

Topic C: Create a Database from a Template

After completing this topic, you should be able to:

- ✓ Create a database from a template.

Creating a Database from a Template

The third approach to creating a database is to base the new database on a template.



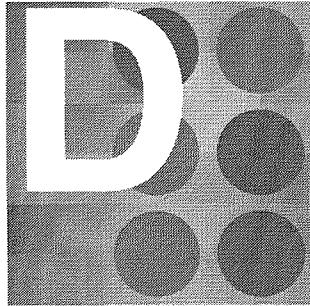
Activity 3-2: Create your Practice database from a template



Scenario: Now that you have your own version of the Instructor Demo database, you will create your version of the Practice database from a template.

Follow these steps to create your own Practice database from a template.

Step	Action
1	If necessary, open the Lotus Domino Designer client.
2	Choose File → Database → New .
3	In the Server drop-down list, verify that Local is selected.
4	In the Title text box, type a title for the database that includes your initials. For example, if your initials are ABC, type Practice ABC .
5	In the File name text box, verify that Lotus Domino has supplied a unique file name for your copy of the database. Then, remove the space before your initials. For example, if your initials are ABC, the file name should be PracticeABC.nsf .
6	In the Specify Template for New Database section, select the classroom server Hub/WWCorp in the Server drop-down list.
7	In the Template list, select Practice Template .
8	Clear the Inherit future design changes check box.
9	Click OK . Result: The new Practice database opens in the Lotus Domino Designer client, and a database icon is automatically created on the Lotus Notes workspace.



Topic D: Organize the Lotus Domino Designer Environment

After completing this topic, you should be able to:

- ✓ Describe uses for folders.
- ✓ Create a folder in a database.
- ✓ Describe uses for bookmarks.
- ✓ Create a database bookmark.
- ✓ Identify ways to manage the Lotus Domino Designer environment.

Managing the Lotus Domino Designer Environment

The Lotus Domino Designer environment provides tools to help developers manage the development of applications. These tools include the ability to create bookmarks on the Lotus Domino Designer Bookmark bar, and the ability to create folders to organize application bookmarks.

Folders

One way to help organize your design work is by using folders. You can create folders:

- As a way of organizing and structuring the design elements in your database.
- On the Bookmark bar for easy access to frequently used items.
- Within a folder in a database.
- Within a folder on the Bookmark bar.

Bookmarks

Bookmarks are used for easy access to frequently used applications and databases. You can drag and drop the following items to the bookmark bar or to a folder on the bookmark bar:

- An application shortcut from your desktop.
- A program executable file from Windows Explorer.
- A database icon from the Design pane.
- A database window tab.

Creating a folder in Lotus Domino Designer

To create a folder in Lotus Domino Designer:

Task	Procedure
1	In the Design pane, click the new folder icon. If the Design pane is not open, right-click the Recent Databases folder on the Bookmark bar and select New Folder .
2	In the Folder name field, type a folder name.
3	In the Select a location for the new folder list box, select the location in which you want to create the folder and click OK .

 **Note:** Lotus Domino Designer places the folder on the Bookmark bar. You can now populate this folder with databases and other folders.

Creating a database bookmark from the Lotus Domino Designer menu bar

To create a database bookmark from the Lotus Domino Designer menu bar:

Task	Procedure
1	Choose File → Database → Open .
2	Select the database you want to bookmark.
3	Click Bookmark .
4	In the Add to list box, do one of the following: <ul style="list-style-type: none"> ● To display the bookmark directly on the Bookmark bar, select Bookmark Bar. ● To add the bookmark to a folder on the Bookmark bar, select a folder. ● To create a new folder, click New folder, type a name for the folder, and click OK.
5	Click OK . You can access the database by clicking the icon on the Bookmark bar or in the folder.



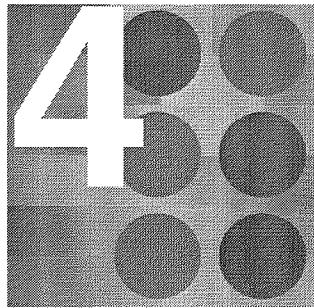
Activity 3-3: Create a folder and a bookmark for the Practice database in Lotus Domino Designer



Scenario: In this activity, you will create a folder on the Lotus Domino Designer Bookmark bar that contains a bookmark for your copy of the Practice database.

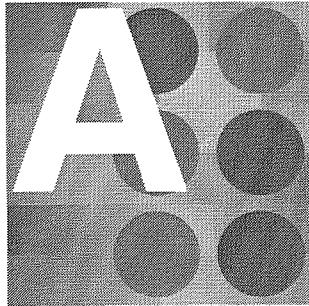
Follow these instructions to create a folder and bookmark.

Step	Action
1	If necessary, open Lotus Domino Designer .
2	Click the New Folder icon above the Design pane. Result: The Create Folder dialog box opens.
3	Name the new folder Fundamentals
4	In the Create Folder dialog box, select the -Folders- location.
5	Click OK . Result: The folder appears on the Bookmark bar. If you move the cursor over the folder, its name appears as pop-up text.
6	Now, to create a bookmark within the folder, choose File→Database→Open .
7	Select the name of your Practice database.
8	Click Open . Result: The database is opened in Lotus Domino Designer.
9	Drag the database icon to the Fundamentals folder. Result: A bookmark for the Fundamentals Practice database is created in the Fundamentals folder.



Creating Pages

- **Topic A: Explore Page Content, Layout, and Navigation Basics**
- **Topic B: Create Pages**
- **Topic C: Add Text to Pages**
- **Topic D: Use Tables to Lay Out Pages**
- **Topic E: Add Images to Pages**



Topic A: Explore Page Content, Layout, and Navigation Basics

After completing this topic, you should be able to:

- ✓ Describe the characteristics of the page design element.
- ✓ List the types of information a page can contain.
- ✓ Identify the design elements used to organize content on a page.
- ✓ Identify the programmable elements that you can have on a page.
- ✓ Identify the navigational elements that you can have on a page.
- ✓ Identify the ways that Lotus Domino pages can be displayed.
- ✓ Determine when to use a page to display information.
- ✓ Identify the design elements that cannot be used on pages.

The Page Design Element

The page design element is similar in concept and usage to a static HTML page. IBM® Lotus® Domino® pages structure and display information that remains relatively stable. Application users do not create pages or add content to pages, but use them to discover information and navigate through a site or application. Pages can consist of the following:

- Information
- Organizing elements
- Programmable elements
- Navigational elements



Caution: All of the elements available to pages are available to forms; however, not all elements available to forms are available to pages.

Types of Page Information

The following table lists the types of information that can be incorporated on a page.

Element	Description
Text	Static data such as a company name.

Element	Description
Graphics	Images such as GIF, JPEG, and BMP files. (For graphic types other than GIF or JPEG, refer to Lotus Domino Help for advice on how to treat the graphics for optimum presentation.)

Content Organization Design Elements

The following elements can be used to organize and display information on a page.

Element	Description
Tables	Information organized in rows and columns.
Sections	Collapsible and expandable areas that can include text, graphics, and objects.
Layers	Control the placement, size, and content of information in overlapping blocks.

Programmable Elements

The following programmable elements can be used on pages.

Element	Description
Applets	Small programs such as an animated logo or self-contained application.
HTML	Hypertext Markup Language, which can be written directly on the page or imported from another source.
JavaScript libraries	A place for storing and sharing common JavaScript programs and code. You can insert an existing JavaScript library into a page, form, or subform.
Actions	Buttons or hotspots that automate tasks for a user.

Topic A: Explore Page Content, Layout, and Navigation Basics

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Element	Description
OLE objects	Links or objects that represent data in another application.
Computed text	Generates dynamic text based on formula results.

Navigational Elements

The following navigational elements can be used on pages.

Element	Description
Imagemaps	A graphic or collection of graphics, overlaid with programmable hotspots. Hotspots, in the form of pop-up text, actions, links, and formulas, perform an action when clicked by a user.
Embedded elements	You can embed the following elements in a page: <ul style="list-style-type: none">● A view or folder pane● Navigator● Outlines● Date picker Use these elements alone or combine them to control how users navigate through your application.

Ways to Display Pages

Pages can be displayed to the user in several ways:

- As part of a frameset
- As a link from a form, subform, outline, or another page
- From an action
- As an outline entry that displays the page

When to Use Pages

When developing or updating an application, designers determine when to use a page instead of a form to display information. The following table lists the conditions used to determine whether to use a page or a form.

If the Goal is to	Use a
Display static information such as company data and background information	Page to structure and display information.
Collect and store information from end users	Form to structure and display the data.



Note: You will work extensively with forms later in the course.

Design Elements Not Available on Pages

The following table lists the elements available to forms but not to pages.

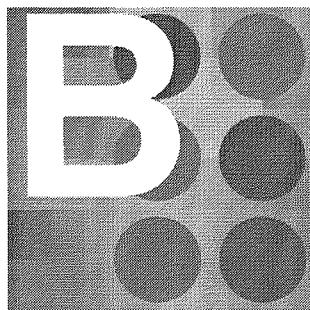
Design Element	Page	Form
Layout regions	No	Yes
Subforms	No	Yes
Fields	No	Yes
Shared fields	No	Yes
Embedded elements: ● File upload ● Scheduler ● Editor	No	Yes



Activity 4-1: Examine a page

Follow these steps to examine a page, its elements, and its properties. The page is in the Practice database.

Step	Action
1	If necessary, open your copy of the Practice database in Lotus Domino Designer.
2	In the Design pane, select Pages . Result: A list of pages appears in the Work pane.
3	Double-click the First Look page to open it. Result: The First Look page opens.
4	Choose Design→Page Properties . Result: The Page Properties box opens.
5	Click the following elements to see the different Properties boxes: <ul style="list-style-type: none">● The IBM logo● The picture● The text Result: The Properties box changes to display properties of the selected element.
6	Close the Properties box and the First Look page.



Topic B: Create Pages

After completing this topic, you should be able to:

- ✓ List the steps for creating pages.
- ✓ Identify the characteristics of and uses for the Page Properties box.
- ✓ Describe page names.
- ✓ List the steps to create aliases.

Page Development Process

Application developers design, create, and control the display of pages. Application users see pages as they navigate through the application.

When developing pages:

- Create the page.
- Set the page properties.
- Add the required elements.

Creating a page

Follow these steps to create a page.

Task	Procedure
1	In the Design pane, click Pages .
2	In the Work pane, click New Page .
3	Choose Design→Page Properties .
4	Enter a name in the Name field.
5	Close the Properties box.
6	Add appropriate elements to the page.
7	Save the page.

The Page Properties Box

In addition to the content that resides on the page, a page contains properties or attributes of its own. To examine information about a page, use the Page Properties box. The properties of a page, as well as any other element, are modified through the Properties box.

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The process to change the properties of an element is as follows:

1. Select the element.
2. Open its Properties box.
3. Specify the appropriate properties.
4. Close or collapse the Properties box.

Properties boxes do not need to be closed after each modification. They are “live” and change to reflect the latest element selected. Changes are applied immediately.

The following figure shows the Page Properties box.

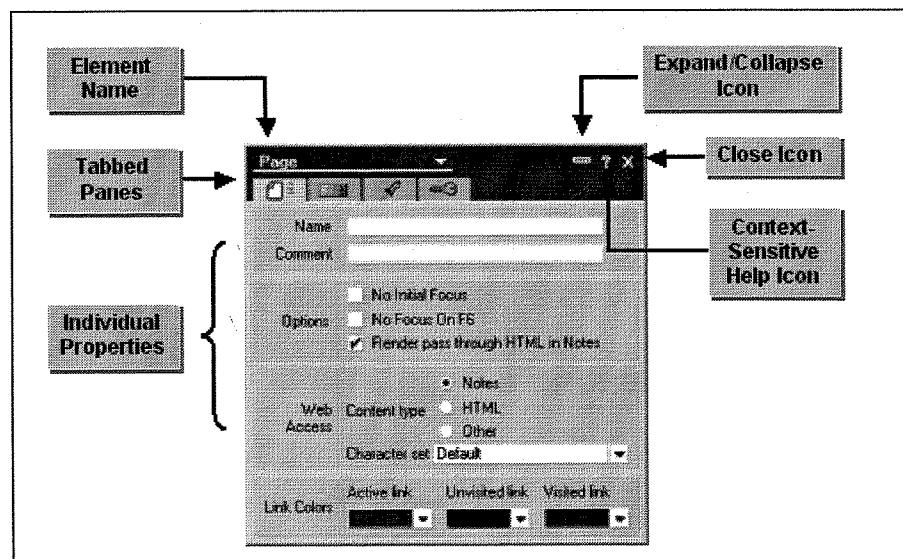


Figure 4-1: The Page Properties box

Use the Properties box to specify attributes of a page such as:

- Page name and alias
- Background color
- Background graphic

Page Names

Page names within the same database must be unique. They can contain:

- Characters
- Spaces
- Numbers
- Punctuation

Page names are also case-sensitive. Although the name itself is limited to 64 bytes, the size limit increases to 264 characters if there is a name alias.

Aliases

An **alias** is simply another name for a page or other design element. Aliases are a short way to refer to the page. If an alias exists, it is used to:

- Refer to the page programmatically.
- Consistently refer to the page, even if the name of the page changes.

Aliases are an internal reference to the page, or other element with which they are associated.

Creating a name alias

Follow these steps to create a name alias.

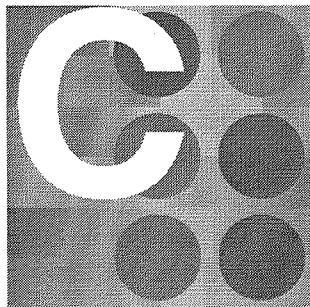
Task	Procedure
1	Open the page.
2	Choose one of the following methods to open the Page Properties box: <ul style="list-style-type: none">● Choose Design→Page Properties.● Right-click the page and choose Page Properties.
3	In the Name box, enter a (pipe symbol) and your alias name after the existing page name. For example: <code>pageName pn</code>  Note: Press Shift+\ for the pipe symbol.
4	Close the Page Properties box.
5	Save the page.



Activity 4-2: Create a page, and set its properties

Follow these steps to create a page.

Step	Action
1	If necessary, open your copy of Practice database in Lotus Domino Designer.
2	If necessary, select Pages in the Design list. Result: The Pages design list appears.
3	Click New Page . Result: A blank page opens in the Work pane.
4	Choose Design→Page Properties . Result: The Page Properties box opens.
5	Type the following name and alias into the Name box: Practice Page pp
6	Close the Page Properties box.
7	Save the page. Result: The new page appears in the page list.



Topic C: Add Text to Pages

After completing this topic, you should be able to:

- ✓ Describe text elements.
- ✓ Identify ways to format page text.
- ✓ Preview pages and other design elements.

Text Elements

Pages can contain the following kinds of text:

- Static text, for example, the page title, graphic labels, or explanatory text.
- Dynamic text, for example, text that is computed.

Text Formatting

Use the Text Properties box to modify text on your form. Using the Text Properties box, you control:

- Font
- Paragraph Alignment
- Paragraph Margins
- Paragraph Border
- When to display or hide a paragraph
- Paragraph Styles

The following figure shows the Text Properties box.

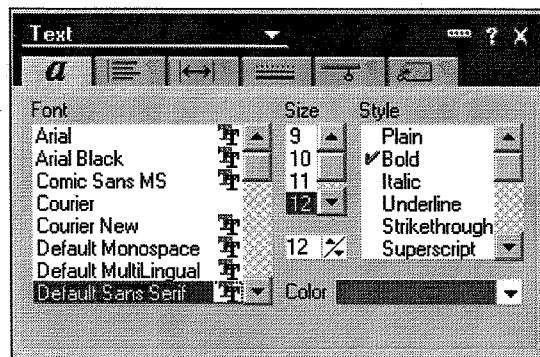


Figure 4-2: The Text Properties box

Previews

To determine how your work looks and behaves in the target client, preview your work in the supported Web browsers as well as in the Lotus Notes client.

The Preview toolbar contains links to each browser on your computer. Clicking a browser icon previews the current design element in the associated browser. The following figure shows the Preview toolbar.



Figure 4-3: The Preview toolbar

Previewing your work

Follow these steps to preview your work.

Task	Procedure
1	In Lotus Domino Designer, open the design element you wish to preview.
2	Either choose the appropriate menu commands or click one of the Preview buttons. The menu commands are as follows: <ul style="list-style-type: none">Choose Design→Preview in Notes.Choose Design→Preview in Web Browser. Result: You are prompted to save any changes to the design element. Then, the design element is opened in the selected client.
3	Close or minimize the preview program and return to Lotus Domino Designer.

Browser previews

Security settings can affect the display of Lotus Domino applications in Web browsers. If a server or application is not set up for Anonymous access, you will need to authenticate to be able to preview.

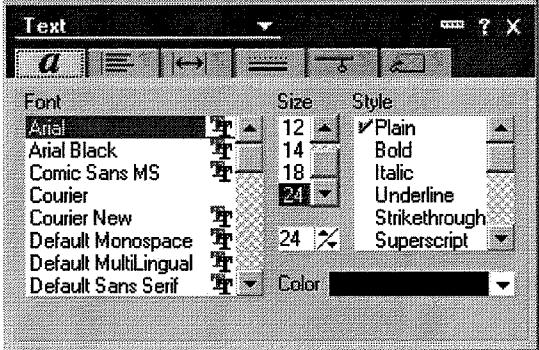
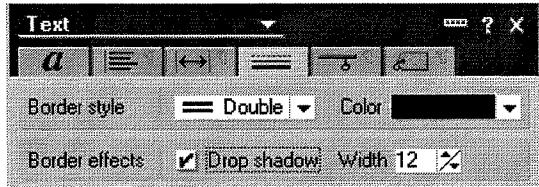


Note: You will work more extensively with access control lists later in the course.



Activity 4-3: Add and format text

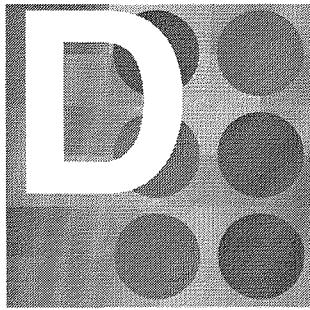
Follow these steps to add formatted text to your page.

Step	Action
1	If necessary, open Practice Page in your copy of the Practice database.
2	Enter the following text: Practice Page Result: The text appears in the top left corner of your page.
3	Highlight the text you just entered and open the Text Properties box by choosing Text→Text Properties . Result: The Text Properties box opens to the Font tab.
4	On the Font tab, click Arial 24 points .  <p>Result: The text changes to Arial font and 24 points.</p>
5	Click the Paragraph Alignment tab and click the centered text option.  <p>Result: The text is centered across the top of the page.</p>
6	Click the Paragraph Border tab and click the Double Border style. Select Drop shadow .  <p>Result: A border box appears around your text, running the length of the page.</p>

Topic C: Add Text to Pages

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Step	Action
7	Close the Text Properties box.
8	Save your page.
9	Preview your work. Result: The page preview is quite different in Lotus Notes than it is in the Web browser.



Topic D: Use Tables to Lay Out Pages

After completing this topic, you should be able to:

- ✓ List table types and uses.
- ✓ List the options in the Table Properties box.
- ✓ Create a table.

Table Types

A **table** is an element you can use to organize content into rows and columns. Use tables to organize, summarize, and align elements such as text, fields, and graphics. Tables can be created in:

- Pages
- Forms
- Subforms
- Table cells

Lotus Domino Designer provides five types of tables. The following table describes these types.

Display	Description	Use on Web
Basic	Displays data organized into rows and columns. Looks like a grid or spreadsheet.	Yes
Tabbed	Displays each row of data as a separate tab. Users view information displayed in the rows by selecting a tab.	Limited. Best for displaying static information.
Animated	Displays one row of the table at a time based on a specified time interval. Animated tables are not supported on the Web and are not designed for data entry on forms.	No. For the Web, an alternate programming technique is required to show an animated table.
Caption	Similar to a tabbed table, but users click captions instead of tabs.	Limited. Best for displaying static information.

Display	Description	Use on Web
Programmed	Similar to a tabbed table, but users click an action or link. Displays a different row of the table based on an action or field.	Limited. Data loss can result.

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Tables and the Web

Tabbed tables are limited for Web use because each time a user clicks a tab, the page needs to redraw, thus consuming server resources and bandwidth. In addition, if information is entered on one tab, and another tab is clicked, that information is lost unless it is submitted prior to the tab change.



Note: If the table collects information (in other words, if the table is on a form), there are properties that can be set to generate hidden placeholders for data that has not been submitted.

Animated tables for the Web can be created by using JavaScript.

Table Properties

The Table Properties box contains a number of tabs and settings. The tabs include:

- Table Layout
- Cell Borders
- Table/Cell Background
- Table Borders
- Table Margins
- Table Rows
- Table Programming

Table width options

When a table is created, there are three width options available: Fit with margins, Fit to window, and Fixed width. The following table lists these options and their results.

Table Width Option	Result
Fit with margin	The table fills a given body size, from margin to margin. This is useful when nesting tables within one another.
Fit to window	The width of the table will fill the margins, regardless of the frame size.
Fixed width	A measured column width is set for the table, regardless of the size of the window.

Setting table layout properties

The following figure shows the Table Layout tab of the Table Properties box.

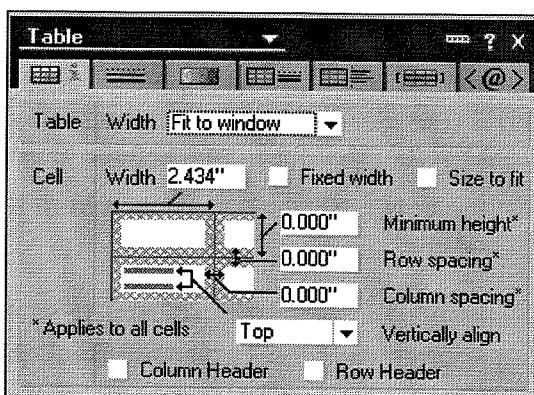


Figure 4-4: The Table Layout tab

On the Table Layout tab, the Width and Position properties also render to the Web. The following table lists the results of the individual property settings in the Web page.

Property	Web Function
Width	If left fixed, keeps the individual column (cell) that particular width, regardless of content. The Width property will generate an HTML width attribute as either a percentage or as pixels, based on the selection.
Position	Affects the horizontal positioning of the table within the Web page. The Position property will create an HTML align attribute.

Setting cell borders properties

The following figure shows the **Cell Borders** tab of the Table Properties box.

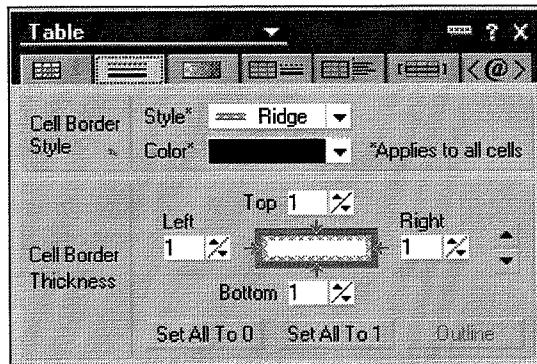


Figure 4-5: The Cell Borders tab

The Cell Border Thickness setting dictates whether or not a border appears. Setting all of the borders to 0 will cause the border to be invisible. Setting the border width to a value of greater than 0, will display a border for the table. Setting a 0 border is useful when the table is only used for positioning and the borders would detract from the page appearance.

For the Web, the only attribute that applies from the Cell Borders tab is **Cell Border Thickness**.

Setting table and cell background properties

The following figure shows the **Table/Cell Background** tab of the Table Properties box.

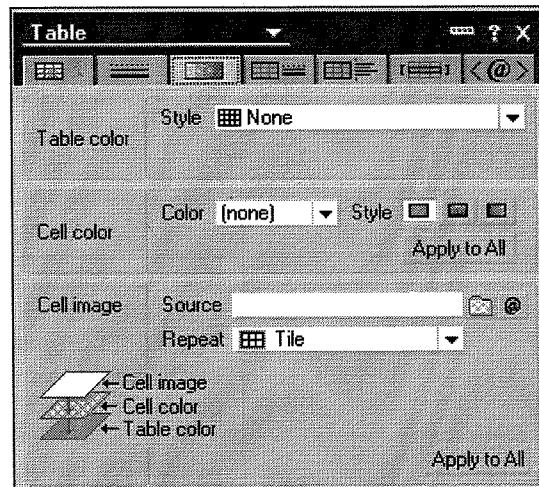


Figure 4-6: The Table/Cell Background tab

The Table/Cell Background tab of the Table Properties box deals with table color, cell color, and cell image. Most of the properties render to HTML. The following table relates properties of the Table/Cell Background tab to their corresponding HTML attributes.

Property	Web Function
Table color	Sets an overall color for the table, it generates an HTML bgcolor attribute on the <td> (Table Data) tag.
Cell color	Generates an HTML bgcolor attribute for an individual cell tag. A table cell is defined in HTML with a <td> tag. The Style attributes do not have a corresponding HTML style.
Cell image	Translates to the Web as a background image attribute for the <td> tag. Lotus Domino Designer does not provide the capability for a background graphic for the entire table. However, you can accomplish this using HTML.

Setting table borders properties

The following figure shows the **Table Borders** tab of the Table Properties box.

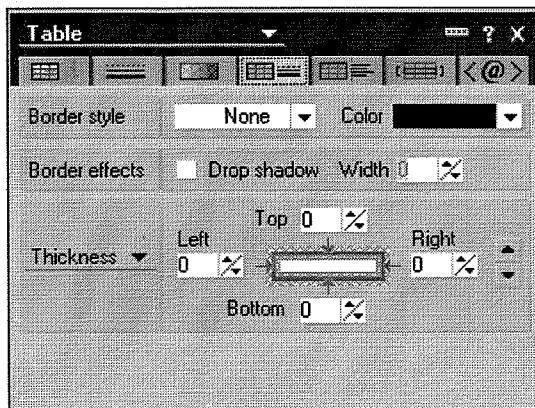


Figure 4-7: The Table Borders tab

The properties of the Table Borders tabs have no effect on any of the translated HTML attributes. The HTML language does not currently provide for margin settings or text wrapping attributes.

Setting table margins properties

The following figure shows the **Table Margins** tab of the Table Properties box.

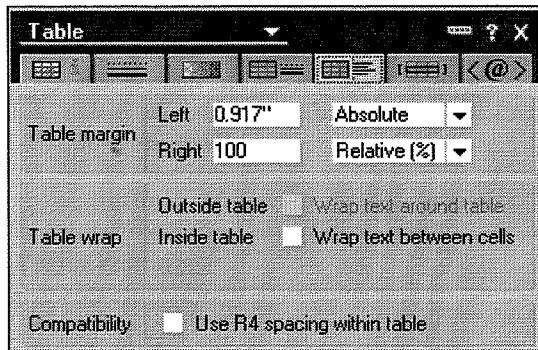


Figure 4-8: The Table Margins tab

The properties of the Table Margins tabs have no effect on any of the translated HTML attributes. The HTML language does not currently provide for margin settings or text wrapping attributes.

Setting table rows properties

The following figure shows the **Table Rows** tab of the Table Properties box.

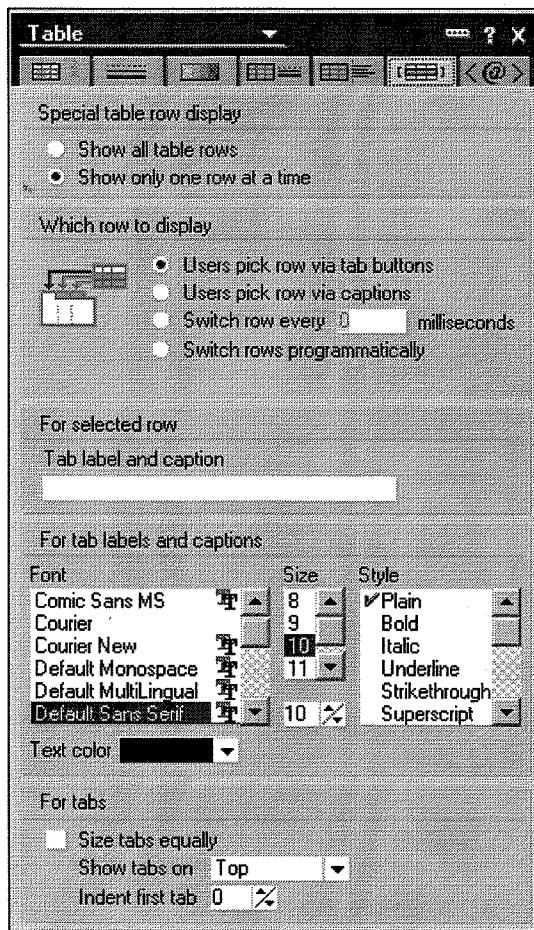


Figure 4-9: The Table Rows tab

The Table Rows tab allows you to modify the Lotus Domino table type attributes, which allow you to modify the overall table settings.

Setting Table Programming Properties

The following figure shows the **Table Programming** tab of the Table Properties box.

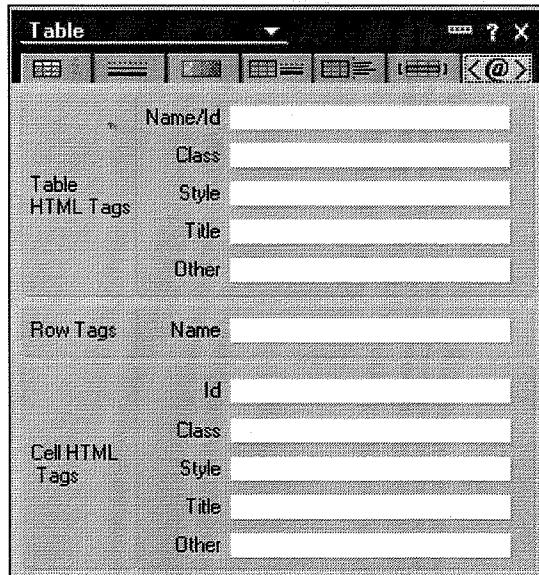


Figure 4-10: The Table Programming tab

Use the **Other** field of the Table or Cell HTML tags to add attributes to the `<table>` or `<td>` tags.

Creating a table

Follow these steps to create a table.

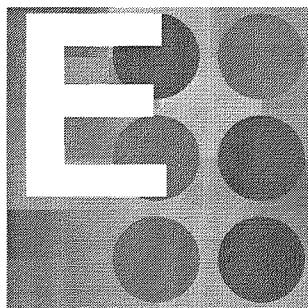
Task	Procedure
1	Open a page in Lotus Domino Designer.
2	Choose Create → Table from the menu.
3	Specify the number of rows and columns for the table.
4	Specify the table width.
5	Select a table type by choosing one of the options.
6	Click OK .
7	Save and preview the page.



Activity 4-4: Add a table to a page, and place text in it

Follow these steps to add a table and text to the Practice page.

Step	Action
1	If necessary, open Practice Page in Lotus Domino Designer. Result: The page opens in the Work pane.
2	Place the cursor below the formatted text. Result: The cursor blinks to indicate its position.
3	Choose Create→Table . Select the appropriate options to create a basic, fixed width table with two rows and two columns. Click OK . Result: A table with two rows and two columns is inserted.
4	Place the cursor in the first cell of the table. Type the following text: Tables can hold text. Result: The text appears in the table cell.
5	Place the cursor in the second cell of the second row. Type the following text: Page layout is easier when you use tables. Result: The text appears in the table cell.
6	Save the page.
7	Preview the page in the Lotus Notes client.
8	Preview the page in a Web browser, and note the differences in how the page appears.



Topic E: Add Images to Pages

After completing this topic, you should be able to:

- ✓ Describe images.
- ✓ List the steps for importing an image.
- ✓ Describe shared resources.
- ✓ Add and use a shared image.

Images

The use of graphics can make an application more appealing and effective. Lotus Domino provides several tools for incorporating graphics. You can:

- Copy and paste a graphic from the clipboard.
- Import an image from a file.
- Insert a shared image from the shared resources area of the Lotus Domino database.

The following image types can be used:

- BMP (Bitmap)
- CGM
- JPEG
- GIF
- Lotus PIC
- PCX
- Tiff 5.0

Images can be used in pages and forms.



Note: Web browsers support GIF and JPEG formats directly. For optimal efficiency, use these formats when designing for the Web.

Importing an image from a file

Follow these steps to import an image from a file.

Task	Procedure
1	Open a page in Lotus Domino Designer.
2	Place the cursor where you want the graphic to appear.
3	Choose one of the following: <ul style="list-style-type: none">● Choose Create→Picture.● Choose File→Import.
4	Select the image's file type. Result: The Create Picture dialog box displays only image file types. File Import displays all file types that can be imported into a Lotus Domino Designer page or form.
5	Select or enter the file name.
6	Click Import . Result: The image is inserted onto the page.

Picture properties

A picture, like other elements, has properties which are modified using the Properties box. Once a picture is added, the Picture Properties box becomes available. Use properties to specify attributes or aspects of a picture such as:

- Size
- Border style
- Alignment
- Margins

Topic E: Add Images to Pages

Lesson 4 ■ Creating Pages

The following figure shows the Picture Properties box.

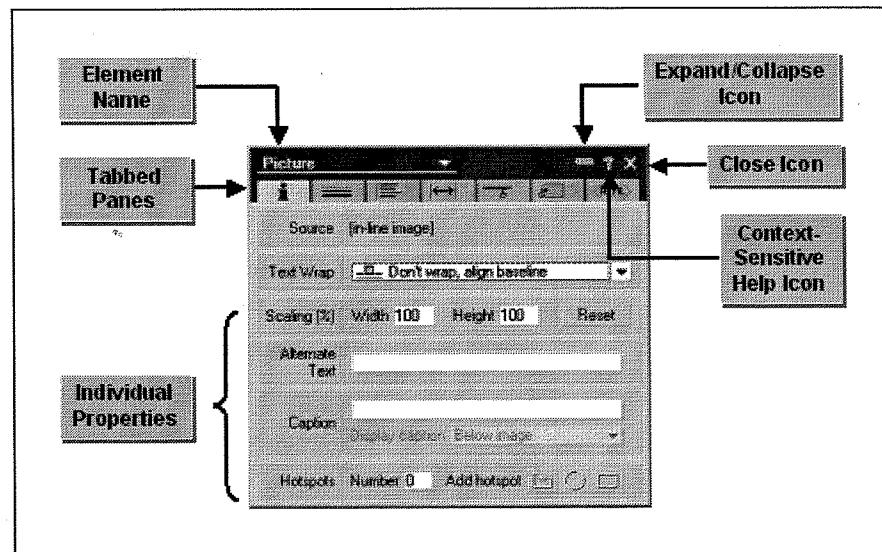


Figure 4-11: The Picture Properties box

Shared Resources

A **shared resource** is an element, such as a graphic file, stored within a Lotus Domino database. Each database can contain a library of its own shared resources. Shared resources let you reference a resource multiple times throughout a database, while only having to maintain the resource in one location.

Each database can contain a library of shared resources consisting of:

- Images
- Files
- Applets
- Style sheets
- Data connections

Using shared resources reduces database maintenance. If a resource is changed, all occurrences of the shared resource are automatically updated. A major advantage of shared resources is that they are a part of the application; if the application is moved, copied, or replicated, so are its shared resources.

To use a shared resource, it needs to be imported to the Lotus Domino database. Its native format is maintained during this process.

Using Image Resources

As you saw earlier in this lesson, you can import an image from the file system. However, if the graphic file changes, the image in the application is not updated unless you import it again.



Note: The native format of an image resource is maintained. Once added to the database, the resource can be exported in its native format, by selecting the image from image resources and choosing **Export** from the **Resource** menu.

Adding an image resource to a database

The first step in the process of using a shared image is to create an image resource. Follow these steps to create an image resource.

Task	Procedure
1	Click Shared Resources in the Design list.
2	Click Images .
3	In the Work pane, click the New Image Resource button.
4	In the New Image Resource dialog box, do the following: <ul style="list-style-type: none">● Select the file type.● Navigate to the correct directory and select the file name.● Click Open.

Image resource properties

Like other Lotus Domino Designer elements, image resources have properties which are modified using a Properties box. Use the image resource properties to specify attributes such as:

- Name and alias
- Source file information

The following figure shows the Image Resource Properties box.

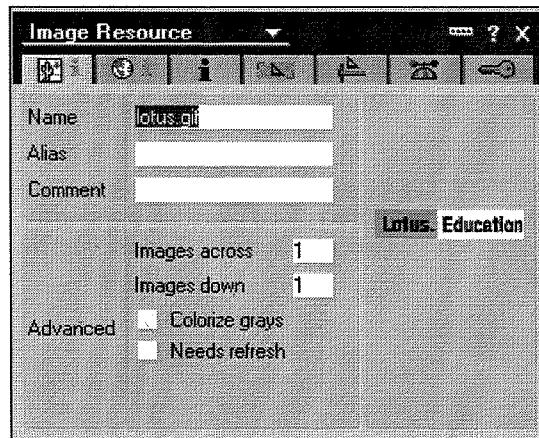


Figure 4-12: The Image Resource Properties box

Inserting an image resource

The second step in the process of using a shared image is to insert the image resource where needed. Follow these steps to insert an image resource.

Task	Procedure
1	Create a new, or open an existing, page in Lotus Domino Designer.
2	Move the cursor to where you want to the image to appear.
3	Choose Create→Image Resource from the menu.
4	Choose the type of image (GIF, JPEG, All Images).
5	Click the file name listed in the list box. Result: A thumbnail view of the image displays in the dialog box.
6	Click OK .

Identifying a picture's source

To identify the source of a picture on a page, use the Picture Properties box. The following figure shows the source of an image added using the **Create** menu.

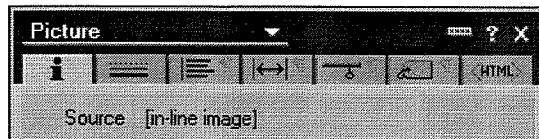


Figure 4-13: Source information for an imported picture

The following figure shows the source of an image that is a shared resource.

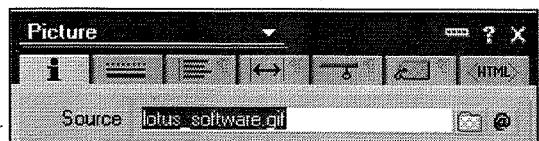


Figure 4-14: Source information for a shared image



Activity 4-5: Add and use a shared image



Scenario: In this activity, you will create a shared image to use throughout the Worldwide Corporation databases. This image is part of the company's new logo.

Follow these steps to complete the activity. Use your copy of the Practice database.

Step	Action
1	Create a shared image resource. In the Element list, click Shared Resources . Then, click Images .
2	Click New Image Resource .
3	Locate and add WWGlobe.gif . Result: WWGlobe.gif is added to the list of image resources.
4	Open the Practice Page you created earlier. Result: The Practice Page opens in the Work pane.
5	Place the cursor below the table you added earlier.
6	Choose Create→Image Resource . Select the WWGlobe.gif image. Click OK . Result: WWGlobe.gif is added to the page.
7	Save and preview the page.



Practice Activity 4-6: Create a Page



Scenario: Worldwide Corporation is in the process of creating organizational policies. They need a Policies and Procedures database to create and store policy documents for their employees. This database also needs a page that gives people an overview of the company.

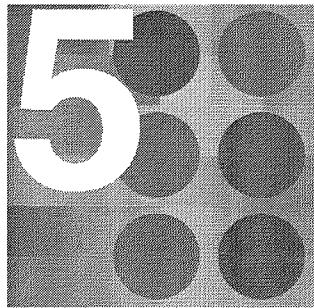


Note: The guided solution to this activity can be found in Appendix A, Solutions to Practice Activities.

In this activity, you will create the database and the page by performing the following tasks:

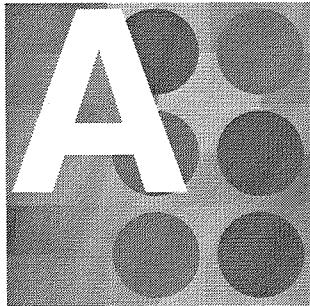
1. Create a new blank database on your local machine. Name it **Policies_ABC.nsf** where *ABC* is your initials.
2. Revise the **Default access level** to **Manager**.
3. Create the following shared images:
 - **LOGO_WW1.gif**
 - **bluerule.gif**
4. Create a page named **Info** that displays the company logo, **Logo_WW1.gif**, and the company address **123 Worldwide Blvd. Metropolis, PA 45555** in a table.
5. Place **bluerule.gif** below the table.
6. Enter the following text that describes the company. Give the text a heading.

Worldwide is an international pottery manufacturer. The company sells ceramics worldwide. Products include tiles, china, and various kinds of pottery. The corporate office houses manufacturing, research and development, product management, quality control, human resources, and system administration. There are several smaller sales offices and resellers throughout each region, and some sales representatives who work from their homes.
7. Save and preview your work.
8. Close all open windows.



Creating Forms

- **Topic A: Create Forms**
- **Topic B: Add Fields to Forms**
- **Topic C: Hide Form Elements**



Topic A: Create Forms

After completing this topic, you should be able to:

- ✓ Identify the characteristics of and uses for forms.
- ✓ List the tasks associated with designing a form.
- ✓ List the steps for creating a form.
- ✓ Identify form properties.
- ✓ Add text and tables to a form.

Forms

A **form** is a design element through which data is entered and displayed. Forms are different than pages in that they are used to collect data. The data collected via a form is stored in a document or a note.

When a user adds information to a database through a form and saves it, the information is saved as a separate document from the form. When a user opens a document, the document uses the form as a template to provide the structure for displaying the data.

Forms consist of the following:

- Fields used to collect or display data.
- Static elements, such as text, graphics, and tables used to control appearance and user interface.
- Programming to act on data.

The following figure represents the form design element.

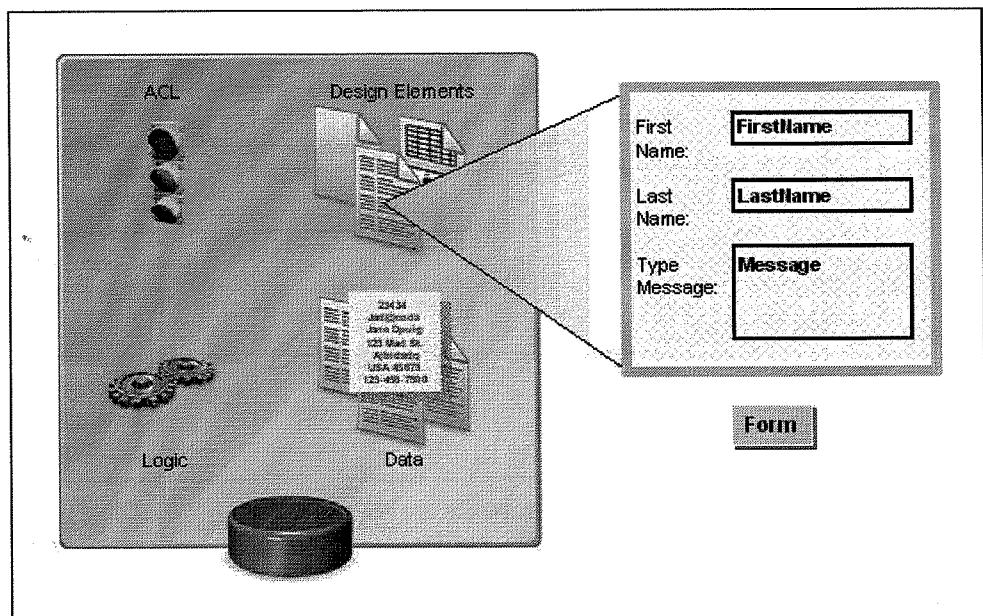


Figure 5-1: The form design element

Database notes

A form is a design note stored inside an IBM® Lotus® Domino® database. The design note contains the design elements and code that make up the form. Lotus Domino databases contain four different types of notes. The following table briefly describes the four note types stored in a database and their function.

Note Type	Function
Header	Contains information about the database itself, such as its name, size, and creation date. Each database has a single header note.
ACL Note	Stores the access control list, a list of names and permissions associated with the database.
Design Note	Each design element, such as a form, view, or page is stored in the database as a design note. The form design note acts as a template used to create new documents or display information.
Data Note	A data note holds the information entered using a form, as well as system data used by Lotus Domino for management purposes. These are also known as documents.

Elements used in forms

The following table describes elements that might be included on a form.

Element	Function
Text and graphics	Display information or pictures on all documents using the form.
Fields	Display data from documents. Save data to a document. Compute a value.
Properties	Control attributes of the form. For example, a background color is a form property.
Other elements, such as subforms, shared fields, and actions	Offer additional tools to the designer, often enhancing interactivity or efficiency of the form.

Form Design

There are three phases in creating a form:

1. Design the appearance.
2. Create the form.
3. Test the form.

In this section, you will investigate the first phase: form design.

When designing a form, consider the following questions:

- What should this form do?
- What kind of information is needed from the user?
- Should any of this information be automatically generated?
- What process(es) should occur once the form is submitted?
- What client(s) will be used to access the form?

Designing a form

Complete these tasks to design and create a form.

Task	Procedure
1	Decide the purpose of the form.
2	Determine the information the form will collect.
3	Determine required elements for the form.
4	Create the form.
5	Add the required elements to the form.
6	Save the form.
7	Test the form in various clients.

Creating a form

Follow these steps to create a form.

Task	Procedure
1	Open the database in Lotus Domino Designer.
2	In the Design pane, click Forms . Result: In the Work pane, the list of existing forms appears. The New Form button appears on the button bar.
3	In the Work pane, click New Form .
4	Choose Design→Form Properties .
5	Enter a name in the Name field.
6	Close the Form Properties box.
7	Add elements to the form.
8	Save the form.

Form Properties

To examine information about a form, use the Form Properties box. The following figure shows the Form Properties box.

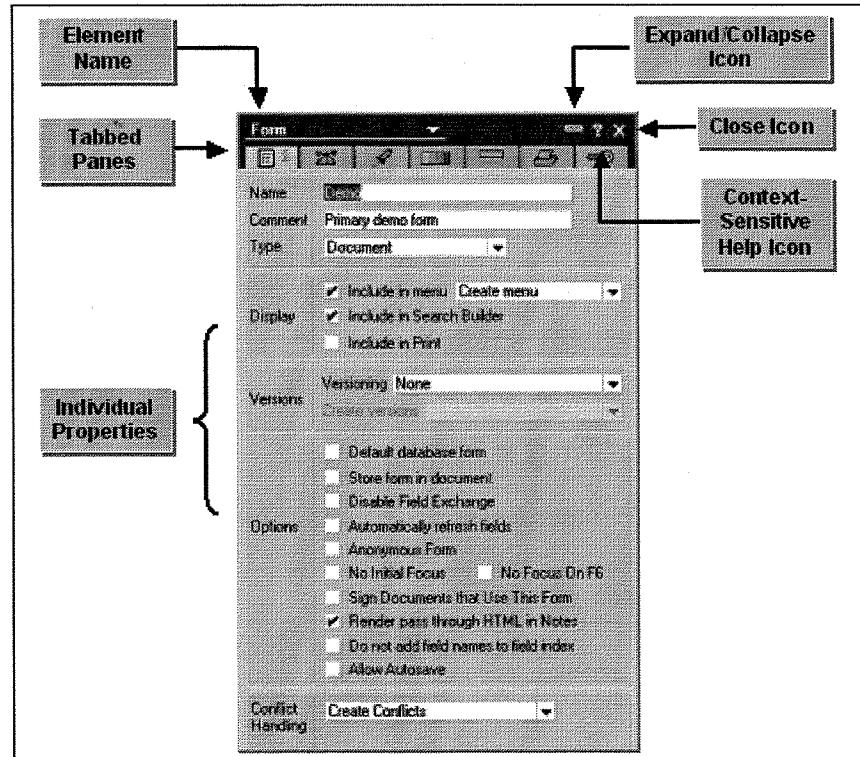


Figure 5-2: The Form Properties box

Use the Properties box to specify attributes of a form such as:

- Form name and alias
- Background color
- Header and footer text

Form names

Form names within the same database must be unique. Form names may include:

- Characters
- Spaces
- Numbers
- Punctuation

Form names are also case-sensitive. Although the name itself is limited to 64 bytes, the size limit increases to 256 characters if there is a name alias or cascading menu option. As with pages, forms can have aliases.



Activity 5-1: Create a form

Follow these steps to create a simple form with an alias.

Step	Action
1	Open your copy of the Practice database.
2	Click Forms in the Design list. Result: A list of existing forms appears in the Work pane.
3	Click New Form . Result: A new blank form opens.
4	Choose Design→Form Properties . Result: The Form Properties box opens.
5	Type the following name and alias into the Name box: Employee Information ei
6	Close the Form Properties box.
7	Save the form. Result: Your new form appears in the form list.

Adding Text and Tables to a Form

As with pages, forms can contain static or dynamic text.

- Static text in a form can be the form's title, field labels, or explanatory text.
- Dynamic text in a form can be computed text.

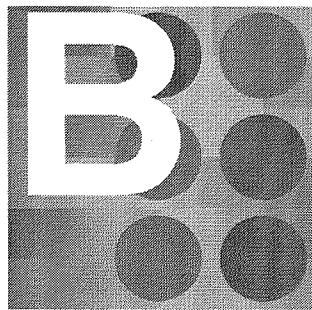
Text and other content in forms can also be organized by using tables, just as in pages.



Activity 5-2: Add and format text

Follow these steps to add formatted text to your form.

Step	Action
1	If necessary, open the Employee Information form in your copy of the Practice database.
2	Enter the following text: Employee Information Form Result: The text appears in the top left corner of your form.
3	Highlight the text you just entered and open the Text Properties box by choosing Text→Text Properties . Result: The Text Properties box opens to the Font tab.
4	On the Font tab, select Arial 24 points . Result: The text changes to Arial font and 24 points.
5	Click the Paragraph Alignment tab and select the centered text option. Result: The text is centered across the top of the page.
6	Click the Paragraph Border tab and click the Double Border style. Select Drop shadow. Result: A border box appears around your text, running the length of the form.
7	Close the Text Properties box.
8	Save and preview the form in both IBM® Lotus Notes® and a Web browser. Note any differences in the form's appearance.



Topic B: Add Fields to Forms

After completing this topic, you should be able to:

- ✓ Identify the characteristics of fields.
- ✓ List the tasks associated with creating fields.
- ✓ List the steps for adding fields to a form.
- ✓ List rules for naming fields.
- ✓ Describe field data types.
- ✓ List field value options.
- ✓ List design considerations for fields.
- ✓ Work with text data.

Fields

A **field** is a part of a form that collects, calculates, or displays data. Each field stores a single type of information. The type of information a field accepts must be defined. Fields are used to:

- Enter data in documents.
- Modify the content of documents.
- View data in documents.
- Calculate data through formulas.

Creating form fields

Complete these tasks to create form fields.

Task	Procedure
1	Add the field to the form.
2	Name the field.
3	Specify the data type.
4	Specify how the field is populated.
5	Set additional field properties.
6	If necessary, program field contents.
7	Save the form.
8	Test the form in various clients.

Specifying field characteristics

When you create fields, specify at least the following characteristics:

- Field name
- Field type
- How the field is populated

Each of these characteristics is specified using the **Field Properties** box.

Adding a field to a form

Follow these steps to add a field to a form.

Task	Procedure
1	Place the cursor at the desired location on the form.
2	Choose Create→Field from the menu, or right-click the form and choose Create Field . Result: Lotus Domino adds a field to the form and opens the field's Properties box.  Note: Like many applications, there can be several options for performing a task. In this course we use the menu bar option for consistency. However, feel free to choose whichever method you are most comfortable with.
3	Enter a name for the field on the Field Info tab in the Properties box.
4	Specify the field type on the Field Info tab in the Properties box.

Field Names

Each field in a form must have a unique name in that form. Use the following rules and guidelines when naming fields. Field names cannot:

- Exceed 32 characters.
- Begin with a number.
- Use the @ symbol.
- Contain spaces.



Caution: Field names can begin with dollar signs (\$). However, this typically indicates a reserved field name. These types of fields add functionality that you would otherwise have to program yourself. If you try to use a reserved name in a way that is different from its intended use or redefine the field, Lotus Domino Designer displays an error message. There are also a few reserved field names that do not begin with dollar signs, such as Form and SaveOptions. These are covered later in this course.

Field Data Types

The field's data type determines two things:

- What type of information the field can contain
- How the field is populated

Fields can contain the following types of data:

- Text
- Numbers
- Date and time
- Formulas
- Rich text

A more complete list may be found in Lotus Domino Designer Help.

Field Values

When you indicate the type of data a field contains, you also indicate how the field gets its value. The following table lists the field value options and their purpose.

How the Field Value Is Created	Value Is...
Editable	Entered by the user. There can be a default entry based on a formula.
Computed	Created as the result of a calculation. Fields are calculated when: <ul style="list-style-type: none">● Saving● Refreshing● Changing modes
Computed for display	Created as the result of a calculation. Lotus Domino does not store the result with the document. It calculates the value each time users refresh the document.
Computed when composed	Created when the document is created. If the field is added to a form, after documents have been created, the value is calculated the next time one of these documents is opened.

Field Design Considerations

Before adding fields to a form, determine the following:

- The type of data that you want to capture (text, number, date, etc.).
- Logical position of fields on the form (consider data entry flow).
- How to identify to users the purpose of the field (for example, field labels).
- How the data should appear to the reader.
- How to identify the field for yourself when designing the application (field name).
- Whether or not there are dependencies on the content of other fields.

Lotus Domino processes forms from the top-left to the bottom-right. Keep this in mind if you create fields whose calculations are dependent upon other fields on the form.

Text Data

Lotus Domino Designer allows you to specify the type of text data a field will store. The types of text data include:

- Text
- Rich text
- Lists
- Names

Text fields

A text field is editable by default. Users can enter and view alphanumeric data in this type of field. One example of a text field is a field used to collect or display a customer name. Text fields have the following characteristics:

- The display format is defined by the field on the form.
- The field length is not fixed.
- The field content can be displayed in a view.

Rich text fields

A rich text field stores complex data. An example of a rich text field is the Body field used in the mail memo. Rich text fields have the following characteristics:

- They can store many types of data, including graphics.
- They can store formatting with the data.
- They cannot display in a view.

Native OS style

Native OS is a style selected on the Field Info tab in the Field Properties box. The Native OS style has a user-friendly interface for text fields. For example, Editable text fields appear on the document as a fixed-sized outlined box instead of as a blank space marked off by brackets.



Activity 5-3: Add text fields to a form

Follow these steps to add first and last name fields, along with text labels, to the Employee Information form.

Step	Action
1	If necessary, open the Employee Information form in your copy of the Practice database. Result: The form opens in the Work pane.
2	Place the cursor below the formatted text. Result: The cursor blinks to indicate its position.
3	Choose Create → Table . Select the appropriate options to create a basic, fixed width table with one row and four columns. Click OK . Result: A table with one row and four columns is inserted.
4	Place the cursor in the first cell of the table. Type the following text: First Name: Result: The text appears in the table cell.
5	Place the cursor in the second cell. Choose Create → Field to create a field with the following characteristics: <ul style="list-style-type: none"> ● Name: FirstName ● Type: Text/Editable. Result: The FirstName field is created.
6	Place the cursor in the third cell of the table. Enter the following text: Last Name: Result: The text appears in the table cell.
7	Place the cursor in the fourth cell. Choose Create → Field to create a field with the following characteristics: <ul style="list-style-type: none"> ● Name: LastName ● Type: Text/Editable Result: The LastName field is created.
8	Save the form.
9	Preview the form in Lotus Notes.

List Fields

List fields present users with a list of pre-defined choices. Some types of list fields allow the selection of a single choice, multiple choices, or choices not in the list. The following table describes the list types available and when to use them.

Use This Type of Field	If You Want the User to Select
Dialog list	One or more choices from a pop-up dialog box, or to add a choice not in the list.
Checkbox	One or more choices from a short list.
Radio button	Only one choice from a short list.
Listbox	One or more choices from a scrolling list.
Combobox	One choice from a drop-down list, or to add a choice not in the list.

Creating a list of choices

Follow these steps to create a field with a list of choices.

Task	Procedure
1	Place the cursor at the desired location on the form.
2	Choose Create→Field from the menu. Enter a name for the field and choose one of the list field types.
3	Click the Control tab.
4	Select one of the list choices: <ul style="list-style-type: none"> ● Enter choices (one per line) ● Use formula for choices Note: Dialog lists have several more choice options.
5	Enter either the list choices or a formula.
6	Save and preview the form.

Setting the default value for a list field

Providing a default value for a list field ensures that the field gets filled in and often removes the need for users to enter data. Follow these steps to set a default value for a list field.

Task	Procedure
1	Open the form in the Designer client.
2	Select the list field.
3	<p>In the Programmer's pane, click the Objects tab.</p> <ul style="list-style-type: none"> The field object with the list field's name should appear at the top of the object list. Default Value should be highlighted. If not, click once on Default Value to select this event.
4	<p>In the Script area, enter the default value surrounded by quotation marks. Click the check mark.</p> <p>Result: A value surrounded by quotation marks displays in the Script area.</p> <p> Caution: This value must exactly match one of the list value's spelling and case.</p>
5	Save the form and preview the design changes.

Default field value

The following figure shows the Programmer's pane with a field entered as a default value.

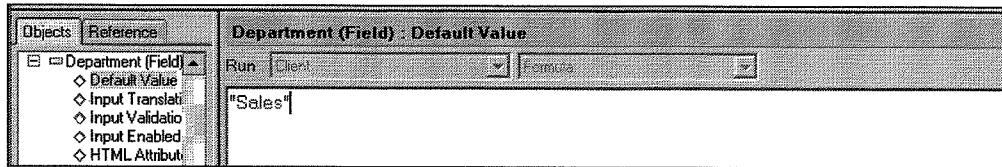


Figure 5-3: A default value entered into the Programmer's pane



Activity 5-4: Create and set a default value for a list field



Scenario: In this activity, you will create several list fields and set default values for them.

Follow these steps to complete the activity.

Step	Action
1	If necessary, open the Employee Information form in your copy of the Practice database. Result: The form appears in the Work pane.
2	Add the following field label below the table: Employment Status Result: The text is inserted.
3	Add a field next to the text. Result: A new field is inserted.
4	Open the Field Properties box. Add the following characteristics on the Field Info tab. <ul style="list-style-type: none"> ● Name: EmploymentStatus ● Type: Listbox, Editable Result: The name and field types are set.
5	On the Control tab, enter the following choices: <ul style="list-style-type: none"> ● Full time ● Part time ● Contractor Result: The list choices are set.
6	From the Objects tab in the Programmer's pane, select the Default Value object. Result: Just above the Script area, the text "EmploymentStatus (Field) : Default Value" displays.
7	In the Script area, type the default value "Full time" and click the check mark. Result: The value is entered into the Script area.
8	Add another list field with the following characteristics: <ul style="list-style-type: none"> ● Name: Department ● Type: Listbox, Editable Choices: Administration, R&D, Manufacturing
9	Save and test the form.

Name Fields

Lotus Domino differentiates text that represents names by using a special category of fields to store names. Because Lotus Domino uses system-specific ways to identify users and servers, consider using a Name field when dealing with names. The following table describes the three types of fields that deal with names.

Field Type	Used to...
Names	Insert or display the name of a user or server.
Readers	Restrict read access to the document. A value in a Readers field will restrict read access to those names specified in that field or in any other Readers or Authors fields in the document.
Authors	Grant read access to the document and grant edit authority to any name that is also specified as an Author in the Access Control List (ACL).

An Authors field is a type of field that works in conjunction with the Author access level in the database's Access Control List (ACL). Authors fields do not override the setting in the ACL. They offer developers more control over which users can edit data in the application. Entries in Authors and Readers fields cannot give a user more access than is specified in the ACL; they can only further restrict access.



Note: You will work more extensively with Readers and Authors fields later in the course.

Numeric Data

Create a number field when the data that users will enter is numeric. Lotus Domino can use data in a number field to perform mathematical calculations. Number fields recognize the following:

- Numerals 0 through 9
- Plus (+) and minus (-) signs
- Decimal point (.)
- Scientific notation (E)

Number fields can be editable, computed, computed for display, or computed when composed.

Setting the style of a number field

Follow these steps to set the style of a number field.

Task	Procedure
1	Create the field.
2	In the Basics tab of the field's Properties box, select Number as its type.
3	Click the Control tab to set the style.

Using a default value for numeric fields

If a numeric field is saved with a blank, the value is valid, but an error will occur if you try to compute a value based on it. A blank value is represented by two quotation marks, " ", and evaluates to a null text string. To ensure that numeric fields maintain the proper data type, set an appropriate default value in the Programmer's pane, or use error-handling techniques.



Note: Error-handling techniques are covered later in the course.

Date/Time Data

When the data users enter or manipulate refers to dates or times, use a date/time field. Date/time fields represent time using a set of numbers and punctuation. Lotus Domino stores date/time values as the number of seconds after a base date.

There are many formatting options available for displaying dates and times. Although the default time format is: MM/DD/YY HH:MM:SS, the operating system's regional settings could affect how dates are displayed.

Date/time fields can be editable, computed, computed for display, or computed when composed.

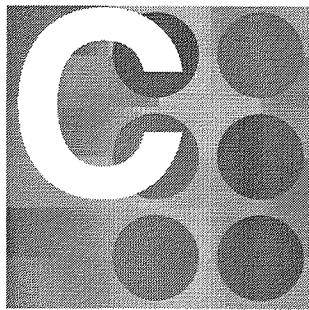
Creating date/time fields

Follow these steps to set the style of a date/time field.

Task	Procedure
1	Create the field.
2	In the Basics tab of the Field Properties box, select Date/Time as its type.
3	Click the Control tab to format the field.

Using Calendar/Time Control

Calendar/Time Control is a style selected on the Field Info tab in the Field Properties box. The Calendar/Time Control style has a user-friendly interface for date/time fields available only to the Notes client. Editable date/time fields display as a graphical date/time control.



Topic C: Hide Form Elements

After completing this topic, you should be able to:

- ✓ Describe the Hide/When options.
- ✓ List conditions for using Hide/When properties.
- ✓ Set Hide/When options for a field.

The Hide/When Options

Hide/When is a property that controls when an element is visible to users or a specific set of users. The Hide/When option hides the entire paragraph where the selected field, text, or graphic is located. However, if the item is inside a table cell, only the contents of the cell are hidden. Some elements that contain Hide/When functionality are:

- Text
- Fields
- Graphics

The following table details the options available for hiding elements.

Option	Description
Previewed for reading	The hidden information is not visible when users read documents in the document Preview pane.
Previewed for editing	The hidden information is not visible when users work on documents in Edit mode in the document Preview pane.
Opened for reading	The hidden information is not visible when users open documents in Read mode. A field that cannot be read cannot be printed or copied to the clipboard.
Opened for editing	The hidden information is not visible when users work on documents in Edit mode.
Printed	The hidden information is not visible on printed documents.
Copied to the clipboard	The hidden information is not visible when information is copied to and pasted from the clipboard.
Embedded	The hidden element is not visible when the document is an embedded document.

Option	Description
Hide paragraph if formula is true	A formula determines the circumstances in which information is hidden.



Note: It is important to note that the Hide/When option is not a security feature.

Conditions for Using Hide/When

When determining whether or not to hide a field, ask the following questions:

- Is it appropriate for all users to see this data?
- Do users need to see the data at all times?

For example, Worldwide Corporation has a standard form filled with information about their employees. When a manager opens an employee's profile, she does not need to see all the company departments, just the one to which the employee belongs. On the other hand, when new employees are added, or an existing employee's information is updated, it would be helpful to see all the departments.

The following table outlines conditions to hide information.

If Users Are...	Then...
Reading a document	Hide information that is useful only when users create or edit documents.
Editing, creating, or printing documents	Hide information that is useful when users read documents.

In the previous example, the Department field is a list field. In order to view the list field while editing and the resulting data when reading, create the following two fields:

- A list field containing all the Worldwide Corporation departments
- A computed for display field to display the resulting value

Displaying the selected value of a list field in Read mode

Follow these steps to set Hide/When options for a list field.

Task	Procedure
1	Create an editable list field.
2	Set the properties on the Paragraph Hide/When tab so that the list field is hidden when the document is: <ul style="list-style-type: none">● Previewed for reading● Opened for reading
3	Create another field and set the field type to Computed for display .
4	Set the properties on the Hide/When tab so that the computed field is hidden when the document is: <ul style="list-style-type: none">● Previewed for editing● Opened for editing
5	In the Programmer's pane, select the Value object for the computed field from the Objects tab.
6	In the Script area, enter the name of the list field.
7	Save the form.
8	Test the form.



Activity 5-5: Set Hide/When properties



Scenario: In this activity, you will continue working in your copy of the Practicea database. You will create a field named **DEmploymentStatus** (the “D” in front of the field name indicates that the field is for display only) and set the appropriate Hide/When properties so that the **EmploymentStatus** list field displays when the document is new or in Edit mode, and the **DEmploymentStatus** field is displayed when the document is in Read mode.

Follow these steps to complete the activity.

Step	Action
1	<p>In the Employee Information form, add label text and a field on the line below the EmploymentStatus field that has the following characteristics:</p> <ul style="list-style-type: none"> ● Label text: Employment Status ● Field Name: DEmploymentStatus ● Field Type: Text, Computed for display <p>Result: The new field is created.</p>
2	<p>To set the value of DEmploymentStatus, click the field. In the Script area of the Programmer’s pane, enter EmploymentStatus</p> <p>Result: The default value for the new field is set to the value of the EmploymentStatus field.</p>
3	<p>To set Hide/When properties for the new field, click the field. In the Field Properties box, click the Paragraph Hide/When tab. Select Previewed for Editing and Opened for Editing.</p> <p>Result: The field will only display when the form is in Read mode. It will not display when the user is editing the document.</p>
4	<p>To set the Hide/When properties for the EmploymentStatus field, click the field. Open the Field Properties box. Click the Paragraph Hide/When tab. Select Previewed for Reading and Opened for Reading.</p> <p>Result: The field will only display when the form is in Edit mode. It will not display when the user is reading the document.</p>
5	<p>Save and test the design changes. Create four or five documents using this form.</p> <p>Result: The EmploymentStatus field displays in Edit mode. The DEmploymentStatus field displays in Read mode.</p>



Practice Activity 5-6: Create a Form that Contains a Table and Fields



Scenario: Worldwide Corporation is in the process of creating organizational policies. You have already created your copy of the Policies and Procedures database and Information page in a previous practice activity. In this activity, you will create the form that will be used to enter the company's policies and procedures.



Note: The guided solution to this activity can be found in Appendix A, Solutions to Practice Activities.

Perform the following tasks to complete this activity:

1. Open the Policies and Procedures database that you created earlier in the course.
2. Create a new form in the Policies and Procedures database. Name the new form Policy.
3. Title the form Policies and Procedures.
4. Format the title.
5. Use a table to organize the fields and field labels that will be included on this form.
6. Add the following field labels and field names to collect and/or display the following information:
 - Policy Number: PolicyNo
 - Policy Title: PolicyTitle
 - Effective Date of the policy: EffectiveDate
 - Policy Description: Description
 - Policy Category: Category (The categories are Office Guidelines, Benefits, Holidays, and Grievance Procedures.)
7. The category should display when the document is in Read mode, while all the categories should be visible when the document is in Edit mode.
8. Test the form. Create several documents from the new form to see if the correct information is gathered and displayed. Close the document and reopen it to test the Category field functionality.

Topic C: Hide Form Elements

Lesson 5 ■ Creating Forms

9. Close all open windows.



Note: The database will contain a default view. All of the documents you create will appear in this view. You will create a customized view later in the course.