterprise Site Collection features*** *choice (among other things this controls forms services)*

iv) Return to your InfoPath Design window and click ***Back*** *and then click* ***Next*** *you should see that the browser based option is now available.*
Note: *If you now see an additional warning that our form requires administrator approval before it can be used via a browser it is likely for one of two reasons:*

1) you have browser incompatible items on your form (in your ***Design Tasks*** *Pane switch to* ***Design Checker*** *and look for* ***Errors*** *(i.e. items with a red X)*

2) you have somehow enabled a VSTO project for your InfoPath form (i.e. created a code behind page) To check this, in InfoPath select ***Tools > Form Options*** *- select* ***Programming*** *(from Category:) - look for the* ***Remove Code*** *button (if this is enabled you've got code behind problems) to remove them click* ***Remove Code*** *and then click* ***OK***
After fixing the issues try step 4 again.

G) Check **Enable this form to be filled out by using a browser** and select **Document Library** click **Next**.

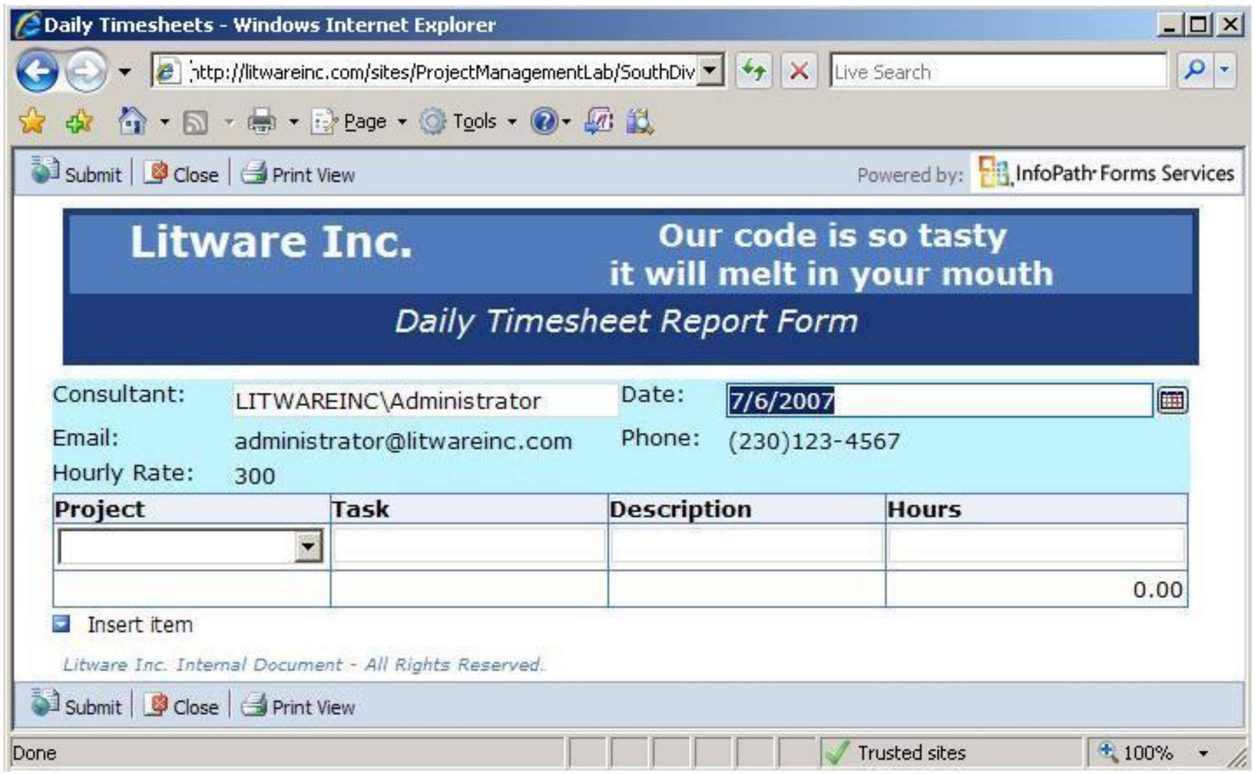
H) Select **Update the form template in an existing document library** and choose the **Daily Timesheets** library.

I) Add **Consultant** and **Date** as new columns to be created

J) Click **Next** and **Publish**

K) In the complete dialog, click **Open this form template in the browser** to view the form in the browser.

L) Once the publish process is completed, close **InfoPath**.



5) Test the template by clicking **New** in the **Daily Timesheets** forms library. Notice that your form opens in **InfoPath** and not the browser. By default forms will use the browser only if **InfoPath** isn't installed. Fill in the form and submit your changes using the **Submit** button.

As an administrator of the forms library, you can specify that the InfoPath form always has to be filled in using the browser, even if the consultant has **InfoPath** installed on his machine.

A) In the forms library, select **Settings** and then **Form Library Settings**

B) Click on **Advanced Settings**

C) Activate the **Display as a Web page** option in the **Browser-enabled Documents** section

D) Click **OK** and using the breadcrumbs navigate back to the **Daily Timesheets** forms library

E) Test the template by clicking **New** in the forms library. The form will be made available in the browser now.

Lab 07: Creating Workflow Associations

Lab Overview: Litware is a consultancy company requiring each of their consultants to fill-in daily a timesheet summarizing all of their activities done during that day. The timesheet data is stored in a custom SharePoint list for later use. At the end of every week managers must review the timesheets to approve or disapprove the hours submitted. In Exercise 1 you will create a workflow to assign a task to the consultant's manager and provide them with a form that allows easy acceptance or rejection of the timesheet.

Lab Setup

1) THIS IS ONLY NECESSARY IF YOU **DID NOT SUCCESSFULLY COMPLETE LAB 6**(**InfoPath**). After step 1 do step 2.
   A) Do this **ONLY** If you **attempted but did not complete Lab 06 Successfully** clean up your prior attempt before deploying the new starter files.
      i) Click **Start** - **All Programs** - **Microsoft Office Server** - **SharePoint 3.0 Central Administration**.
      ii) In the top navigation bar, click the **Operations** tab.
      iii) Select **Solution Management** under the **Global Configuration** header.
      iv) You must retract and delete all of your form-timesheet*.wsp files found here (Do this 1x for each Form-timesheet*.wsp)
      v) Select the form-timesheet*.wsp
      vi) If necessary click Retract Solution
      vii) Click Remove Solution
      viii) Repeat as necessary for all Form-timesheet*.wsp files.

   Do this once you **if** do not have any Lab 06 Form-TimeSheet*.wsp Solutions on your server.

   B) You must run the **RefreshProjectSite.bat** file located in the **Desktop\Labs\Lab 7** directory to restore the site named **ProjectManagementLab** and install and activate the **TimeSheet** form Template.
   C) **Note:** If you receive the following message at the end of the restore process "Duplicate properties/sections cannot be defined" you may ignore this and close the cmd window (you are receiving this because you have in some prior lab already altered the user profiles on the server.
   D) Navigate to SharePoint Central Administration (**Start - All Programs - Microsoft Office Server - SharePoint 3.0 Central Administration**)
   E) In Central Administration on your Quick Launch Bar (left side of screen) click on **Litware SSP**
   F) In the Litware SSP **User Profiles and My Sites** section click on **User profiles and properties**
   G) Click on **Start full import** (this will pull the new settings from Active Directory into SharePoint so that we might utilize them).
2) **EVERYONE** must run the **security.bat** file located in **Desktop/Labs/Lab 7** folder.
   Note: this grants contributor access to the LitwareFTE Group on both the Litwareinc and ProjectManagementLab site collections.

This lab will take approximately 60 minutes.

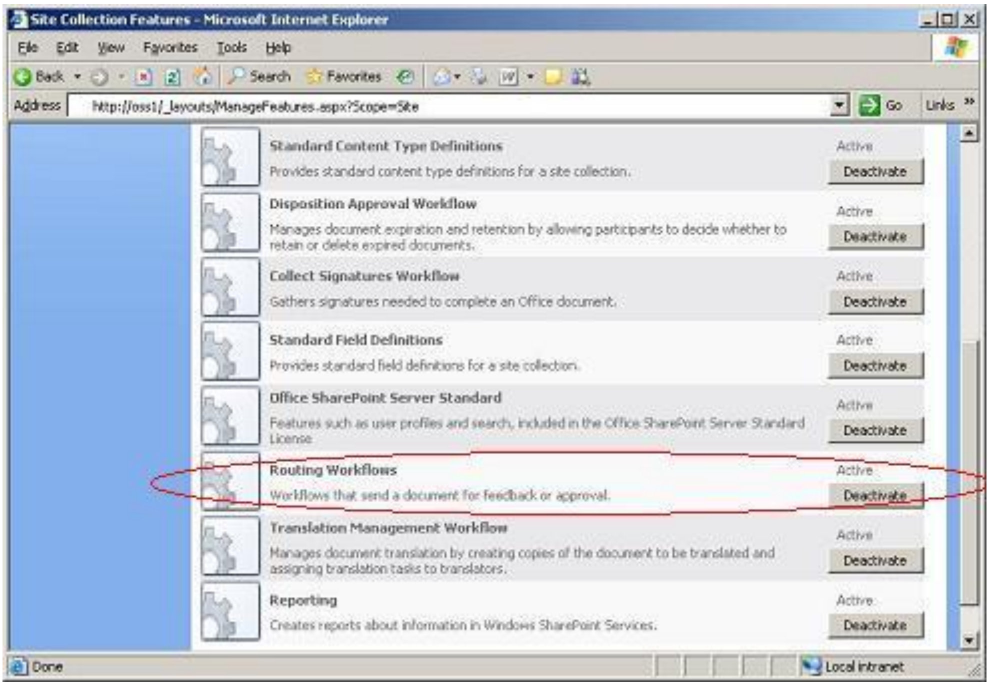
Exercise 1: Associating and Initiating SharePoint Workflows

SharePoint provides several workflow types out of the box. One of those workflow types is an approval workflow. Whenever a user needs to interact with the workflow, a task is added to a **Tasks** list. To better facilitate user interaction, the approval workflow provides InfoPath forms to simplify interaction with the tasks. In this exercise you'll attach an approval workflow to the **Weekly Timesheets** document library to facilitate manager approval of the timesheets.

1) Before you can use the **Approval** workflow that is included with SharePoint, you'll need to enable the **Routing Workflows** feature on the site collection.
   A) Open the site at **http://Litwareinc.com/sites/ProjectManagementLab** and navigate to the site settings using the **Site Actions > Site Settings** menu.

B) In the **Site Collection Administration** page find and click the **Site Collection Features** link.

C) In the features list, find the **Routing Workflows** feature and make sure that it is activated.



2) Now that all the preliminary work is done, it's time to associate the **Approval** workflow with the **Daily Timesheet** form library.

A) Navigate to the **South Division child site** and navigate to the **Daily Timesheets** form library.

B) Click on **Settings > Form Library Settings.**

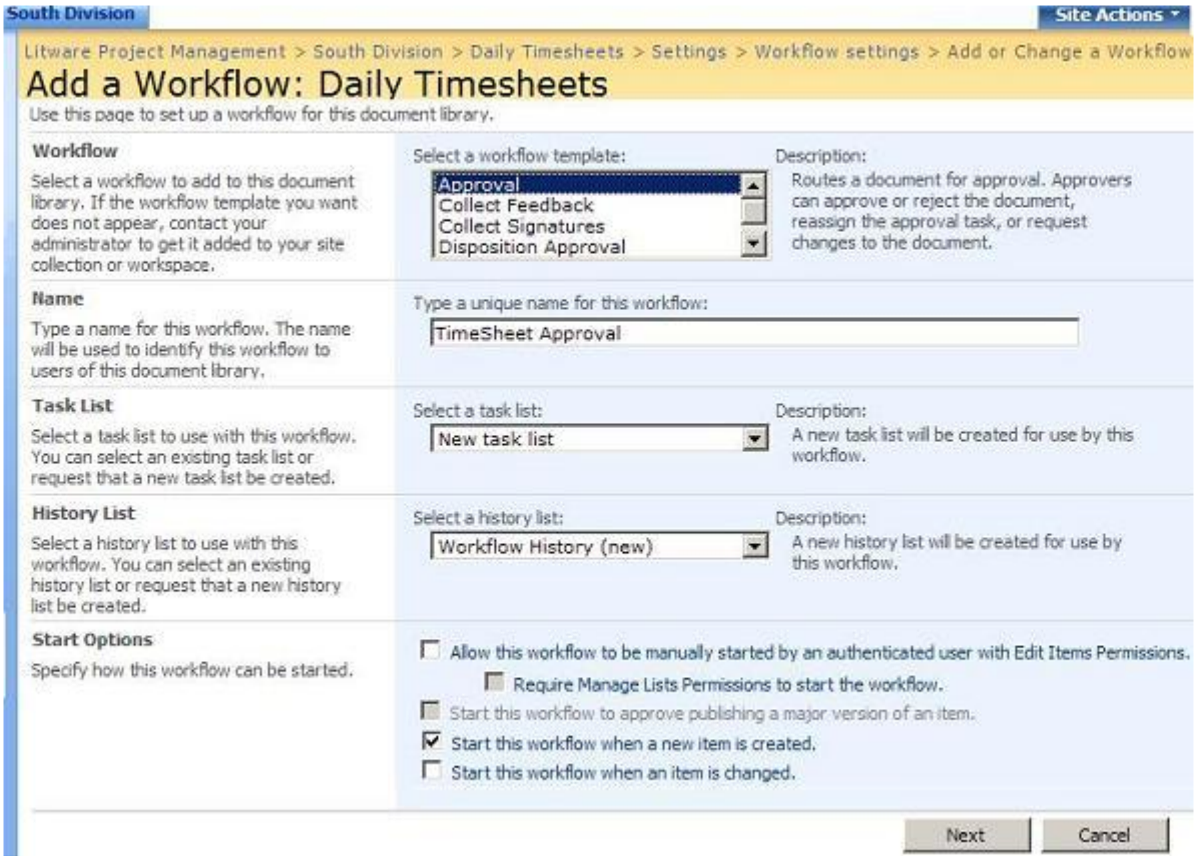
C) Under the **Permissions and Management** section, click on **Workflow settings**

D) Select the **Approval** workflow template and name the workflow **Timesheet Approval**.

E) Select **Tasks (new)** to create a task list to store the workflow tasks and leave the **History List** dropdown where it is so a new workflow history list will be created for you.

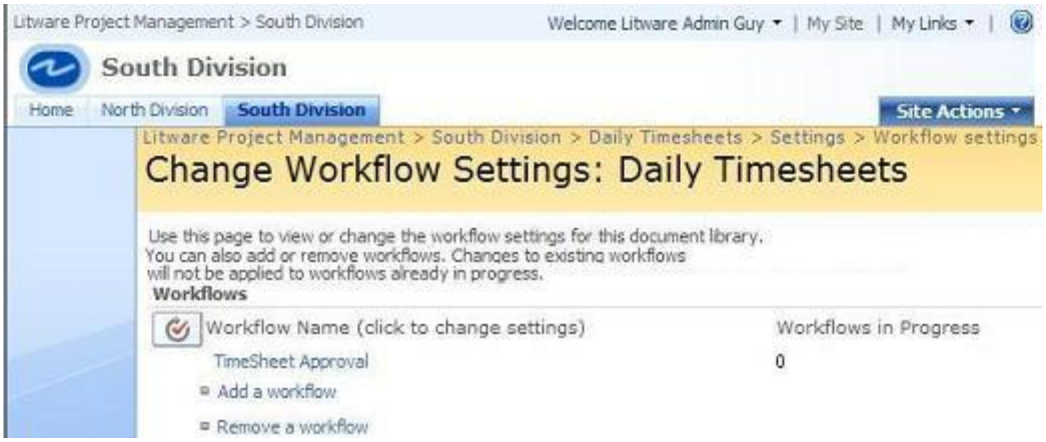
F) Be sure to uncheck the setting to **Allow this workflow to be manually started by an authenticated user with Edit Items Permissions**.

G) Select **Start this workflow when a new item is created**.



H) Click the **Next** button to move to the next step.

I) This page allows you to configure many settings related to the approval process. You're only interested in the **Approvers** text box. Enter **LITWAREINC\Administrator** so the administrator must approve the document press Ctrl + k to validate the name. Finally click **OK** to complete the workflow creation.



3) You've successfully created the **Approval** workflow and associated it with the form library. All that's left to do is test the approval process. On your desktop you should see several icons with an rdp extension. Double-click on the one marked **AngelaB.RDP** 

. You should notice that you have opened a remote desktop session on this computer for AngelaB. Your Desktop is now Purple to indicate this.

A) Open the site at **http://Litwareinc.com/sites/ProjectManagementLab/SouthDivision** and navigate to the Daily **Timesheets** document library.

B) Create a **New** Timesheet for Angela as follows:

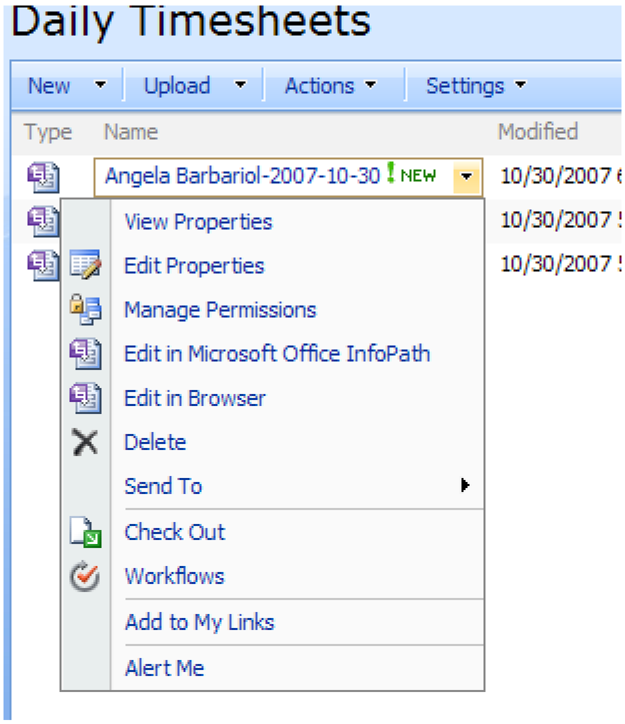
C) Click on **Submit** in the upper lefthand corner of the timesheet. Then click **OK** to the completion message.

D) Notice that the **TimeSheet Approval** for Angela's Timesheet is **In Progress** (the workflow automatically starts as a result of the document being created)

E) Click on Angela's **Start** menu and select the **Shutdown** choice. Click **OK** to the message that appears. This will allow us to act as the approver (i.e. Administrator).

F) As the **Administrator**, navigate to the **Daily Timesheets** form library in the **Litware Project Management - South Division** site.

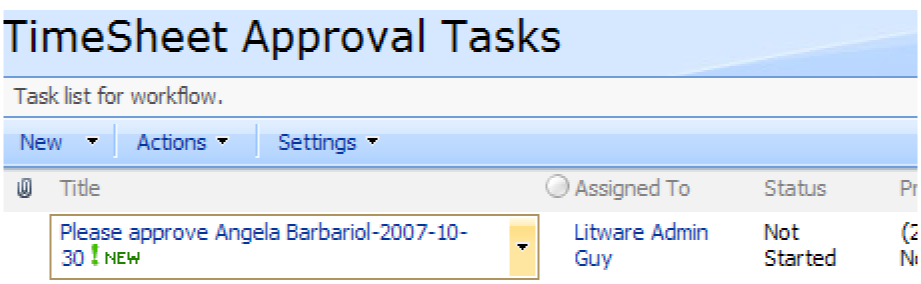
G) Select the **Workflow** menu item for the AngelaB timesheet in the document library.



H) Notice that the workflow is running with a status of **In Progress**. As part of the process the workflow has created a task for the user **LITWAREINC\Administrator** to resolve. Navigate to the **Tasks** list to see the task that has been created by the workflow.

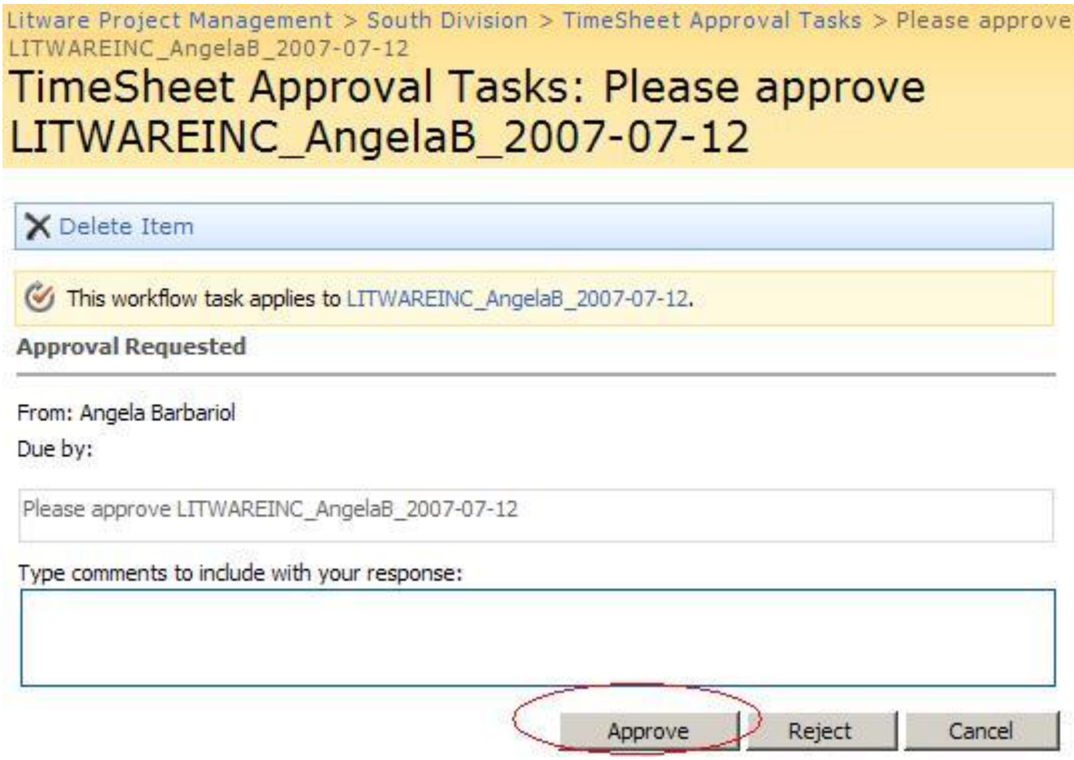
i) *From the South Division site click on **View All Site Content***

ii) *Select the **TimeSheet Approval Tasks** list that was auto-generated for us upon the creation of our workflow.*

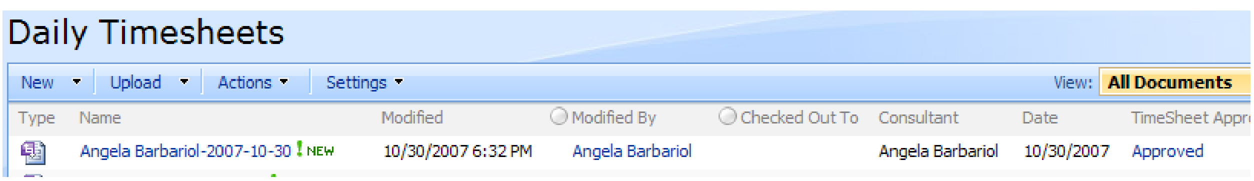


I) The next step in the workflow is to complete the task so the workflow can continue. On the **TimeSheet Approval Tasks** list, edit the properties of the task in the list either by selecting **Edit Item** in the menu or clicking the item link.

J) On the approval form, you can enter comments and either approve or reject the document. In this case **approve** the document by clicking the **Approve** button.



K) The last step is to verify that the workflow has completed successfully and that the timesheet is approved. Navigate to the **Daily Timesheet** list on the South Division site. You'll notice that the **Timesheet Approval** column for the document you approved is set to **Approved**.



Exercise 2: Creating a Custom Workflow with SharePoint Designer

In the first Exercise you created an out-of-the-box workflow, very powerful but little room for customization. In this exercise you have been asked to take the workflow a step further. The managers would first like to approve the time sheet, but after it is approved they would like Accounts Receivable to be notified to bill the client and mark the date they sent the invoice. To do this customization we will be using SharePoint Designer.

1) First we will create two columns in the Daily Timesheets library we will use later.

A) In the Daily Timesheets library, click **Settings > Create Column**

*i)Title: **Manager Approval***

*ii)Type: **Singe line of text***

*iii) Click **OK***

B) Create a second column with the following settings:

I) Title: ***Date Invoiced***

ii) Type: ***Date and Time***

iii) Click ***OK***

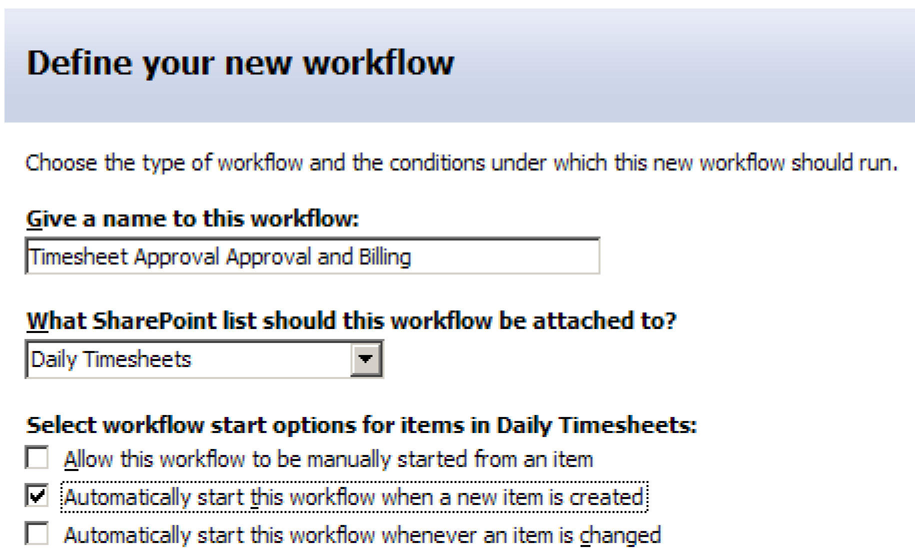
2) Open SharePoint Designer. The first step is to open the site with the list or library you would like to attach the workflow to. **File > Open Site.** In the Site Name dialog box type: http://litwareinc.com/sites/projectmanagementlab/southdivision Click **Open**.

3) To create a new workflow, click on **File > New >Workflow**

A) Name: **Timesheet Approval and Billing**

B) List: **Daily TimeSheets**.

C) Uncheck the box for **Allow this workflow to be manually started from an** item. Check the box for **Allow this workflow to be manually started from an item** and **Automatically start this workflow when a new item is created.**



D) Click **Next**.

4) The First step in our workflow will be to get approval from the manager. For this lab, you (the administrator) will act as the Manager and Accounts Receivable.

A) Step Name: **Manager Approval**

B) Since we always need a manager approval, there is no condition for this step.

C) Action: **Collect Data from user**

D) First we need to determine the data we want to collect, Click on **Data**

*i) Click **Nex**t*

*ii) Name: **Timesheet Approval***

*iii)Click **Next***

*iv)Click **Add…***

*v)Field Name: **Manager Approval***

*vi) Information Type: **Choice (menu to choose from)***

*vii) Click**Next***

*viii) Choices: **Approved** and **Rejected**. Remember to enter them on separate lines.*

*iv)Click **Finish > Finish***

E) Then you assign it to a user or group, Click on **this user**

*i)Select **LITWAREINCE\administrator***

*ii)Click **Add>>***

*iii)**OK***

F) Finally we need an output variable to later be able to find a particular instance of this collect data task. Click on **Variable:Collect > Create a new variable…**

*i) Name: **Manager Approval ID***

*ii) Click **OK***

G) A second action will be added to update the **Manager Approval** column in the **Daily Timesheet** library with what the manager selected in the **Task** item. From the **Actions** dropdown select **Set field in current item.**

*i) Click **Field > Manager Approval***

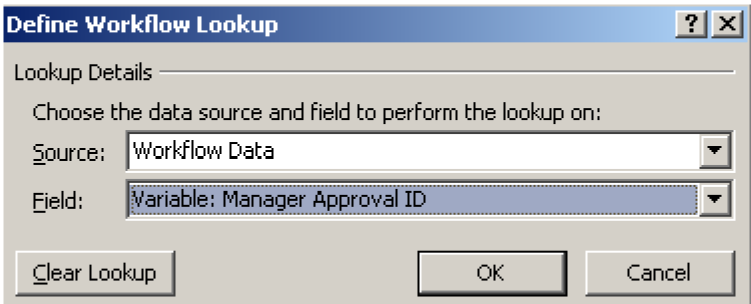
*ii) Click **Value > fx** button*

*iii) Source: **Tasks***

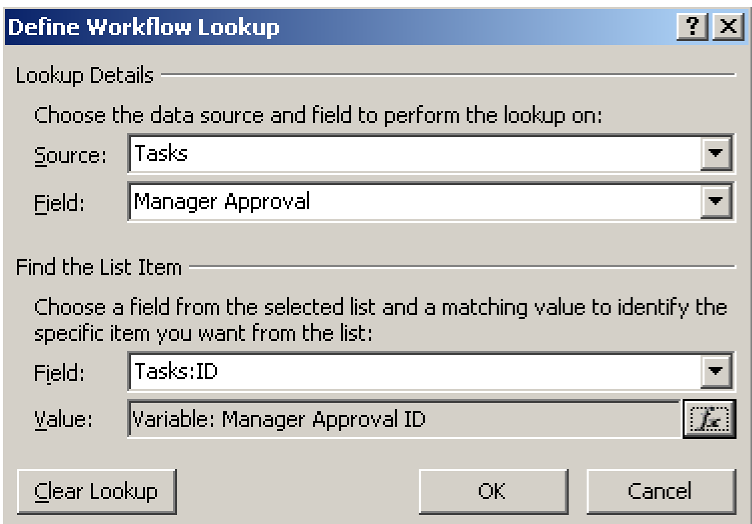
*iv)Field: **Manager Approval***

*v) Field: **Tasks:ID***

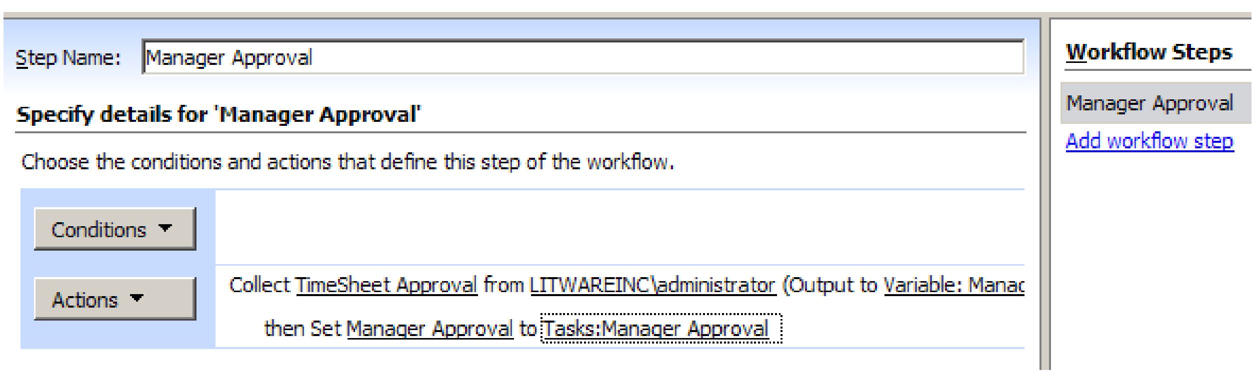
*vi)Value: **fx**button and then fill in as seen below:*



*vii) Click **OK***



*viii) click **OK***



5) The next step in the workflow is to either send a message to the consultant letting them know it was rejected, or if it is approved, send it to Accounts Receivable to be invoiced. In the right side of the Workflow wizard under Manager Approval, click **Add workflow step.**

A) Step Name: **Accounts Receivable**

B) Condition: **Compare Daily Timesheets Field**

*i) **Field > Manager Approval***

*ii)**Value > Rejected***

C) Action: **Send an Email**

*i) Click **this message***

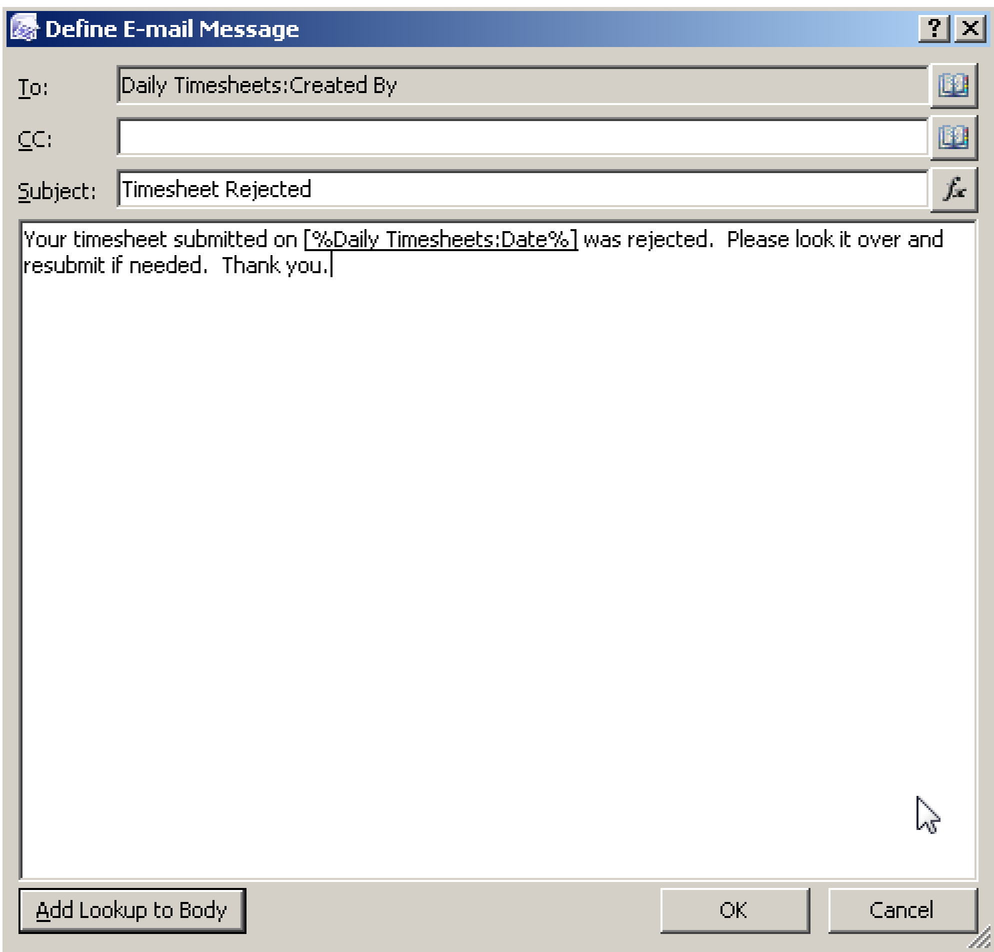
*ii) To: select the **address book** button and add **User who created current item***

*iii)Click **OK***

*iv) Subject: **Timesheet Rejected***

v) Fill in the Body as seen below,

*To add the date from the item click the **Add lookup to body** in the bottom left hand corner. For Source leave it **Current Item** and for the Field select **Date.** Click **OK**.*



*vi) Click **OK***

D) Next you will want to add another condition statement to send to Accounts Receivable when the timesheet is approved. Click **Add "Else If" Conditional Branch**.

E) Condition: **Compare Daily Timesheets Field** *i) Field **> Manager Approval***

*ii)Value **> Approved***

F) Action: **Collect Data from user**

G) First we need to determine the data we want to collect, Click on **Data**

*i) Click**Nex**t*

*ii) Name: **Bill Client***

*iii)Click **Next***

*iv)Click **Add…***

*v)Field Name: **Date Invoiced***

*vi) Information Type: **Date and Time***

*vii) Click **Next***

*viii)Click **Finish > Finish***

H) Then you assign it to a user or group, Click on **this user**

*i)Select **LITWAREINCE\administrator***

*ii)Click **Add>>***

*iii)Click **OK***

I) Finally we need an output variable to later be able to find a particular instance of this collect data task. Click on **Variable:Collect→Create a new variable…**

*i) Name: **Accounts Receivable ID***

*ii) Click **OK***

J) A second action will be added to update the **Date Invoiced** column in the **Daily Timesheet** library with the date **Accounts Receivable** sent the invoice. From the **Actions** dropdown select **Set field in current item.**

*i) Click **Field > Date Invoiced***

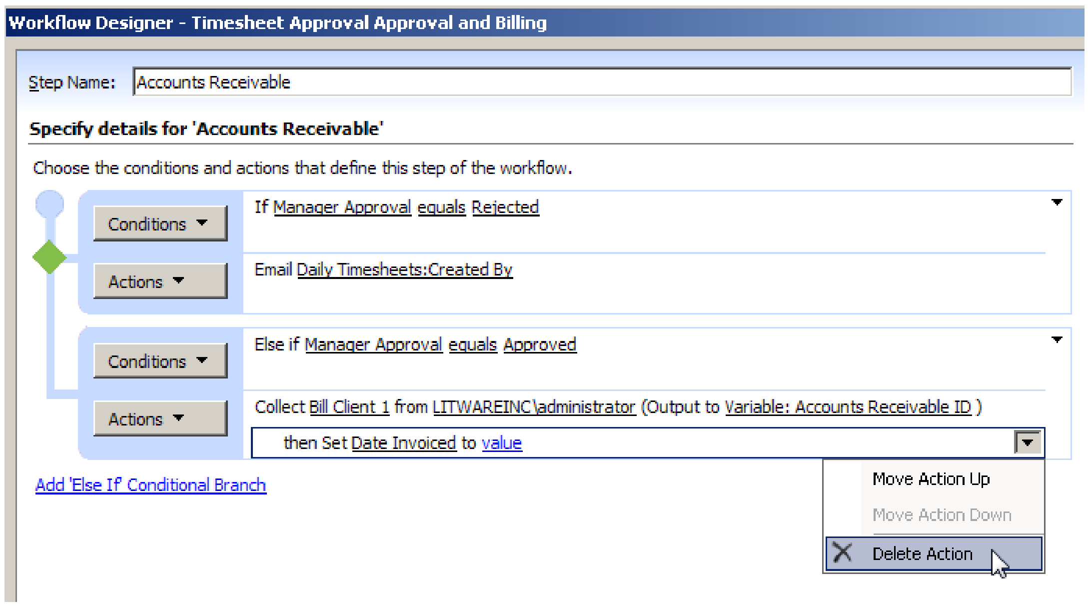
*ii) Click **Value > fx** button*

*iii) Source: **Tasks***

*iv) Field: **Date Invoiced**.* If you do not see **Date Invoiced** as an option, follow these steps:

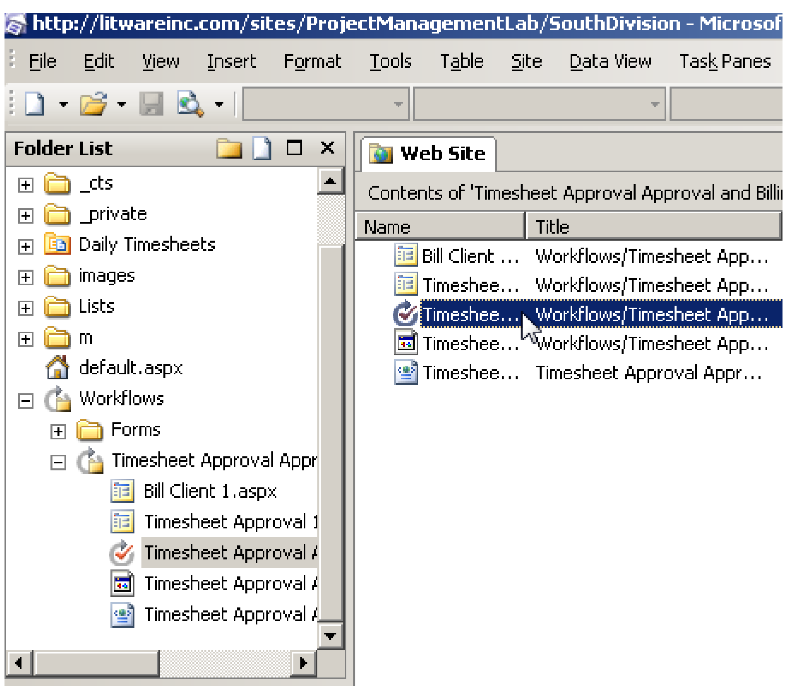
1) *Click **Canel** to get out of the **Define Workflow Lookup** dialog.*

2) *Move your cursor over the **Action** you just added, move to the right and click on the drop-down menu. Click **Delete Action**.*



3) On the bottom right, click on **Finish**. This will save your progress and close the workflow wizard.

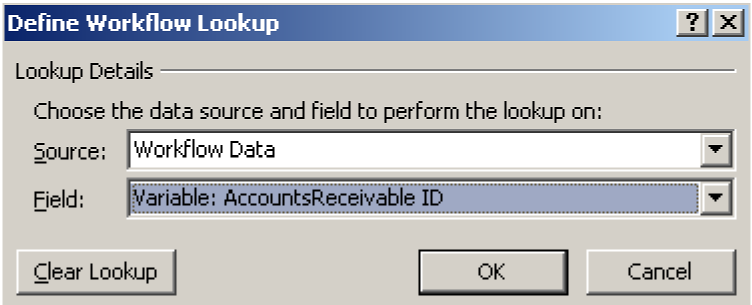
4) In the **Folder List**, expand **Workflows >** expand **Timesheet Approval and Billing >** double click on **Timesheet Approval and Billing.xoml**. This will reopen the workflow wizard.



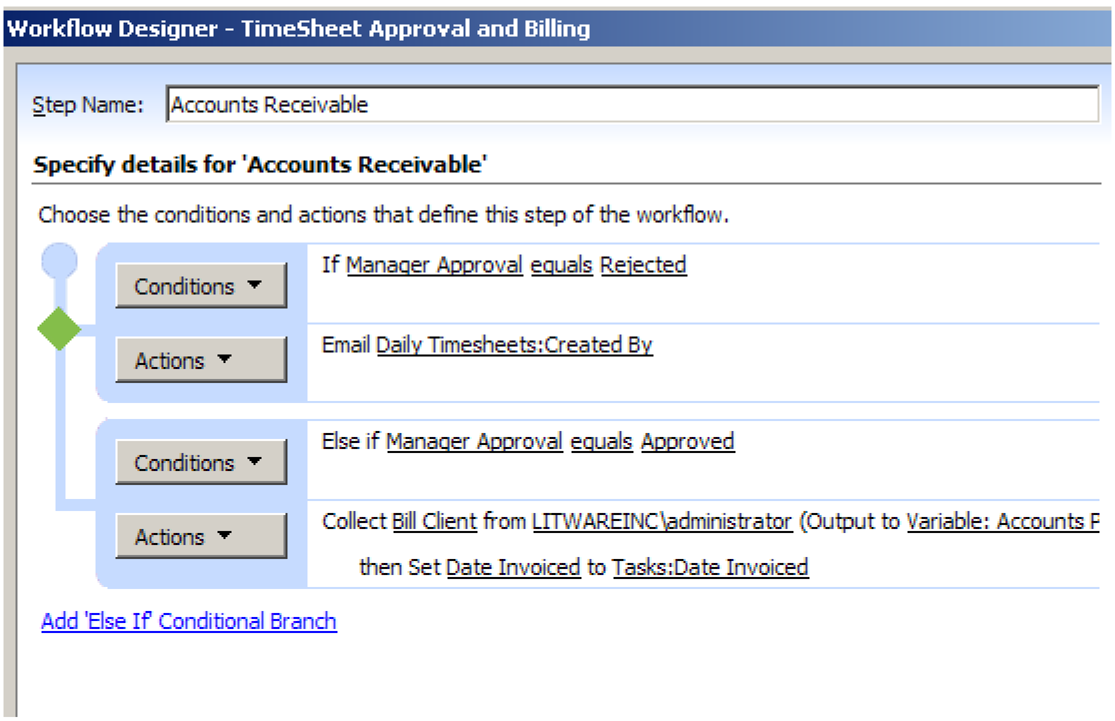
5) In the **Workflow Steps** section (upper right) click on **Accounts Receivable**. This will take you back to the last step that you finished. Go back to step 5J and **Invoiced Date** should now be an option.

*v) Field: **Tasks:ID***

*vii) Value: **fx**button and then fill in as seen below:*



*vii) Click **OK, OK***

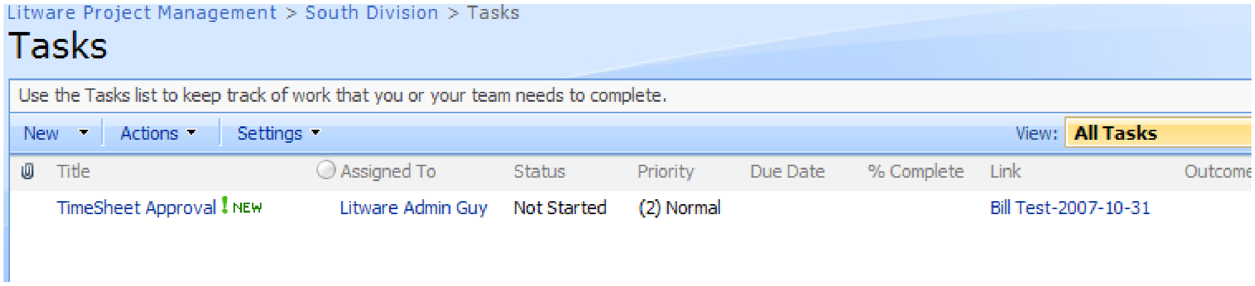


6) Finally complete the workflow by clicking **Finish.** You will now see the contents of your 'Timesheet Approval and Billing' Workflow. If you need to make changes click on the item with symbol in front of it. This will open up the workflow wizard.

7) Now it is time to test the workflow. Create a new timesheet form in the **Daily Timesheets** library.

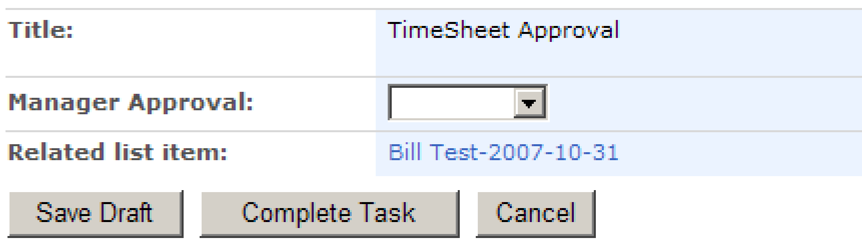
(You may fill in the data with whatever seems appropriate)

8) In the quick launch bar, click on **Tasks**



9) On the Timesheet Approval task, click on the drop down and select Edit Item.

NOTE: When you select edit item, if your screen does not look like the one below you will need to recompile the workflow. Open the workflow back up in SharePoint Designer. On the Manager Approval step, open up the Timesheet Approval action and click through the wizard, do not make any changes. Then click Finish on the workflow and allow it to save the changes. Open back up the **Edit Item** of the Timesheet Approval. You may have to do this a couple times until it complies correctly, however once it does you should not need to do it again. This is just a minor glitch.



A) For Manager Approval , select **Approved**

B) Click **Complete Task**

C) Refresh the Task List

10) You should now have a **Bill Client** Task. Click **Edit Item** on the drop down menu.

Note: The previous issue in step 9, could happen again here. If it does follow the same steps to resolve, instead of the Timesheet Approval action in the Manager Approval Step, you will open up the Bill Client action in the Accounts Receivable Step.

A) For Date Invoiced select **Today's Date**.

B) Click **Complete Task**

C) Navigate back to the **Daily Timesheets** library. For this Timesheet , you should see the following:

Note: The first task has not gone through this workflow because it was created before this workflow was in place. Also, you may notice the Timesheet Approval workflow is still In Progress, this is the out-of-the-box workflow we created in exercise one, if you visit the Timesheet Approval Task list, you could approve it there.

Lab 08: Web Content Management with MOSS 2007

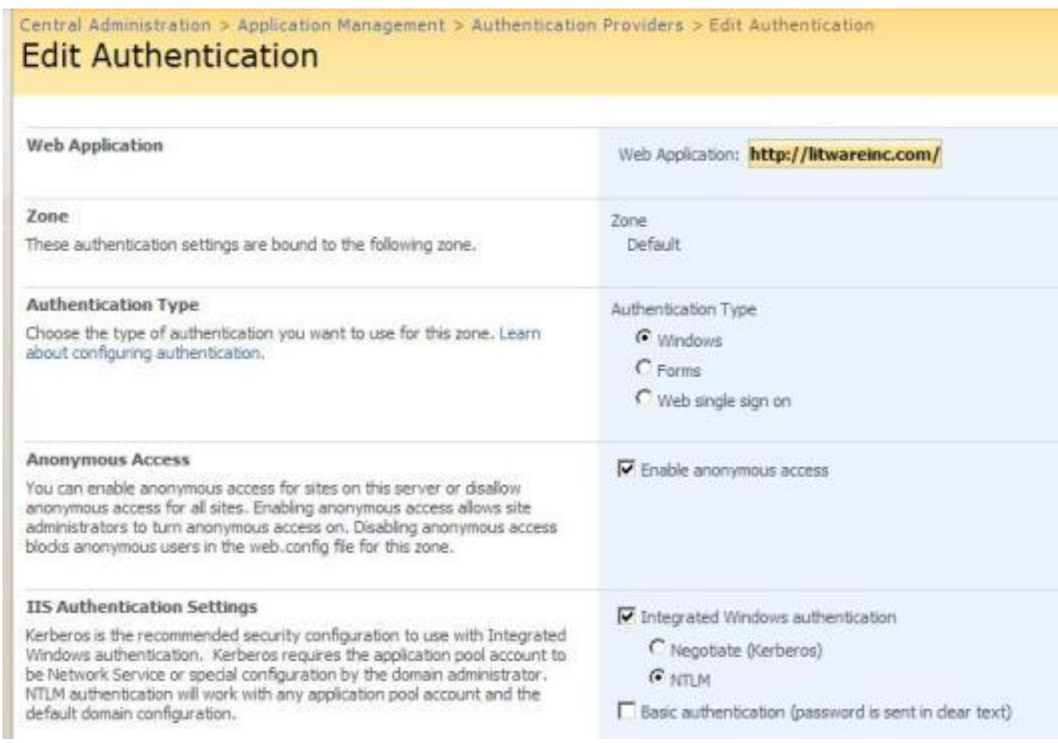
Lab Overview: Litware management has decided to use Microsoft Office SharePoint Server 2007 to create an internet site that will be used to deliver information about the company and its services. The goal is to enable a number of people in the company who are not IT/Dev-skilled to create and manage the content. Your job in this lab is to prepare the infrastructure to support this scenario.

This lab will take approximately 70 minutes to complete.

Exercise 1: Creating a Publishing Portal Site

To start, you will be asked to create the site based on the site definition that is made available with the Microsoft Office SharePoint Server 2007.

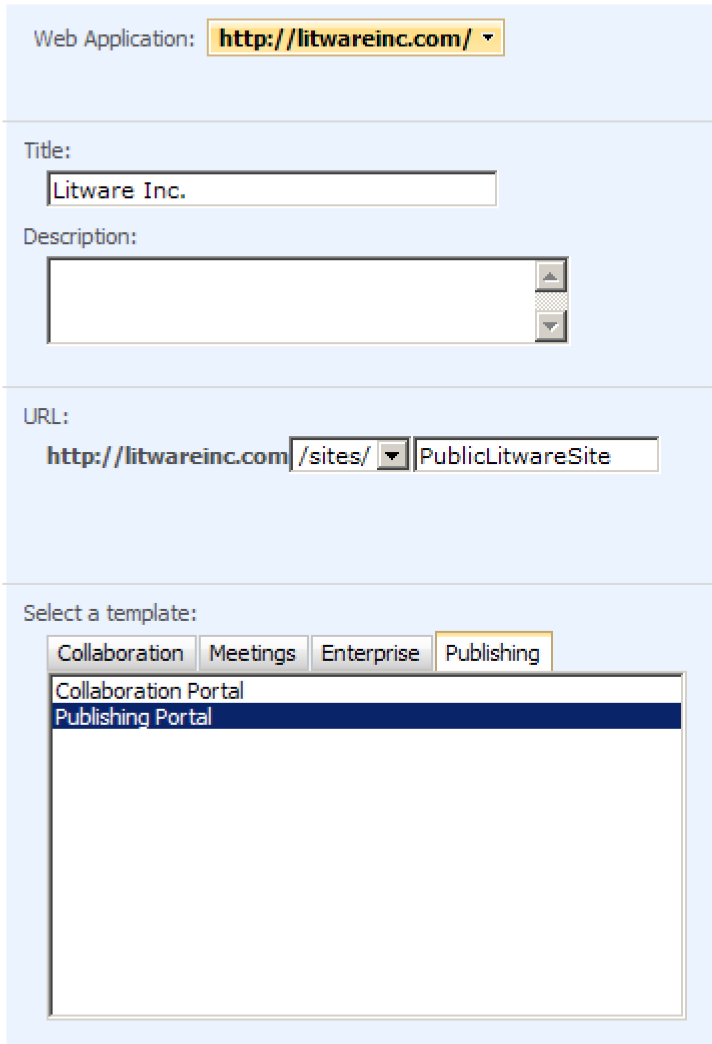
1) Open **SharePoint 3.0 Central Administration** and navigate to the **Application Management** page.
2) Click on the **Authentication Providers** link under **Application Security**. Once you are at the **Authentication Providers** page, click on the link to configure the **Default** zone for the Web Application at the URL of **http://litwareinc.com**. In the **Anonymous Access** section, **Enable Anonymous Access** for the Web Application at the URL http://litwareinc.com Click **Save**.



3) Navigate back to the **Application Management** page, and under the **SharePoint Site Management** section, click on **Create Site Collection**. Create a new site collection using the following values.

A) Title is **Litware Inc.**

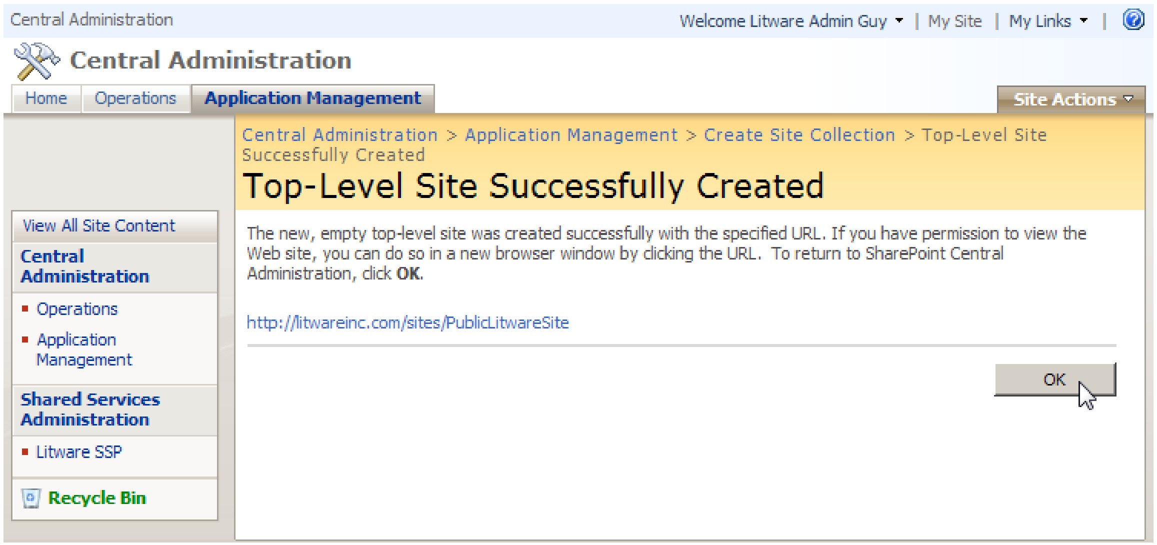
B) Create the site collection at http://litwareinc.com/sites/PublicLitwareSite Under the **Publishing** tab, select the **Publishing Portal** site template.



C) Add the **LITWAREINC\Administrator** as the Primary Site Collection Administrator.

D) Add the **LITWAREINC\AngelaB** as the Secondary Site Collection Administrator

Press **OK** to start the process of creating the new site collection. When this process has completed successfully, you will see this administration page that links to the new site.



4) Click on the link http://litwareinc.com/sites/PublicLitwareSite to open a new browser session with the newly created WCM Publishing site.

Exercise 2 - Configuring the site for anonymous access

1) Since this will be an Internet-facing web site, you should enable anonymous access for this site. You have already done it at the level of IIS but now you need to also enable it for the site collection itself.

A) On the home page of the new site, click on **Enable anonymous access**.

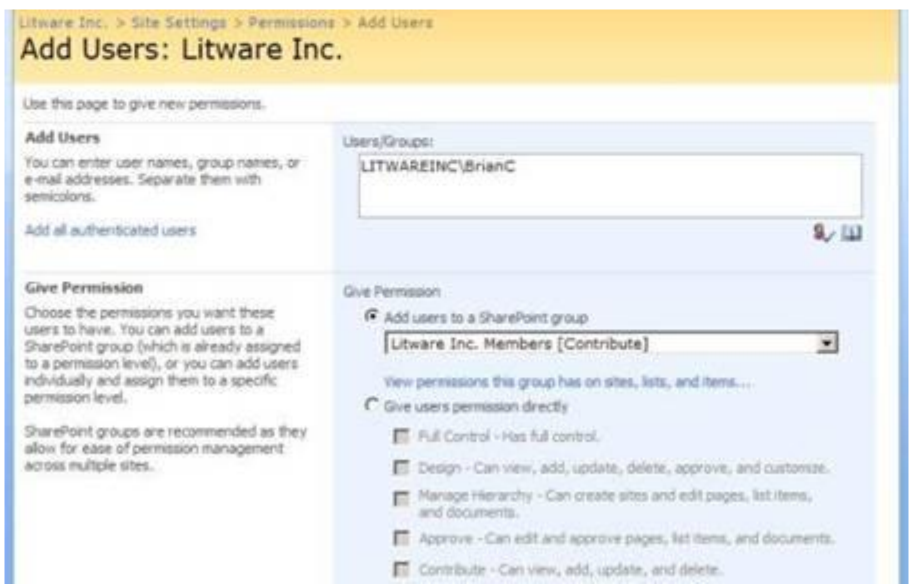
B) Select **Entire Web Site** as the part accessible by anonymous users.

C) Click **OK** to navigate to the **Permissions** page. Here you have to add the anonymous user to the list.

D) Click **New** and then **Add Users**

E) Add **LITWAREINC\BrianC** in the users box and verify the account.

F) Set the group to **Litware Inc. Members [Contribute]**



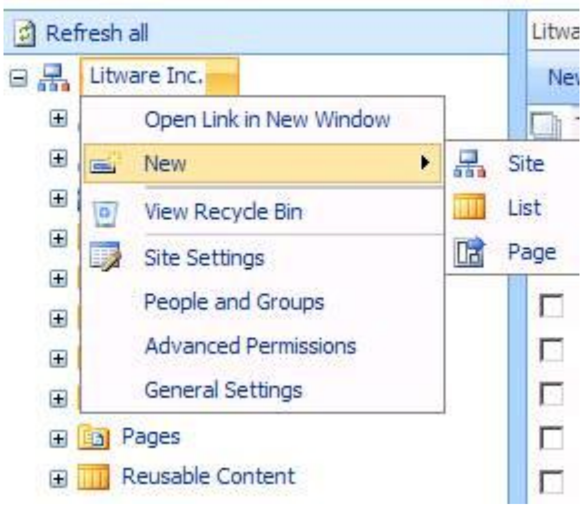
G) Press **OK**

2) To test out your work, in the right hand corner click on **Welcome Litware Admin Guy**, and select **sign out**. At the pop up, select **No** and click the link to **Go back to site**. You will see that you are not signed in, but you still have access.

Exercise 3 - Creating Sub Sites

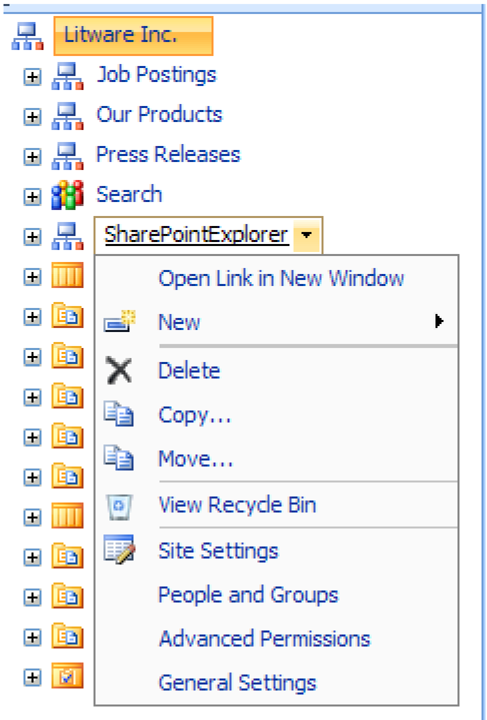
At this moment, you have one top-level site and one subsite called **Press Releases**. In this exercise, you will create a couple more subsites.

1) Sign back in, by clicking **Sign In** in the right hand corner.
2) Use the **Site Actions** to click on **Create Site**.
   A) Title of the site is **Job Postings**
   B) Last part of the URL is **JobPostings**
   C) Click **Create**
3) Navigate again to the home page of the top-level site. We are going to create two more sub-sites, but we are going to use a different procedure to show you how SharePoint provides several ways to accomplishing the same tasks.
4) Now use **Site Actions** to click on **Manage Content and Structure**
   A) Use the drop-down menu on the root node and select **New | Site**

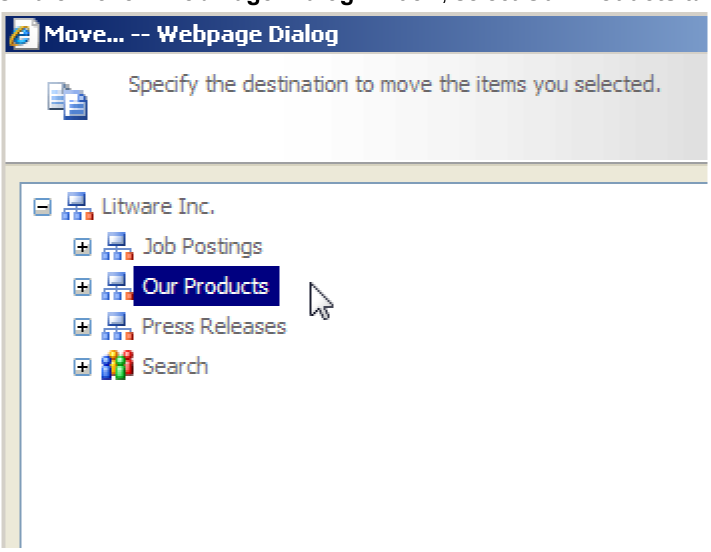


   B) Title of the site is **Our Products**
   C) Last part of the URL is **Products**
   D) Click **Create** to start the process
5) Create one more sub site under the top-level site with the title **SharePoint Explorer** and a URL **SharePointExplorer**.

6) The **SharePoint Explorer** sub site actually should have created under the **Products** site. Use the **ECB** drop-down menu for the **SharePoint Explorer** site and select **Move**.



On the **Move…Web Page Dialog** window, select **Our Products** and Click **OK.**



7) Navigate back to http://litwareinc.com/sites/publiclitwaresite

Exercise 4 - Creating a Page Layout

In this exercise, you are asked to create templates or page layouts for a job posting and for a product description page.

1) Navigate to the home page of the top-level site.

2) Click on **Site Actions>Site Settings> Modify All Site Settings**

2) Under **Galleries**, click on **Site columns**

4) Click **Create**.

   A) Name of the column **Job Description**

   B) For **Type**, select **Full HTML content with formatting and constraints for publishing**

   C) For Group, create a new group called **Litware Columns**

   D) Enter a small description like '**Type here the description of the job we are looking for**'

   E) Press **OK**

5) Create a second **Site Column** with the following values:

   A) For the name of the column enter **Required Skills**

   B) For **Type**, select **Choice (menu to choose from)**

   C) For the Group, use **Litware Columns**

   D) Enter a small description like '**Select one or more skills that are required for the job.**'

   E) Enter a couple of choices, like '**SharePoint Administration**', '**.NET Development**', ...

   F) Display choices using: Checkboxes

   G) Set the **Allow Fill-In Choices** to **Yes**

   H) Press **OK**

6) Use the breadcrumb to navigate back to the **Site Settings page.** Under the **Galleries** section, click on **Site Content Types** to open the **Content Types Gallery** of the site collection.

   A) Click **Create**

   B) Name of the content type is **Job Posting**

   C) Enter a small description like '**Use this page layout when you want to create a page for a job posting at our company.**'

   D) Select **Publishing Content Types** under **Parent Content Type From**

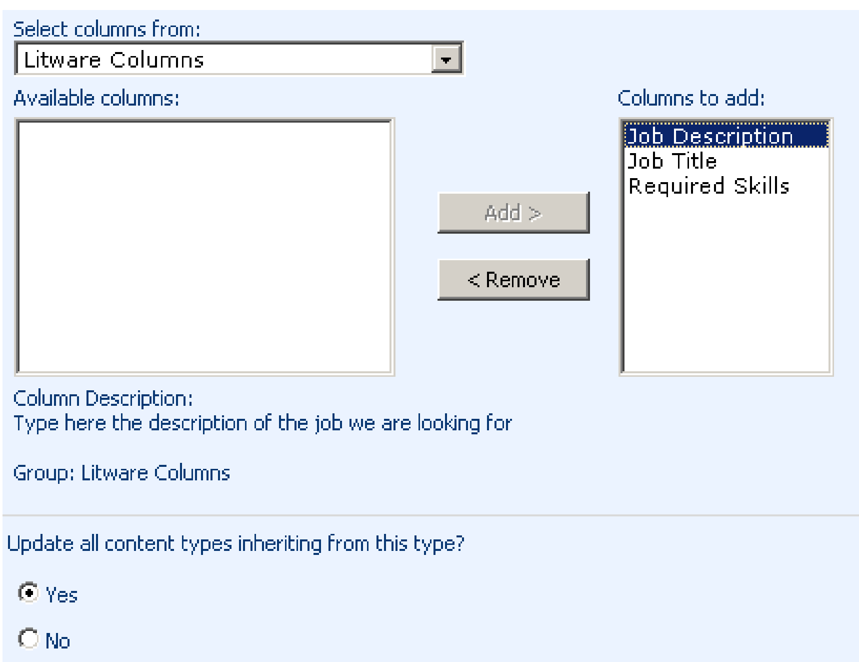
   E) Select **Page** under **Parent Content Type**

F) Create a new group called **Litware Content Types**

G) Press **OK**

7) Now add three columns to the **Job Posting** content type. Click **Add from Existing Columns**:

A) Add **Job Title (Core Contact and Calendar Columns)**, **Job Description** and **Required Skills (Both from Litware Columns)**



B) Press **OK**

8) Click on Site Settings in the Bread Crumb, under Galleries, select Master pages and page layouts

A) Click **New** and select **Page Layout**

9) In the **New Page Layout** page use the following values:

A) **Content Type Group** is the **Litware Content Types**

B) **Content Type Name** is of course **Job Posting**

C) Type in **JobPosting** as the **URL name** and **Title** and **'Job Posting Template'** as the description.

D) Click **OK** to create the page layout

10) Your next task is to use the SharePoint Designer and populate the page layout file with the field controls. Open the **SharePoint Designer** and open the **http://litwareinc.com/sites/PublicLitwareSite/** site.

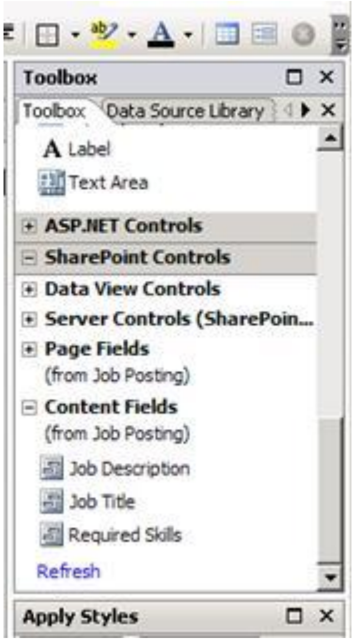
A) Expand **_catalogs**. Expand **masterpage. Under the Preview Images file, find the JobPosting.aspx file.**

B) Double-click the **JobPosting.aspx** item

C) Position yourself in the **PlaceHolderMain** and insert a table of 6 rows and one column. Click on **Table** tab at the top of the page. Click on **Insert Table…** Enter the values for rows and columns and click **OK**.

D) In the first row add **Are you looking for the following job?**. Apply the **.HeaderTitle_Large** as style.

E) Drag and drop **Job Title** from the toolbox into the second row.



F) Set the **Css Class** property to **.HeaderTitle_Large** also

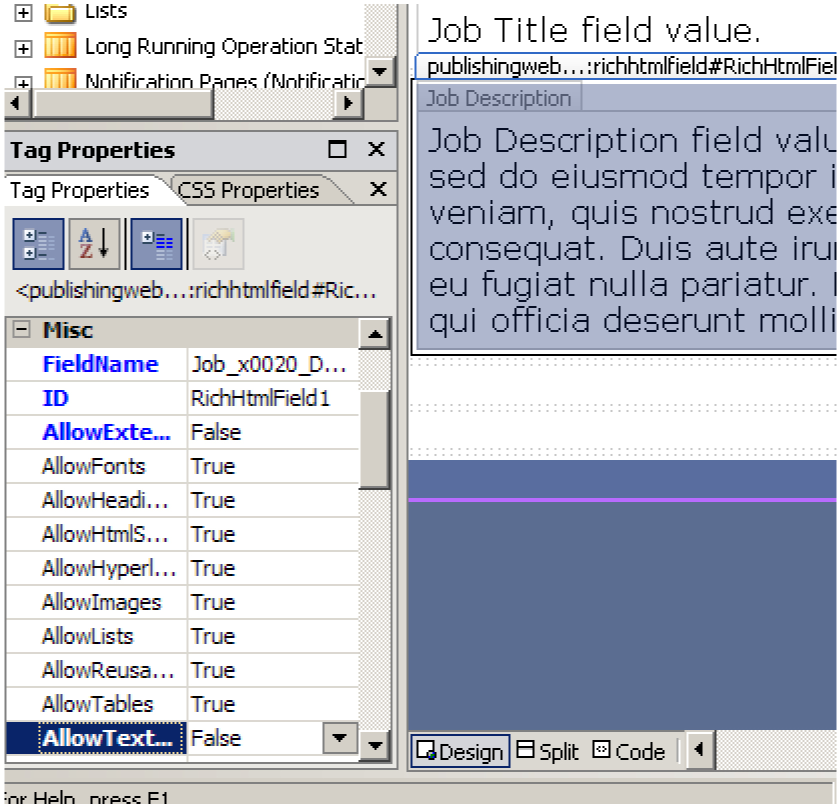
G) Type "**Job Description:**" in the third row and apply the **.HeaderTitle_Large**

H) Drag and drop **Job Description** into the fourth row

I) In the properties pane apply the following values:

J) **AllowExternalUrls** is **false**

K) **AllowTextMarkup** is **false**



L) Type **'You must have the following skills:'** in the fifth row and apply the **.HeaderTitle_Large** as style.

M) Drag and drop **Required Skills** in the sixth row.

N) Save the page now.

11) Go back to the **Master Page and Layout Gallery**.

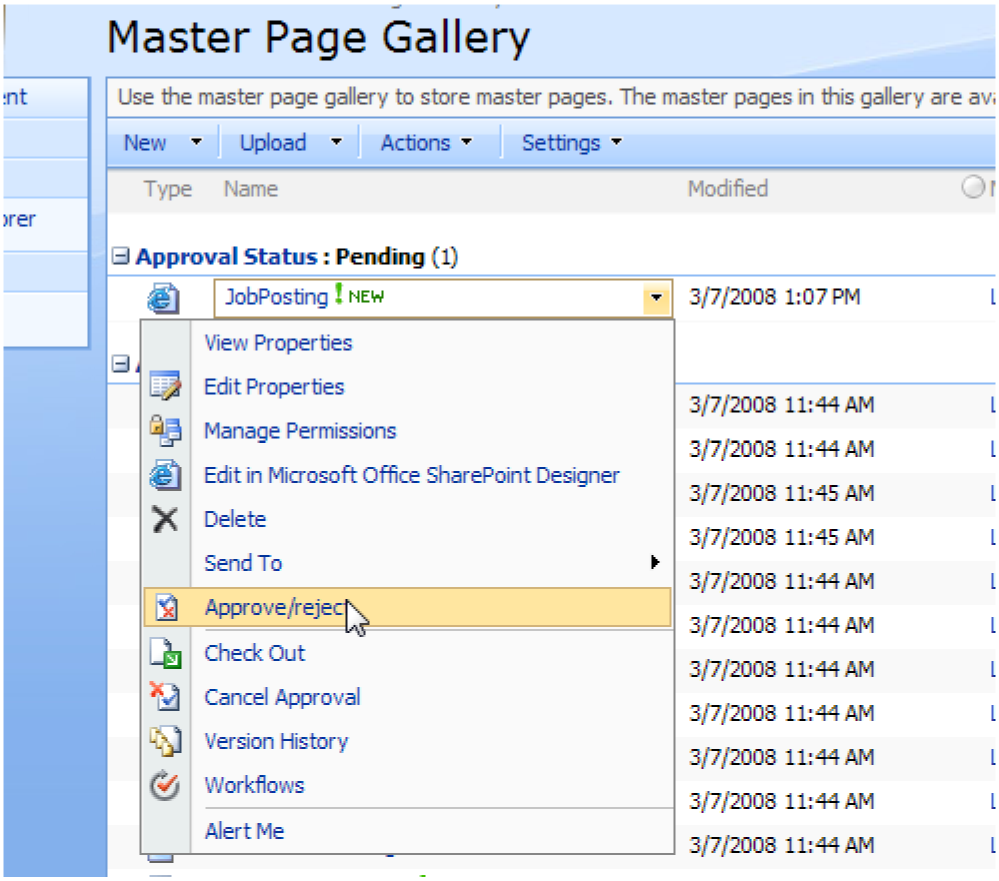
12) As you notice in the Master Page Gallery in your browser, the **JobPosting.aspx** is in draft mode. Check in the page as a major version and next approve the page.

A) The **Check In** option is in the **Edit** menu

B) Check in the template as a **Major** version.

C) Click **OK.** You will be prompted to approve/reject the request. Click **OK**.

D) Move your cursor over the **Job Posting** file, use the drop down and click **Approve/Reject**.



E) Select **Approved** and click **OK**.

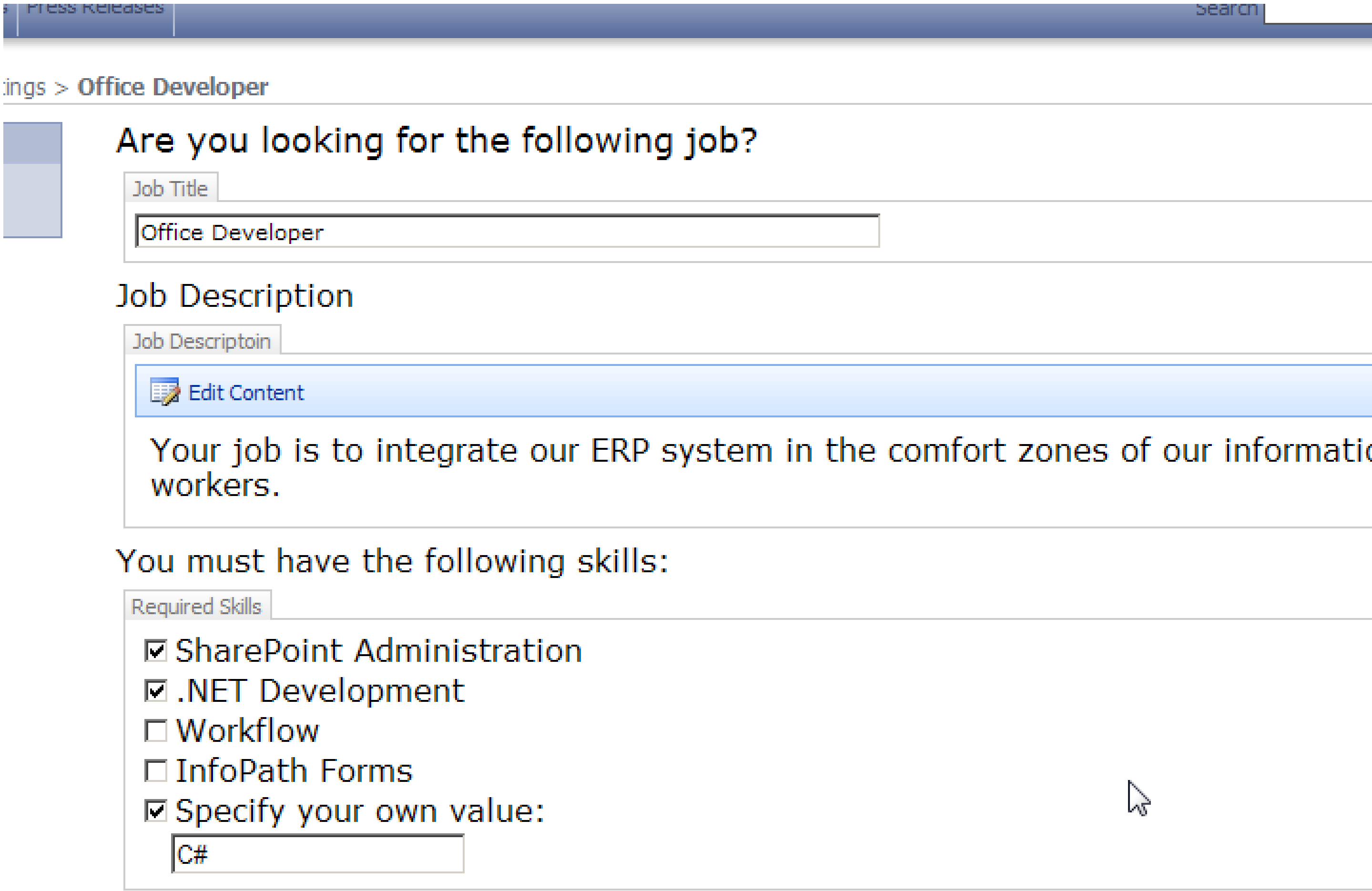
Exercise 5 - The Publishing Cycle

Now change your role and play the content author who is going to use the newly created job posting layout page.

1) Go to the **Job Postings** site and use the **Site Actions** to **Create a Page**.

2) Enter **Office Developer** as the name of the page, enter **OfficeDeveloper** in the URL, and select the new **Job Postings** layout page. Press the **Create** button.

3) Type in some data in the field controls.



4) When finished, save your page in the database. Click the **Check in to Share Draft** button in the **Page Editing** toolbar.

5) Now hit the **Submit for Approval** button.

6) Start the approval workflow.

7) Navigate to the **Pages** library of the **Job Postings** site. Go to the **Job Postings** site. Click on **Site Actions>View All Site Content.** You should see the page in pending mode.

8) Use the **ECB** to approve the page. A window will pop-up, click **OK**.

9) When approved, check out the page by going to the **Job Postings** site again.

10) This finishes this exercise.

Exercise 6: Utilizing and Customizing the Content Query Web Part

1) The first step in this exercise is to create the content type to roll up. The goal of this lab is to create a company news content type. This content type will be added to the announcements list in the different departments and then displayed for the public to see on the homepage. Out of the box, the content query web part only displays the title of the item; we will be customizing it to show both the title and the body using SharePoint Designer.

   A) Navigate back to the top level site: http://litwareinc.com/sites/PublicLitwareSite

   B) On the Site Actions menu, select **Site Settings > Modify all site settings**

   C) Under the **Galleries** section, click **Site content types**

   D) Click **Create** and fill in the New Site **Content Type** page as seen below:

   E) Click on **Litware Inc.** in the bready crumb to return to the top level site.

2) In this step we will add a custom list to the Job Postings site and configure to use both the item and company news content types. This allows members of this site to go to one spot to create both news for just this division and news for the entire company.

   A) Navigate to the **Job Postings** site

   B) On the **Site Actions** menu, select **View all Site Content**.

C) Click **Create > Custom List**

*i) Name: **Announcements***

*ii) Click **Create***

D) On the **Announcements** page, click **Settings > List Settings**

E) On the **Customize Announcements** page, click **Advanced settings**

*i) The first option is **Content Types**, select **Yes > OK***

F) Now you need to add the **Company News** content type, in the **Content Types** section, click **Add from existing site content types**

G) Select **Company News**, and click **Add,** then **OK**

H) Navigate back to the **Announcements** list and add one **Company News** list item and one **Announcement** list item.

*i) Hint: If you select the drop down arrow next to **New**, you will see both **Company News** and **Announcement**, select **Announcement** the first time to create an item and **company news** the second time.*

3) On the Litware, Inc Portal home page, you will be adding the content query web part and then customizing it to show the Company News Content Type

A) Make sure you are the Litware Portal home page, http://litwareinc.com/sites/publiclitwaresite

B) On the **Site Actions** menu, select **Edit Page**

C) Delete the Content out of the **Summary Links** control on the Left, by clicking the  icon to the left of each link, and selecting **Delete.** Delete the **Press Releases** web part in the top zone, by clicking **Edit** and **Delete.** At the warning, select **Ok.**

D) Click **Add a Web Part** in the **Top Zone**.

E) Select **Content Query Web Part** and click **Add**

F) On the content query web part you have just added to the page, click **edit→modify shared web part**.

G) In the task pane on the right hand side, expand **query**

H) Under List Type, select **Custom List**

I) Under Content type select the following:

*i) Show items of this content type group: **Litware Inc***

*ii) Show items of this content type: **Company News***

J) Expand Appearance and rename the web part, "**Important News**"

K) Click Ok

4) The content query web part should now be displaying on your home page only the announcement you created using the Company News Content Type. Currently it only shows the title, it would be helpful if it gave a bit more information for your users.

A) On the content query web part select **Export□Edit**

B) Select **Save□Save**. This should save the file to your Desktop folder.

C) Browse to the□ Open□Open the file with SharePoint Designer, File Select□Desktop **Important_News.webpart**Open□

D) Locate the following line of code approximately line 68:

<property name=”CommonViewFields” type=”String”/>

E) Change this line of code to: (Note: you are adding the field using the internal name of field and the type of field, separated by a comma. The internal name of the field can be found by locating the column, right clicking and selecting properties.

<property name=”CommonViewFields” type=”String”>Body, Rich HTML</property>

F) **Save** the file

G) Navigate back to the Litware Portal home page

H) **Site Actions>Edit Page**

I) Select **Add a Web Part** in the Top Zone, in the bottom right corner select **Advanced Web Part Gallery and options**, this will allow us to import our newly configured web part.

J) On the Browse bar in the right hand corner, click the **drop down arrow**, select **import**

K) Click **Browse**, and navigate to the **Important_News.webpart** file you just edited (it should be saved on the desktop). Click **Upload > Import**

L) Navigate back to SharePoint Designer and open the site: http://litwareinc.com/sites/publiclitwaresite/

M) In the Folder list on the left side, expand **Style Library** and then **XSL Style Sheets**

N) Double click on **ItemStyle.xsl** to open it.

O) Replace the following line of code, approximately line 40:

```
<div class="description">
  <xsl:value-of select="@Description" />
</div>
```

With:

```
<xsl:variable name="body">
  <xsl:call-template name="removeMarkup">
    <xsl:with-param name="string" select="@Body"/>
  </xsl:call-template>
</xsl:variable>

<div class="description">
  <xsl:value-of select="$body"/>
</div>
```

(You can cut and paste this code from a document in your lab documents. Look in the folder: **Desktop/Labs/Lab 8/Lab 8 code**

P) Place your cursor at the beginning of the last line of code:

```
</xsl:stylesheet>
```

And hit return.

Q) Place your cursor in the line you just added and add the following piece of code:

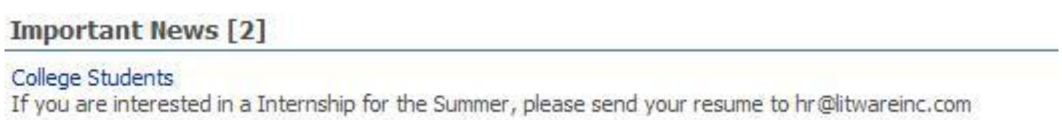
```
<xsl:template name="removeMarkup">
  <xsl:param name="string" />
  <xsl:choose>
    <xsl:when test="contains($string, '&lt;')">
      <xsl:variable name="nextString">
        <xsl:call-template name="removeMarkup">
          <xsl:with-param name="string" select="substring-after($string, '&gt;')" />
        </xsl:call-template>
      </xsl:variable>
      <xsl:value-of select="concat(substring-before($string, '&lt;'), $nextString)" />
    </xsl:when>
    <xsl:otherwise>
      <xsl:value-of select="$string" />
    </xsl:otherwise>
  </xsl:choose>
</xsl:template>
```

R) **Save** the file.

S) Right Click the file and select **Check in**. On the **Check in** menu, select **Publish a Major Version**.

T) Go back to the homepage, select **Submit for Approval > Start.**

U) On the page editing toolbar, select **Approve**. On the **Workflow Tasks** page, select **Approve>Approve.**



V) If you would like, delete the first content query web part you added to the page. Remember that since we exported the web part and customized it, they are not the same.

Lab 09: Business Data Catalog

Lab Overview: The Business Data Catalog, or BDC in short, is a new feature introduced with Microsoft Office SharePoint Server 2007 which allows an easy integration between SharePoint and business data present in back-end systems such as SAP, Siebel and Microsoft SQL Server. The BDC is activated as a service within the Shared Services model of SharePoint 2007. The shared service can be utilized from various places inside a site such as Web Parts, lists, the search environment and from user profiles.

One of the major design goals of the BDC is to enable minimal-code data retrieval from a disparate set of back-end systems. To achieve this goal the BDC provides a metadata model that provides a consistent environment for creating BDC enabled applications. In this lab exercise you will work with a predefined BDC application and find out where this application definition can be used to provide a value-add solution on top of the out of the box functionality provided by SharePoint 2007. You will begin with importing the BDC application into SharePoint. Next you will use various BDC enabled technologies such as the Web Part framework and SharePoint lists. You will finish the lab exercise by creating a custom Web Part that accesses the BDC through the BDC object model.

This lab will take approximately 60 minutes to complete.

Exercise 1: Import an existing BDC application definition

In this exercise you will examine a pre-built BDC metadata definition which retrieves data from the AdventureWorks data-warehouse. Next you will import this application definition into SharePoint and examine the elements it contains using the browser. You will also modify the BDC security settings to allow non-administrative level users to view the data contained in the BDC application. The exercise will finish with the creation of a simple site and Web Part page to allow the BDC data to be displayed.

In this exercise you will examine a BDC application definition. The BDC application file is an elaborate XML with metadata containing the data types and operations available on the external data source. In this step you will examine a metadata file which contains information about products, product categories and product resellers from the AdventureWorks sample database.

1) Open **Windows Explorer** and navigate to the following location: **Desktop/Labs/Lab 9**
2) Open the **AdventureWorksDWH.xml** BDC metadata definition in **Internet Explorer**. The metadata definition contains information about four entities, their relationships and their corresponding operations.
3) Begin by examining the root element called **LobSystem**. It contains three important fields: The **name** for the BDC application, **versioning information,** and the **type** of application (database or web service).
4) Next examine the child elements of **LobSystem**.
    A) Look at the **Properties** node. It defines properties specific for this BDC application and can be thought of as an extra set of properties for the **LobSystem** element.
    B) Examine the **LobSystemInstances** node. This element defines the **connection** to the Adventure Works data-warehouse database.
    C) Take a look at the **Entities** element. An entity can be thought of as the **definition of a record** in the database (a table definition).
    D) Finish with the **Associations** element. This part of the definition is used to define the **relationships** between entities. This allows you to perform drill-down operations on business data.
5) Expand the **Entities** node and next expand the **Entity** node for the **Product** entity. Examine the child elements.
    A) Look at the **Properties** element, now used within an **Entity** element. It defines properties specific for the **Product** entity.
    B) The **Identifier** element is used to define the name of an identifying property. This name will later be attached to the fields of the entity to identify those fields as being part of the primary key for the entity.

C) The **Methods** element is used to define the available operations on this entity and the data that the operation returns.

6) Expand the **Methods** element for the **Product** entity. Examine the structure that makes up an operation.

A) The **Properties** element is again used as a container element for its parent, which in this case is the **Product** entity.

B) The **FilterDescriptors** element defines the values to be used for filtering the retrieved items with the operation.

C) The **Parameters** element defines the input and output parameters for the operation.

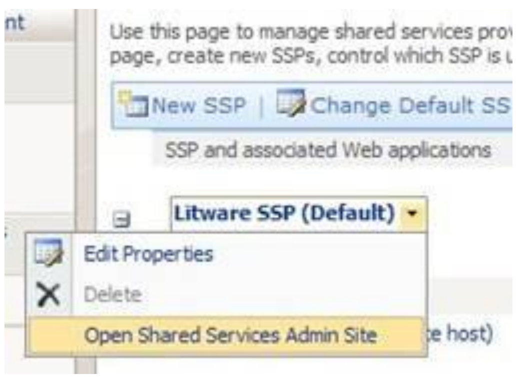
D) The **MethodInstances** define the actual callable operations. The same **Method** definition can define multiple method instances. The **GetProducts** method can for instance return a single product or a set of products.

7) In this step you will import the BDC application definition. Now that you have reached a basic understanding of the contents of the BDC application file definition, this XML file can be loaded into the BDC environment. The shared service provider has a configuration page where you can administer the BDC.

A) Open **SharePoint 3.0 Central Administration** and navigate to the **Application Management** page.

B) On the **Application Management page**, in the **Office SharePoint Server Shared Services** section, click **Create or configure this farm's shared services** in order to navigate to the **Manage this Farm's Shared Services** page.

C) On the **Manage this Farm's Shared Services** page, open the menu for **Litware SSP** and click **Open Shared Services Admin Site** in order to navigate to the **Shared Services Administration** page.



8) On the **Shared Services Administration** page, click **Import application definition** in order to import a new BDC application definition into the BDC environment. All the BDC related options are combined within the **Business Data Catalog** group.

9) Import the BDC application using the following settings

A) **Application definition file** is **Desktop/Labs/Lab 9/AdventureWorksDWH.xml**

B) **File type** is **Model**

10) Click **Import** to begin the process of importing a BDC application. You should view a page that says **Application definition was successfully imported**. Click **OK**.

11) After the process is finished you are redirected to the **View Application: AdventureWorksDW** page. Review the information on this screen and leave it open for the next task.

12) In this step you will configure BDC security setting to allow user access to the BDC application. The imported BDC application is initially only available for administrative users. The BDC specific application management page allows the modification of these permissions to allow fine-grained control over who can access the BDC data and in what manner. First you will provide user access to the BDC application imported in the previous step. Next you will provide user access to the BDC subsystem as a whole.

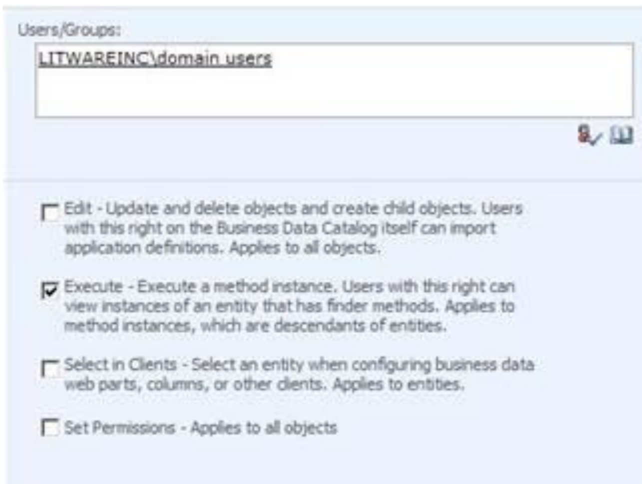
    A) On the **View Application: AdventureWorksDW** page, click **Manage permissions** in order to change the default permissions of the BDC application.

    B) On the **Manage Permissions: AdventureWorksDW** page, click the **Add Users / Groups** button in order to add permissions.

    C) Add the following permissions:

    D) Users / Groups is **LitwareInc\Domain Users**

    E) Choose permissions is **Execute**



13) Click **Save** in order to attach the new permissions to the BDC application.

14) Go back to the **Shared Service Administration: Litware SSP** page. If your browser window is closed, you can take the following steps to go back to this page, or use the breadcrumb control available on most SharePoint pages.

    A) Open **SharePoint 3.0 Central Administration** and navigate to the **Application Management** page.

    B) On the **Application Management** page, click **Create or configure this farm's shared services** in order to navigate to the **Manage this Farm's Shared Services** page.

    C) On the **Manage this Farm's Shared Services** page, open the menu for **Litware SSP** and click **Open Shared Services Admin Site** in order to navigate to the Shared **Services Administration** page.

15) On the **Shared Services Administration: Litware SSP** page, click **Business Data Catalog Permissions** in order to control the user access permission to the BDC subsystem.

16) On the **Manage Permissions: Business Data Catalog** page, click the **Add Users / Groups** button in order to add permissions.

17) Add the following permissions:

    A) Users / Groups is **LitwareInc\Domain Users**

    B) Choose permissions is **Execute**

18) Click **Save** in order to attach the new permissions to the BDC subsystem.

19) In the current navigation, click on **Back to Central Administration**.

Exercise 2: Using BDC Web Parts

Now that the BDC application has been defined and security has been set, it is time to start making use of the built-in Web Parts for accessing BDC data. In this exercise you will use various Web Parts deployed with SharePoint 2007 to access and display hierarchical data. Before working with the Web Parts first a separate top-level site will be created for this exercise.

In this first part of this exercise you will create the BDC Web Part top-level site. While BDC Web Parts can be used on all sites that have the correct features activated, in this exercise you will create a separate top-level site to work with. This allows you to focus on the Web Parts and not worry about other details.

1) Open **SharePoint 3.0 Central Administration** if your browser is closed, and navigate to the **Application Management** page.

2) On the **Application Management** page, in the **SharePoint Site Management** section, click the **Create Site Collection** link in order to navigate to the **Create Site Collection** page.

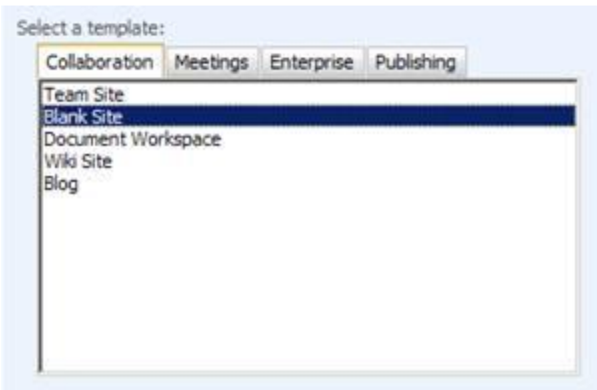
3) Create a new site collection using the following values:

   A) Web application is **http://litwareinc.com/**

   B) Title is **BDC Lab**

   C) Web Site Address is **http://litwareinc.com/sites/BDCLab**

   D) Template selection is **Blank Site**, which you find under the **Collaboration** group.



   E) Primary Site Collection Administrator is **LitwareInc\Administrator**.

4) Press **OK** to start the process of creating the new site collection. When this process has completed successfully you will be presented with an administration page that links to the new top-level site. Click on the link to navigate to the top-level site. A new window should pop-up showing the home page of your new top-level site. Go back to the browser that is running Central Administration. Click **OK**. Close Central Administration.

5) In this step you will create the main site layout. The new top-level site will contain a list of product categories and product subcategories. The final layout will allow a user to select a category and be presented with the list of subcategories for the selected category. The next task will expand on this model by altering the profile page for a subcategory to also display all the products within that subcategory. Before using the BDC features on the BDC Lab site, first the BDC needs to be activated through a feature.

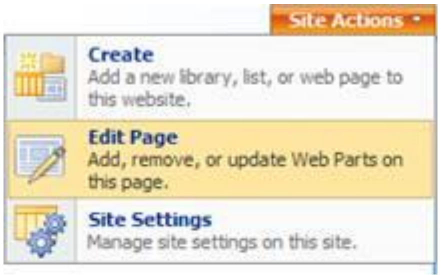
   A) On the main page of the **BDC Lab** site, click the **Site Actions** button and choose **Site Settings** from the menu that appears.

   B) On the **Site Settings** page, choose **Site collection features** which is available in the **Site Collection Administration** group.

   C) On the **Site Collection Features** page, click **Activate** next to the feature named **Office SharePoint Server Enterprise Site Collection features** in order to provision the BDC Web Parts to the site.

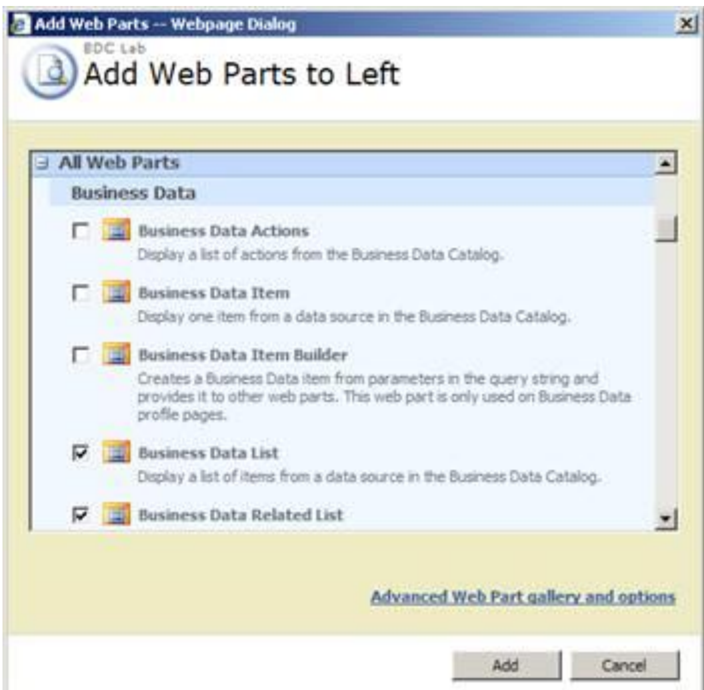
   D) Use the breadcrumb or URL to navigate back to the main site. The URL to navigate to is http://litwareinc.com/sites/BDCLab

E) On the main page of the **BDC Lab** site, click the **Site Actions** button and choose **Edit Page** from the menu that appears. This will allow you to edit the Web Parts on the main page.

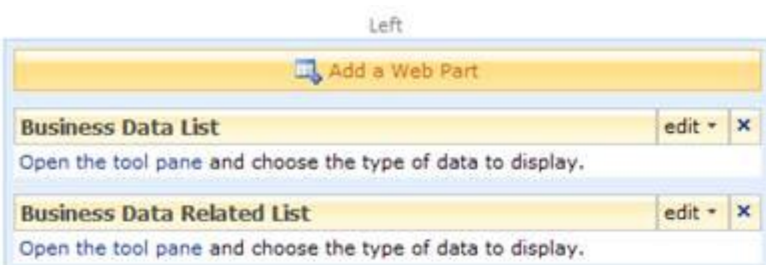


6) Click the **Add a Web Part** button available inside the **Left** Web Part Zone in order to add new Web Parts to the page.

7) In the **Add Web Parts to Left** dialog, choose the **Business Data List** and **Business Data Related List** web parts from the **All Web Parts** group. Press **Add** to close the dialog and add the web parts to the main page.



8) The **Left Web Part Zone** should resemble the following image. In the next task you will configure each of the two Web Parts.



9) In this next step you will configure the **Business Data List Web Part**. The first web part that will be using the BDC is the **Business Data List Web Part**. This web part can be used to display a list of records (BDC entities).

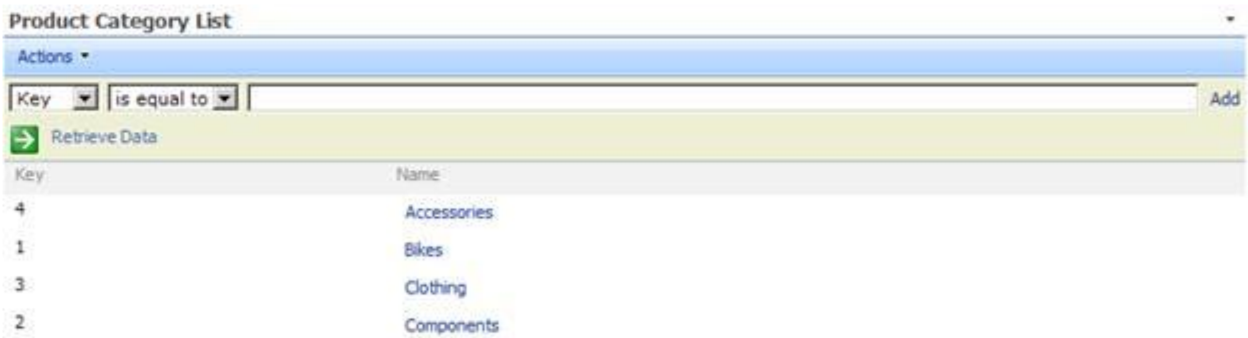
A) In the **Business Data List Web Part**, click **Open the tool pane** to configure the web part.

B) In the **Business Data List** tool pane, configure the web part with the following settings.

C) Type is **Product Category**. You can find the **Type** property in the **Business Data List** group. Press the **Check Types** button directly besides the **Type** field to verify whether you have entered the **Product Subcategory** correctly.

D) Click **OK** at the bottom of the tool pane in order to show the list of **Product Category** entities in the **Business Data List Web Part**.

10) In the **Business Data List** Web Part, click **Retrieve Data** to verify that the web part successfully retrieves data from the LOB system through the BDC. Note that the title of the web part has changed to reflect the type of data it is retrieving.

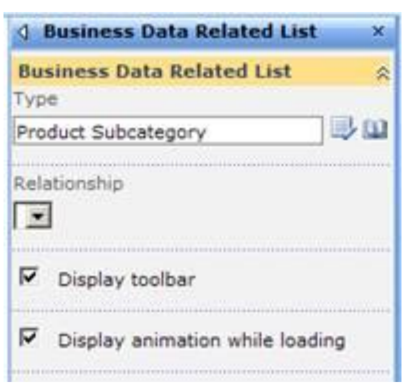


11) In this step you will configure the **Business Data Related List Web Part**. The second web part on the page is a **Business Data Related List Web Part**. This web part will display related records based on the selection of the **Business Data List Web Part**, forming a master-detail hierarchy. In this sample the **Business Data Related List Web Part** will display a list of **Product Subcategory** entities based on the selected **Product Category.**

A) In the **Business Data Related List Web Part**, click **Open the tool pane** to configure the web part.

B) In the **Business Data Related List** tool pane, configure the web part with the following settings.

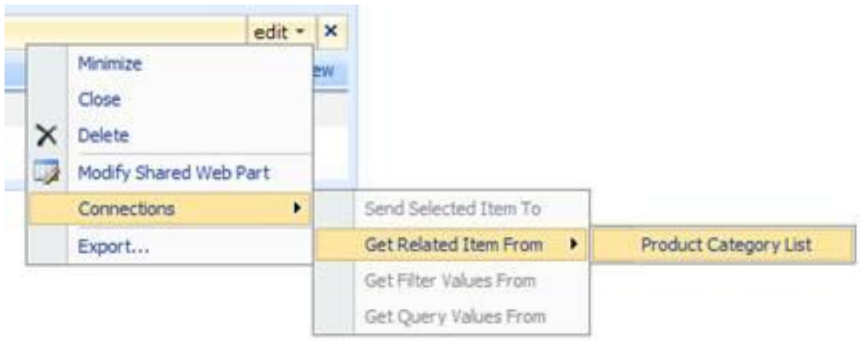
C) Type is **Product Subcategory**. You can find the **Type** property in the **Business Data Related List** group.



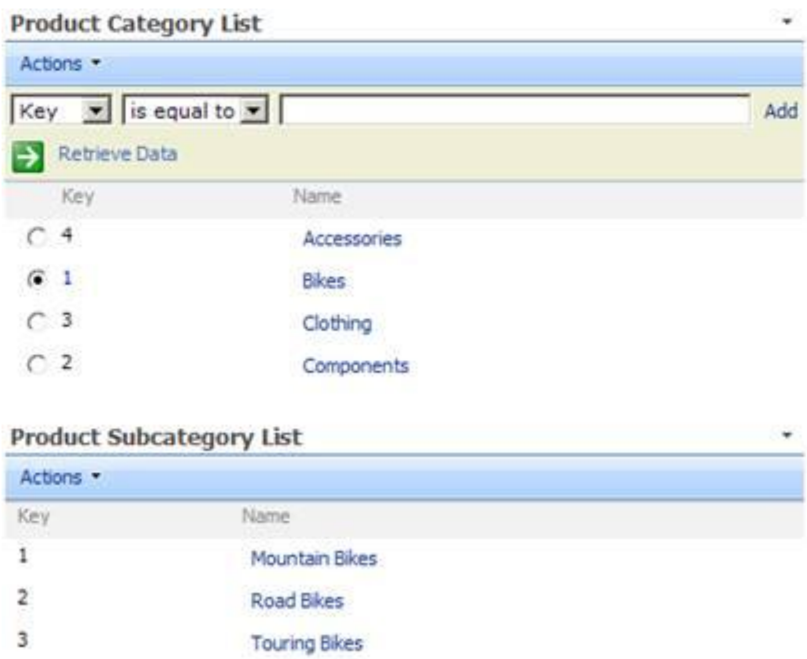
12) Press the **Check Types**  button directly besides the **Type** field to verify whether you have entered the **Product Subcategory** correctly. This will also select the relationship to the **Product Category**.

   A) Click **OK** at the bottom of the tool pane in order to show the list of **Product Subcategory** entities in the **Business Data Related List Web Part**. Note that the title of the web part has changed to **Product Subcategory List**.

13) On the **Edit** menu of the **Product Subcategory List Web Part**, choose **Connections**, next choose **Get Related Item From** and choose **Product Category List** in order to have the sub category list populated from the selected item in **the Product Category Web Part**. Note that this modifies the **Product Category List Web Part** which now shows selection buttons for each item displayed.

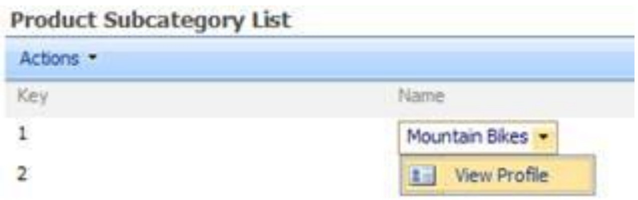


14) Verify that the final page looks like the following image. You can select an item in the **Product Category List Web Part** and display detail records in the web part listing sub-categories.

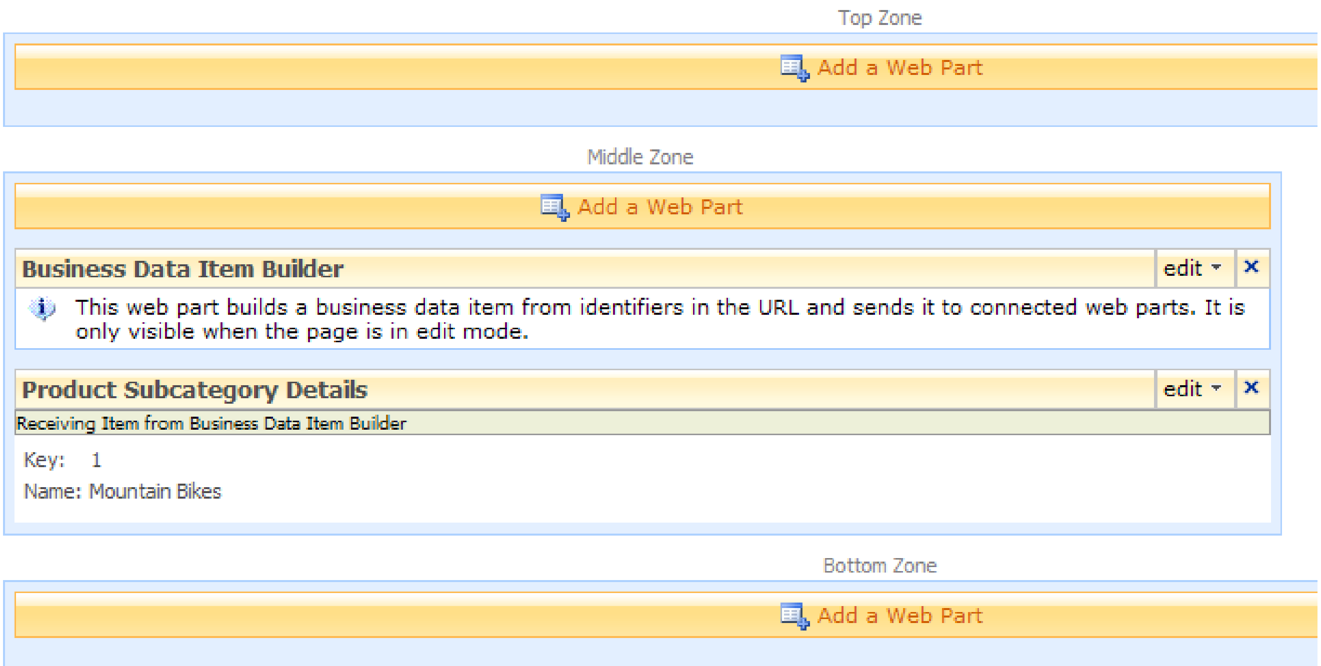


15) Now it's time to create a profile page. Each BDC entity has a special page where the details of the entity can be viewed. This page is called the profile page. You can modify the contents of these pages to display unique content along with the entity details. In this task you will modify the profile page for the **Product Subcategory** entity in order to display a list of products contained in the category, creating an extra level in the master-detail hierarchy.

A) On the item menu for an item displayed by the **Product Subcategory List Web Part**, choose **View Profile** in order to navigate to the profile page of the sub category. Note that this page is part of the shared service provider architecture. You can notice this from the URL you are being redirected to.



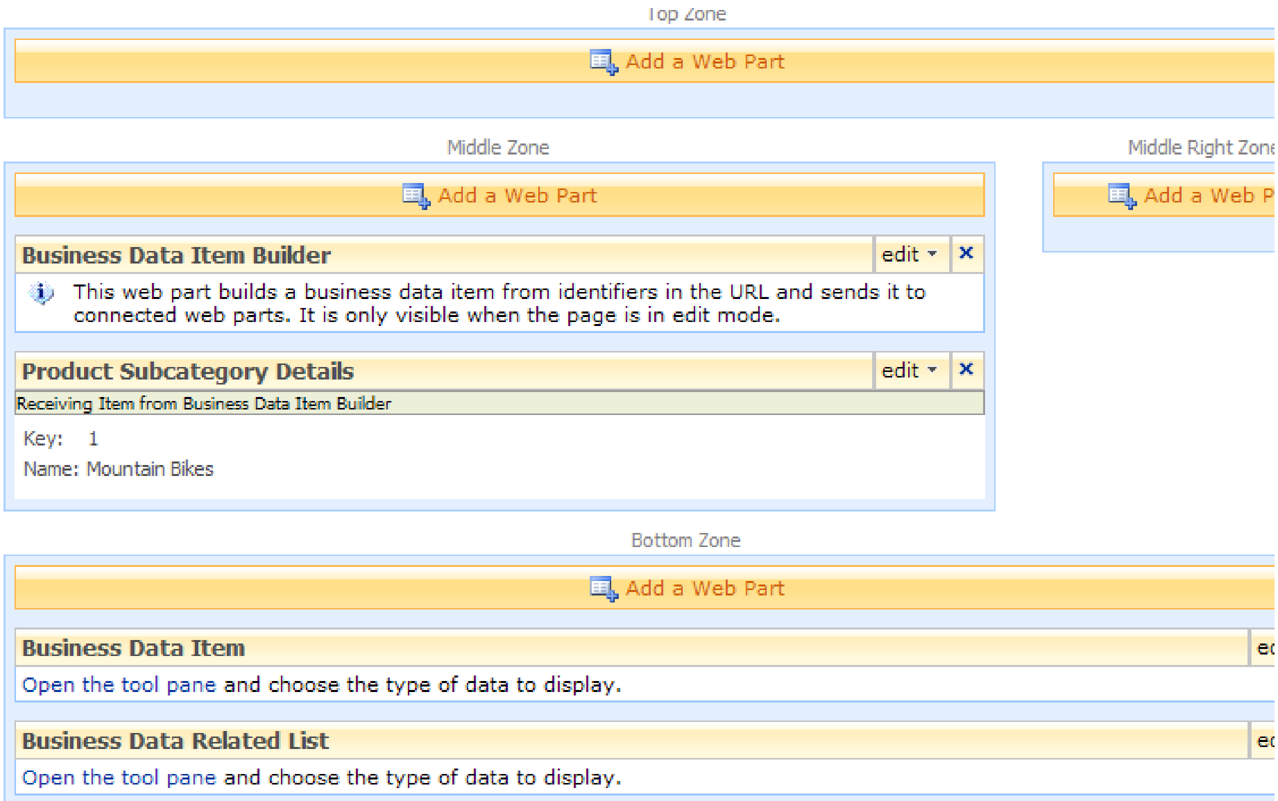
16) On the layout page of the **Product Subcategory**, click the **Site Actions** button and choose **Edit Page** from the menu that appears. This will allow you to edit the web parts on the profile page. When going to the edit mode, note the presence of the normally invisible **Business Data Item Builder Web Part** on the layout page. This web part takes the context on the query-string to retrieve the selected BDC entity.



17) Click the **Add a Web Part** button available from the **Bottom Zone** web part zone in order to add new web parts to the page.

18) In the **Add Web Parts to Bottom Zone** dialog, choose the **Business Data Item** and **Business Data Related List Web Parts** from the **All Web Parts** group. Press **Add** to close the dialog and add the web parts to the main page.

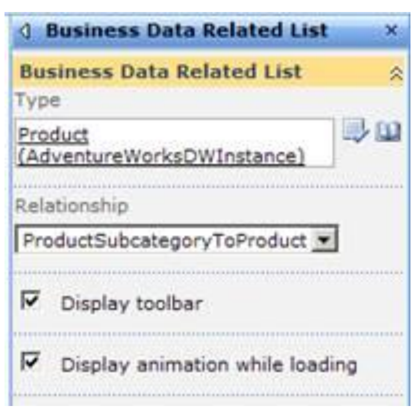
19) The profile page should resemble the following image. In the next task you will configure each of the two web parts added to the profile page. The first web part will display a list of products for the selected sub category. The second web part will display the product details for a selected product. You can also view these details on the product profile page.



20) In the **Business Data Related List Web Part**, click **Open the tool pane** to configure the web part.

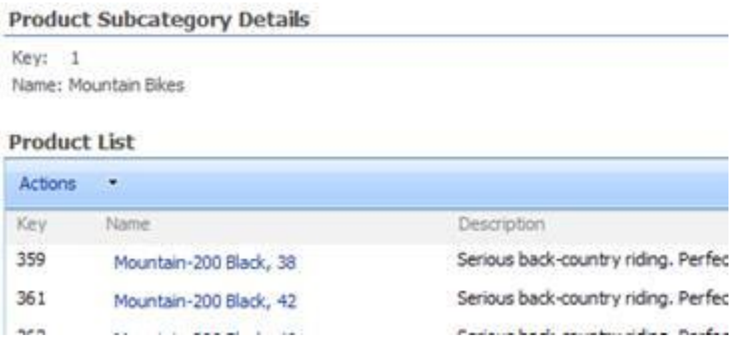
21) In the **Business Data Related List** tool pane, configure the Web Part with the following settings.

A) Type is **Product**. You can find the **Type** property in the **Business Data List** group. Use the Browse  button to choose the **Product** entity.



22) Click **OK** at the bottom of the tool pane in order to show the list of **Product** entities in the **Business Data Related List Web Part**. Note that the title of the web part has changed to **Product List.**

23) On the **Edit** menu of the **Product List Web Part**, choose **Connections**, next choose **Get Related Item From** and choose **Business Data Item Builder** in order to have the product list populated from sub category in context on the profile page. The web part should start retrieving data immediately.



24) Finish the profile page for the **Product Subcategory** entity by configuring the **Business Data Item Web Part** using the following details.

   A) Configured display entity is **Product**

   B) Add a connection to retrieve data from the **Product List**

25) Verify that you can now select a product in the **Product List Web Part** and see the details in the **Product Web Part**.

Exercise 3: BDC List Column

The Business Data Catalog is available from many places within the SharePoint environment. In this exercise you will create a custom list which contains a BDC lookup column. You can use this column type to look up records in the BDC application and display the record inline in the list definition.

The main purpose of this exercise is to work with the Business column type to integrate the BDC with a standard SharePoint list. The first step consists of creating a new custom list and then configuring the list columns to include a BDC Business column.

1) Open a browser window and navigate to the root site for this lab exercise located at http://litwareinc.com/sites/BDCLab

2) On the **Site Actions** menu, choose **Create** in order to go to the content creation page.

3) On the **Create** page, in the **Custom Lists** group, choose **Custom list** in order to add a new list to the site.

4) On the **New list** page, use the following information to create the new list.

   A) Name is **Product Ratings**

   B) Description is **Rates the AdventureWorks product line**.

5) Click **Create** in order to create the new list and open the default list view.

6) On the **Product Ratings** page, open the list settings by choosing **Settings** and next **List Settings**.

7) On the **Customize Product Ratings** page, choose **Create Column** in order to add a new BDC column to the list definition.

8) In the **Create Column: Product Ratings** page, use the following information for the column definition.

   A) Column name is **Product**

   B) Column type is **Business Data.** If you receive an error, you must first activate the **Office SharePoint Server Enterprise Site features**. Use the Breadcrumb and navigate back to the BDC Lab site. **Go to Site Actions**>**Site Settings**>**Site Features** and click **Activate** for that feature. Now to get back to where you were, use the breadcrumb to get back to the **BDC Lab** site and click on **View All Site Content**. Click on **Product Ratings**. Click on **Settings>List Settings>Create Column.**

   C) Require information is **Yes**

D) Type is **Product**

9) Click **OK** to close the column creation page and add the new column definition to the list.

10) Repeat steps 7 through 9 using the following column definition.

A) Column name is **Rating**

B) Column type is **Choice**

C) Require information is **Yes**

D) Add these choice values

i) *Very good*

ii) *Somewhat good*

iii) *Not so good*

E) Display choice is **Radio Buttons**

F) Click **OK**

11) Now it's time to view the BDC enabled list. Navigate to the list using the following location http://litwareinc.com/sites/BDCLab/Lists/Product%20Ratings

12) Add new items to the list and view the result. The following image displays how this can look on your SharePoint environment.

Lab 10: Excel Services

Lab Overview: One of the difficulties of working with spreadsheet data is that this information is often shared through email or other means, leading to multiple versions of the truth floating around. In this lab you will explore the new Excel Services capability of MOSS to interact with data stored in spreadsheets on the server. First you will examine a mortgage calculation spreadsheet which will be published to a SharePoint library and driven through Excel Services. Next you will examine how pivot tables and charts behave when deployed on the server. The third exercise involves the addition of custom code to drive the mortgage calculator. This will allow complex code to be executed in unison with the built-in formulas.

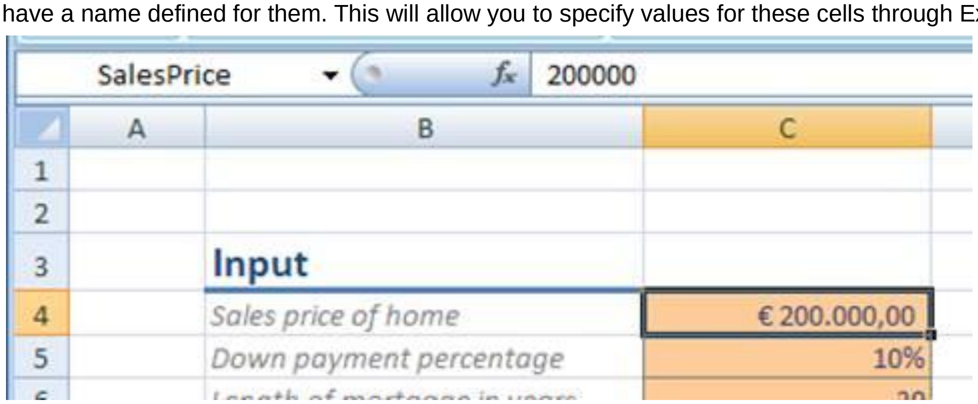
This lab should take approximately 45 minutes to complete.

Exercise 1: Publishing Excel Workbooks with Excel Services

In this exercise you will examine a prebuilt mortgage calculation spreadsheet inside Excel. Next you will deploy this spreadsheet to SharePoint and examine the behavior from inside a web-browser. Before deploying the spreadsheet, first the SharePoint environment needs to be setup. You will create a new site collection with a top-level site based on the **Report Center** site template. Next you will configure a **Report Library** as a **Trusted Location** to allow access to the spreadsheet reports through Excel Services.

You will start by examining the mortgage calculation spreadsheet in Excel. The mortgage calculation spreadsheet is a common spreadsheet using the calculation engine of Excel to provide insight in mortgage payments.

1) Open **Windows Explorer** and navigate to the directory at **Desktop/Labs/Lab 10**.
2) Open the **Mortage Calculator.xlsx** spreadsheet in **Excel**. The spreadsheet contains two worksheets. The **Mortgage Calculator** worksheet is used for calculating mortgages. The second worksheet contains private instructions which should not be made publicly available.
3) Examine the **Mortage Calculator** worksheet. Alter the values for the mortgage calculation using the following information.
   - A) Sales price is **$200,000**
   - B) Down payment is **10%**
   - C) Length of mortgage is **30 years**
   - D) Annual interest is **6.5%**
4) Check that the calculated monthly payment comes down to **$1,137.72**
5) Take notice of the fields where you entered data. Besides being identified by a column / row index, the cells also have a name defined for them. This will allow you to specify values for these cells through Excel Services.



6) Examine the **Mortgage Guidelines** worksheet. It contains text which should remain outside of the public domain.

7) Keep Excel open, as you will return to it after finishing the next step.

8) Now it's time to create the **Report Center** top-level site. The **Report Center** site will host spreadsheet reports and web parts to display those spreadsheets. For this sample it will host the mortgage calculation spreadsheet and others.

   A) Open SharePoint 3.0 Central Administration and navigate to the **Application Management** page.

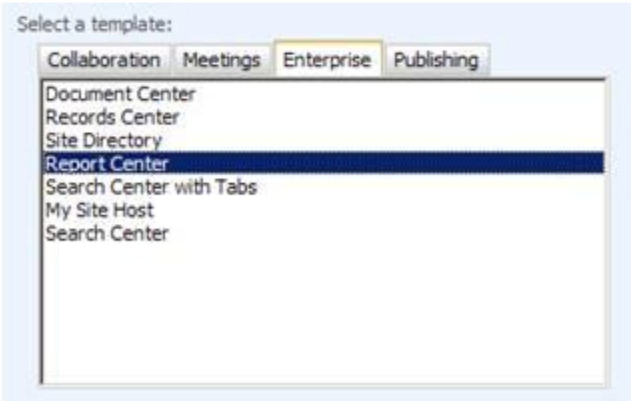
   B) On the **Application Management** page, click the **Create Site Collection** link in order to navigate to the **Create Site Collection page**.

   C) Create a new site collection using the following values

      *i) Title is **Excel Lab***

      ii) Web site Address is http://litwareinc.com/sites/ExcelLab

      *iii) Template Selection is **Report Center**, which you find under the **Enterprise** group.*



      *iv) The Primary Site Collection Administrator is **LitwareInc\Administrator**.*

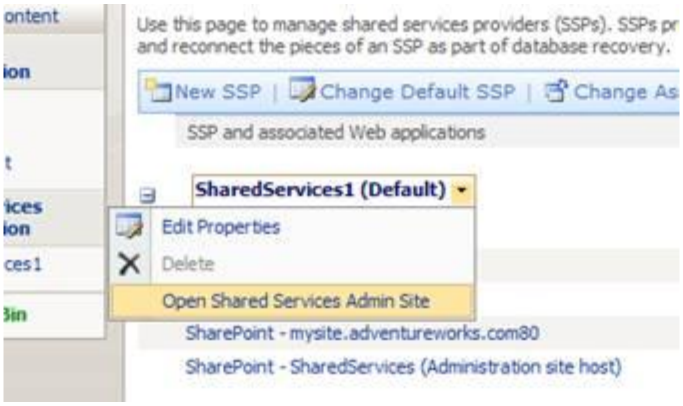
   D) Press **OK** to start the process of creating the new site collection. When this process has completed successfully you will be presented with an administration page that links to the new top-level site.

9) In this step you will configure the Report Center site with a Trusted File Location. Excel Services only works with spreadsheets found in trusted locations to reduce the security risk of hosting complex spreadsheets containing code online.

   A) Open SharePoint 3.0 Central Administration and navigate to the **Application Management** page.

   B) On the **Application Management** page, in the **Office SharePoint Server Shared Services** section, click **Create or configure this farm's shared services** in order to navigate to the **Manage this Farm's Shared Services** page.

   C) On the **Manage this Farm's Shared Services** page, open the menu for **Litware SSP (Default)** and click **Open Shared Services Admin Site** in order to navigate to the **Shared Services Administration** page.



D) On the **Shared Services Administration** page, in the **Excel Services Settings** section, click **Trusted file locations** in order to manage trusted file locations for Excel Services.

E) Click **Add Trusted File Location** to add the location of the **Report Center**.

F) Create the trusted file location using the following values.

   i) *Address is http://litwareinc.com/sites/ExcelLab*

   ii) *Location Type is **Windows SharePoint Services***

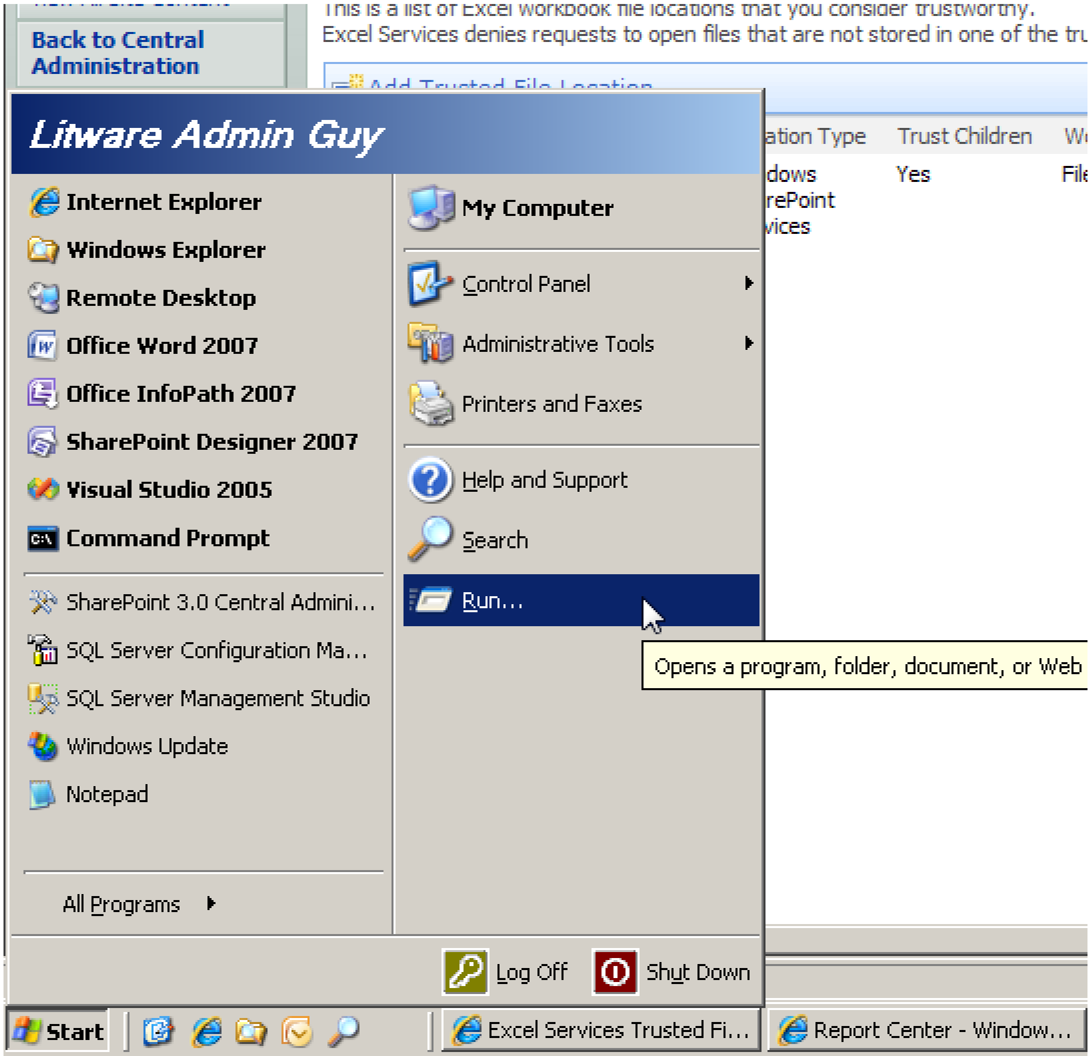
   iii) *Trust Children is checked*

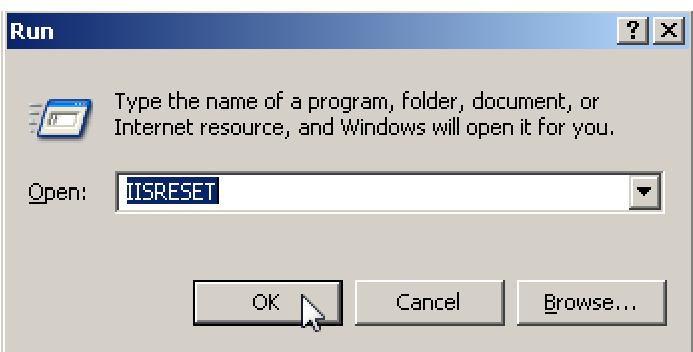
   iv) *Scroll down to the **External Data** section and **Allow External Data** is **Trusted data connection libraries and embedded***

   v) *In the **User-Defined Functions** section, **Allow User-Defined Functions** is checked*

G) Press **OK** to add the new file location to the list of trusted file locations.

H) Click the **Start** menu and open a new Command Prompt window and issue the **IISRESET** command to reset the web server and allow the new trusted location to become immediately available.



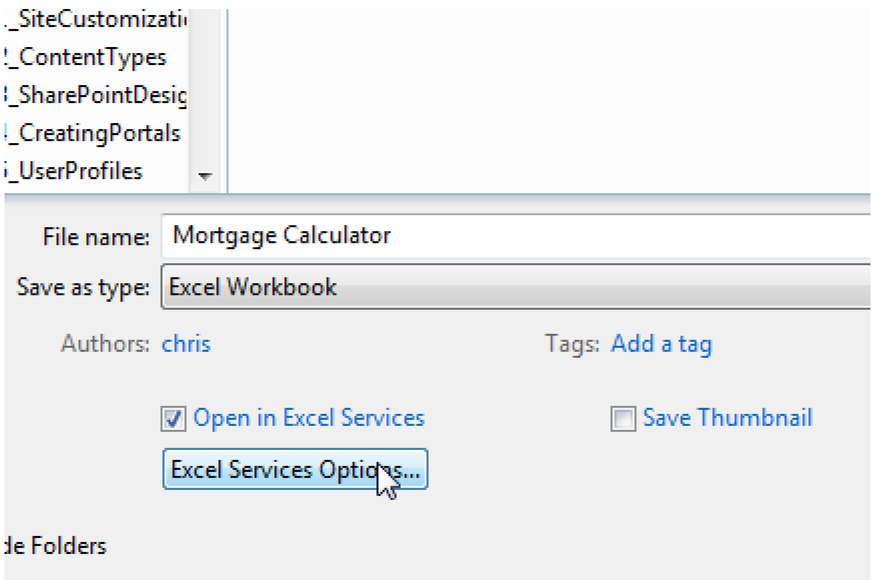


10) Now you can publish the mortgage calculation spreadsheet. The mortgage calculation spreadsheet needs to be made available online to allow users to interact with the calculator without having Excel installed, as well as allowing users to always work with the latest mortgage calculation formula.

A) Go back to the **Mortgage Calculator.xlsx** left open in Excel.

B) On the **Office** menu, click **Publish** and then **Excel Services** to publish the spreadsheet to SharePoint.

C) In the **Save As** window, in the lower part of the window, click **Excel Services Options** to configure the spreadsheet before publishing it to Excel Services.



i) *On the **Show** tab, choose **Sheets** to only allow certain sheets to be made available.*

ii) *Make sure that only the **Mortgage Calculator** is published by clearing the checkbox for all other worksheets.*

iii) *On the **Parameters** tab, review the parameters that are made available for modification through Excel Services. If all 4 Parameters are not in the list (AnnualInterestRate, DownPaymentPercentage, MortgageLength, and Sales Price) then click the **Add** button, select the checkbox next to any parameters that were not already selected, and then click **OK**.*

iv) *Choose **OK** to close the **Excel Services Options** dialog.*

D) In the **Save As** window, choose the pre-made **Reports Library** in the **Report Center** as the target location, available at **http://litwareinc.com/sites/ExcelLab/ReportsLibrary** To do this, you must type the URL as the **File name**. Then you must click **Save** – this opens up the **Reports Library view** in the **Save As** dialog box. Then you must click **Save** again, which opens the **Choose Document Type** dialog.

E) In the **Choose Document Type** dialog, choose **Report** and click **OK** to publish the spreadsheet.

F) The spreadsheet is automatically opened in a web browser.

11) Now examine the **Mortgage Calculation** spreadsheet in Excel Services. The view of the **Mortgage Calculator** spreadsheet is nearly the same as the Excel based view. The users can now interact with the spreadsheet by providing values for the named cells.

A) Examine the **Mortage Calculator** worksheet. Alter the values for the mortgage calculation using the following information. Take note of the decimal separator character. It is locale specific and depends on locale configured in SharePoint. Also take note of how percentages are noted, using the value ‘1’ for 100%.

*i) Sales price is **200,000***

*ii) Down payment is **0.1***

*iii) Length of mortgage is **30***

*iv) Annual interest is **0.065***

B) Check that the calculated monthly payment comes down to **$1,137.72**

Exercise 2: Publishing Excel Workbooks with a Data Connection

While the ability to publish a spreadsheet online poses a great solution platform, many spreadsheets are not self-contained units. Instead they retrieve information from an array of external data sources such as the Microsoft SQLServer database engine and Analysis Services. In this exercise you will create a new spreadsheet which rolls up information about sales based on the region, salesperson and year. Next the data will be displayed in a pivot-chart before publishing the spreadsheet to Excel Services.

1) Over the next few steps you will create the sales overview spreadsheet. First a new spreadsheet will be created which will display a sales overview in a pivot table. Next a pivot chart is defined on top of this table.

2) Open a new instance of **Excel**. An empty spreadsheet will be made available automatically.

3) On the **Get External Data** group in the **Data** tab, click **From Other Sources** and then **From SQL Server** in order to create a new data connection to SQL Server.

4) In the **Data Connection Wizard** dialog perform the following steps.

A) In the **Connect to Database Server** step, enter “**(local)**” for the server name. Click **Next** to navigate to the next step.

B) In the **Select Database and Table** step, select **AdventureWorks** as the database and **vSalesPersonSalesByFiscalYears** view as the data source. Click **Finish** to complete the wizard and close the dialog.

5) In the **Import Data** dialog, select **PivotTable Report** and click **OK** to add a new pivot table bound to the data source to the first worksheet.

6) In the **Pivot Table Field List** pane, configure the pivot table according to the following information. If the pane does not appear, right-click anywhere in the pivot table and choose **Show field list**. Drag the fields from the field list into the four container areas at the bottom of the pane.

A) For **Row Labels**, add the **FullName** field

B) For **Values**, add the **2002**, **2003** and **2004** fields. Configure each field to display the SUM instead of the default COUNT.

*i) Click the field and choose **Value Fields Settings…**.*

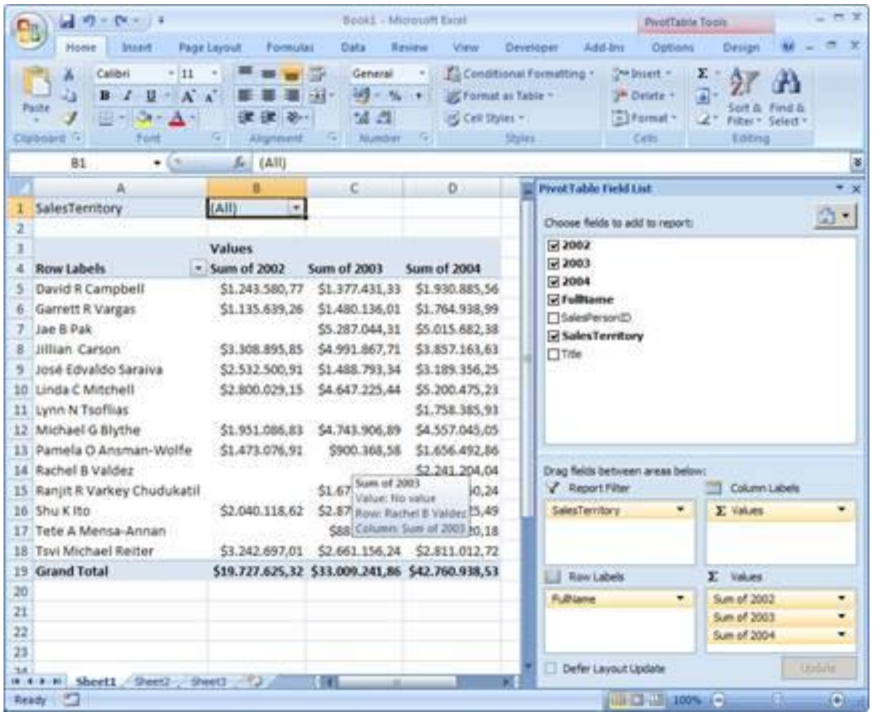
*ii) On the **Summarize by** tab, choose **Sum***

*iii) Optionally change the number format to reflect the **Currency** type. This option will be under the **NumberFormat** box.*

*iv) Click **OK** to close the settings dialog.*

C) For **Report Filter**, add the **SalesTerritory** field.

D) The following image depicts the configured pivot table.



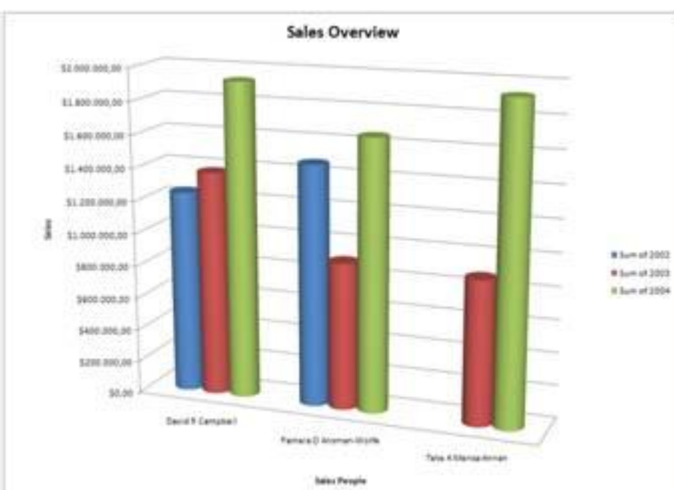
7) Select a cell in the pivot table. When creating a new chart, Excel will recognize that the chart needs to be bound to the selected pivot table. In the sample cell B1 is selected, containing the report filter.

8) Right-click the **Sheet1** tab on the bottom of the Excel window and choose **Insert** in order to open the sheet creation dialog.

9) In the **Insert** dialog, choose **Chart** and click **OK** to insert a new chart sheet into the workbook. The chart should automatically display the records of the pivot table.

10) Inside the **Type** group, on the **Pivot Chart Tools – Design tab**, click **Change Chart Type** to alter the chart type. Choose the **Clustered Cylinder** chart type.

11) Optionally provide a value for the **SalesTerritory** filter to lessen the number of records displayed. The following image depicts how the chart can look when filtering on the **Northwest** territory.



12) On the **Office** menu, click **Save** in order to open the **Save** dialog. Choose '**Sales Overview.xlsx**' as the name for the document. You can save the document to your **Desktop** or to the **Lab 10** folder.

13) Now it's time to publish the spreadsheet to allow a daily overview of the data in the sales spreadsheet, the spreadsheet needs to be made available online to the other managers.

A) On the **Office** menu, click **Publish** and then **Excel Services** to publish the spreadsheet to SharePoint.

B) In the **Save As** window, click **Excel Services Options** to configure the spreadsheet before publishing it to Excel Services.

*i) On the **Show** tab, choose **Sheets** to only allow certain sheets to be made available.*

ii) Make sure that only the sheet containing the table and the one containing the chart are published by clearing the checkbox for all other worksheets.

*iii) Choose **OK** to close the **Excel Services Options** dialog.*

C) In the **Save As** window, choose the pre-made **Reports Library** in the **Report Center** as the target location, available at http://litwareinc.com/sites/ExcelLab/ReportsLibrary

D) In the **Choose Document Type** dialog, choose **Report** and click **OK** to publish the spreadsheet.

E) The spreadsheet is automatically opened in a web-browser.

14) Examine the **Mortgage Calculation** spreadsheet in Excel Services. The view of the sales overview spreadsheet is nearly the same on the web as in Excel.

A) Examine the worksheet containing the pivot table. Alter the value for the **SalesTerritory** filter.

B) Examine the chart sheet containing the pivot chart. Notice that the view is similar to the view provided by Excel, but differing slightly in 3D layout.