Functionality Walk-Through Guide

BETA TESTER EDITION

May
1996

Lotus Components

http://components.lotus.com

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How to use this guide

Thank you for taking the opportunity to review Lotus Components. The purpose of this guide is to provide an introduction to Lotus Components and how they work with Notes Release 4. This guide offers a series of step-by-step, walk-thru exercises for two distinct audiences; the Notes user and the Notes application developer. These exercises will demonstrate the features and technologies of Lotus Components suiting the needs of both audiences.

This guide begins by furnishing a brief definition of Lotus Components and how they relate to Notes Release 4. The seamless integration between Lotus Components and Notes Release 4 is then further described and how this integration brings significant benefits to both audiences.

For the Notes user, this guide will suggest a whole new way of working. Using Lotus Components allow users to "live" within Notes only using those tools necessary to complete distinct tasks. A series of walk-through exercises then illustrate this with a step-by-step demonstration of each Lotus Component included in the Lotus Component Starter Pack.

For the Notes application developer, this guide will begin to describe the extended solution potential Lotus Components offer Notes applications. Developers will learn how easily Lotus Components can be incorporated into Notes solutions, dramatically reducing their application development cycle. Two key development technologies will be defined and illustrated in three walk-through exercises: Notes/FX and LotusScript.

This guide is organized into the following three distinct sections:

- Lotus Components Integration with Notes Release 4
- Walk-Through Exercises for Notes users
- Walk-Through Exercises for Notes Application Developers

We thank you for taking the opportunity to review Lotus Components.

Regards,

The Lotus Components Team

Lotus Components Integration with the Notes Release 4

Before starting a walk-through self demonstration of the rich feature sets and functionality of Lotus Components, it is important to understand the relationship between Lotus Components and Notes Release 4. Lotus Components are small, fast and focused, embeddable software modules that have been optimized to seamlessly integrate with Notes Release 4. Technically described, they are enhanced ActiveX Controls (formerly OCXs), which by definition require an "ActiveX container" in which to live, depending on that container for a variety of services.

Notes Release 4 has been widely acknowledged as the premier ActiveX container, complete with a full application development environment, application deployment and administration capabilities, and a powerful communication messaging system. As the initial container for Lotus Component, Notes Release 4 offers a whole host of services and benefits to Lotus Components both for the Notes user, and the Notes application developer.

Integration for the Notes User

The tight integration between Lotus Components and Notes Release 4 manifests itself to Notes users through the Lotus Components Palette, and the standard Notes interfaces which include; Notes Menus, SmartIcon Palettes, Live Status Bar, InfoBox and Right Mouse Button Menus. It is through these interfaces that users will tap into all the features and functionality of Lotus Components.

Through seamless integration, Notes users utilize Lotus Components as integral extensions of the Notes workspace, providing a single place to complete all their work. The combination of complimentary feature sets between these products eliminate the traditional need for users to launch and/or switch between multiple editing programs to perform their work--only to subsequently bring their finished work back into Notes via file attachments. Users can start -- and stay -- inside of Notes accessing Lotus Components on an "as needed" basis to complete their task. Since Lotus Components are small and extremely focused, users can quickly master component feature sets, dramatically shortening their learning curve.

Menus

Lotus Components adhere to and fully integrate with the standard Lotus menu structure as implemented in Notes Release 4 and other Lotus products. These menus appear above the SmartIcon palette in the application window.

Task Sensitive Menu(s) appear between the "Create" and "Window" menus. They appear and disappear when the cursor enters or leaves a particular area in Notes. (i.e. text, table, field, embedded object, etc.) It is in this space that Lotus Component specific menus appear when the cursor is within an activated component. (See "Project Scheduler" example below) In addition to the component specific menu, Lotus Components support the task sensitive functionality of the Edit, View and Create menus and change accordingly.

Lotus Project Scheduler Component Menu

SmartIcons

Notes Release 4, as with other Lotus products, use two types of SmartIcon palettes. The "universal' palette is in general, always available to the end user when Notes is open. The "task sensitive" palettes are programmed to anticipate the tasks users are about to perform and then appropriately present them with the most commonly used functions. Both types of SmartIcon palettes are customizable by the end user or developer.

Lotus Components fully comply with and support the implementation of Lotus SmartIcon palettes. Since Lotus Components are ActiveX objects residing within a Notes document or form, they act as task sensitive "objects" within Notes. Upon activating a Lotus Component, the Notes document or form centric palettes are replaced with a Lotus Component "task sensitive" palette, providing the user with the most common and appropriate functions with a single mouse click.

Lotus Chart Component SmartIcon Palette

Status Bar

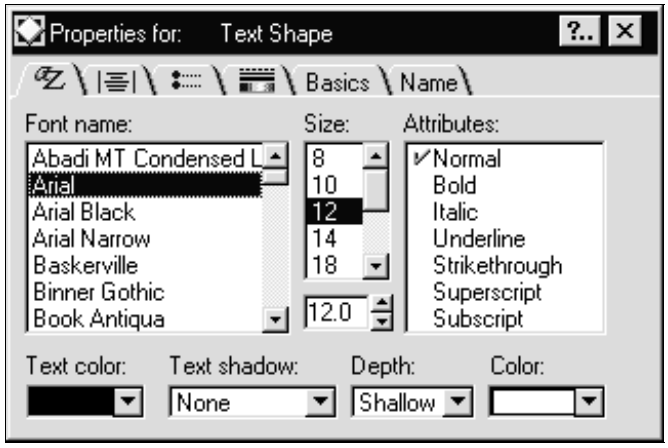
The Lotus Status Bar resides on the bottom of the application window and generally supplies the user with quick access to common formatting functions such as font selection, font style, font size, numeric formatting etc. Lotus Components offer full integration with the Lotus Status Bar similarly providing component-specific formatting options to the user.

Lotus Spreadsheet Component Status Bar

InfoBox

The Lotus InfoBox or "properties box" is an innovative new formatting tool supported by Notes Release 4 and other Lotus products. It offers a feature rich, tabbed user interface for "one-stop-shopping" of formatting options. This tool is task sensitive, mode-less, and collapsible so users can leave it open while they continue to work. Lotus Components take full advantage of the InfoBox to give users the tools they need when they need them to format and manipulate their component specific data.

Lotus Draw/Diagram Component InfoBox



Right Mouse Button Menus

In addition to the four user interfaces defined above, Lotus Components offer full right mouse button support. This task sensitive type of support provides the user with a short drop down menu of commonly performed tasks associated with the object selected. It is used by simply right mouse clicking on any object within the Lotus Component. At the top of all right mouse click drop down menus, an option to bring up the properties associated with that object through the InfoBox will be available.

Integration for the Notes Application Developer

For Notes application developers, the integration between Notes Release 4 and Lotus Components surface through the Notes UI integration (described above), through basic Notes form development with OLE objects, and through two key integrating technologies; Notes/FX 2.0 and LotusScript.

The seamless integration to the Notes UI interfaces offer application developers the ability to extend the functionality of their Notes applications without requiring end users to learn new skills. Because Notes application developers can leverage their knowledge of basic Notes form development and OLE objects, they can significantly shorten their application development cycle and/or product time-to-market. Finally using Notes FX and/or LotusScript, developers can further customize and control functionality of applications based on Lotus Components and Notes Release 4.

Notes/FX 2.0 Support

Lotus Components support the latest version of Notes/FX 2.0. Notes/FX "field exchange" is a non-programming technology that allows you to exchange data seamlessly and bi-directionally between Lotus Components and Notes Release 4.

Through this technology, Notes based data can be pushed into a Lotus Component for analysis, charting, formatting, presenting etc. by the unique abilities of the component. Conversely data entered into Lotus Components can be pulled out into Notes fields. This data, now exposed to the Notes application developer, can be further developed upon for inclusion in Notes views, actions, agents, scripts, workflow, routing and so forth.

LotusScript 3.0 Support

Lotus Components have been enhanced to support LotusScript 3.0, the BASIC compatible scripting language of Notes Release 4 and other Lotus products. The properties and methods of Lotus Components, exposed by standard OLE Automation, are made accessible to the Notes developer through the Notes Release 4 object browser, an integral part of the Notes Release 4 integrated development environment (IDE). Using these properties and methods, the LotusScript application developer is able to customize a component's look and feel as well as drive it programmatically. This means that developers can use components to build sophisticated, modular applications using high-level tools without giving up functionality, programmability or flexibility.

Walk-Through Exercises for Notes Users

This section of exercises is intended for all Notes users interested in learning about Lotus Components. To complete these exercises, you should be familiar with basic Notes functionality including using Notes forms, menus, SmartIcons, status bar, InfoBox and right mouse button menus. By completing these exercises, a Notes user will acquire a basic knowledge and competency of the core functionality of each Lotus Component included in the Lotus Component Starter Pack.

These exercises require that you use the Windows 95 or NT 32 bit version of Notes Release 4 with accessibility to a standard Notes Release 4 Mail database. You can either use your own personal Mail database, or create a new one for the purpose of completing the exercises in this guide.

> You can easily create a new Notes Release 4 Mail database by clicking on the "File" menu, and selecting "Database," and then "New...". In the bottom portion of the "New Database" dialogue box, choose to create a database using the Mail (R4) template. Give the database a title and file name, and then press the "OK" button.

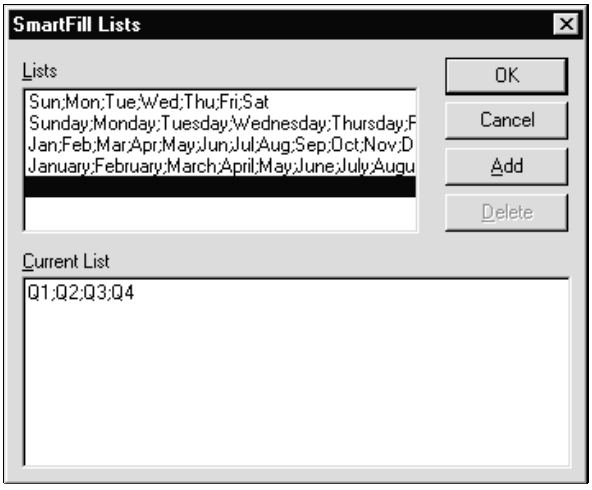
Before beginning each exercise below, open a standard Notes Release 4 mail database, create a new e-mail document, and place the cursor in the "body" section of the e-mail message.

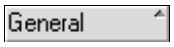
Lotus Spreadsheet Component

This 20 minute exercise provides a hands-on introduction to the features and functionality of the Lotus Spreadsheet Component. It will walk you through inserting a Lotus Spreadsheet Component into a Notes Release 4 document, working with spreadsheet basic formulas, setting up custom SmartFill lists, applying formatting, using drawing tools and adjusting spreadsheet viewing preferences.

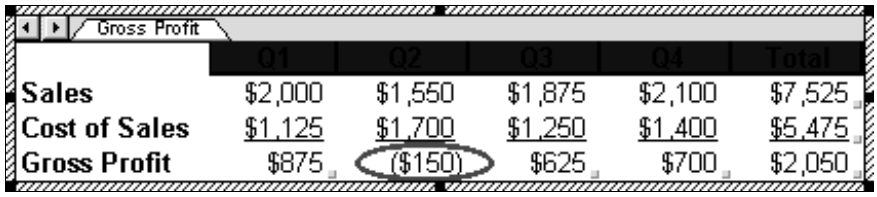
☑ What to do	☞ How to do it	💻 What to see
Create a Lotus Spreadsheet Component.	➢ Click on the Lotus Components Palette  located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Spreadsheet" from the drop down menu. ➢ Enlarge the size of the spreadsheet component window by dragging out a corner of the window.	A Lotus Spreadsheet Component will appear in your e-mail showing 4 columns and 8 rows. The component window becomes larger exposing more columns and rows.
Enter sample data into spreadsheet.	➢ Enter the following data into the spreadsheet component in their respective cells: A2: Sales A3: Cost of Sales A4: Gross Profit B1: Q1 B2: 2000 B3: 1125 C2: 1550 C3: 1700 D2: 1875 D3: 1250 E2: 2100 E3: 1400	Your starting spreadsheet component should look like this:

	A	B	C	D	E	F	G
1		Q1				Total	
2	Sales	2000	1550	1875	2100		
3	Cost of Sales	1125	1700	1250	1400		
4	Gross Profit						
5							
6							
7							
8							

	F1: Total ➢ Widen column "A" by first hovering the cursor between columns "A" and "B" in the column headers area, and then when the cursor turns into an two sided arrow, dragging the cursor to the right.	
Sum rows.	➢ With the cursor in cell F2, click on the Autosum SmartIcon.  ➢ "Drag" the Autosum formula from cell F2 to F3 by placing the cursor in the very bottom right corner of cell F2, (Cursor changes to a plus sign) and dragging the cursor to cell F3.	The spreadsheet component automatically totals the values of cells B2...E2. (7525) The formula from F2 is copied into F3 automatically totaling the values in cells B3...E3. (5475)
Sum columns. (Notice the Lotus Spreadsheet Component supports both 1-2-3 and Excel formula syntax)	➢ Place the cursor in cell B4, and enter the following 1-2-3 formula using this syntax and key stroke: +B2-B3 [Return] ➢ Place the cursor in cell C4, and enter the following Excel formula using this syntax and key stroke: =C2-C3 [Return] ➢ "Drag" the formula from cell C4 to F4 by placing the cursor in the very bottom right corner of cell C4, (Cursor changes to a plus sign) and dragging cursor to cell F4.	The spreadsheet component returns the value of 875. (The difference between the values of cells B2 and B3) The spreadsheet component returns the value of -150. (The difference between the values of cells C2 and C3) The formula from C4 is copied into cells D4...F4 automatically.
Setup custom SmartFill list for annual quarters.	➢ Click on the Create menu, and select the "SmartFill Lists..." option. ➢ Place the cursor in the bottom text box and enter the following text: Q1;Q2;Q3;Q4 ➢ Click the "Add" button, then the OK button. 	The spreadsheet component automatically fills in the labels Q2, Q3, Q4 into cells B1...E1, based on the newly created custom list for Quarters.

	➢ Place the cursor in the very bottom right corner of cell B1, (Cursor changes to a plus sign) and drag the cursor to cell E1.	
Format data.	➢ Highlight all the cells containing "Sales," "Cost of sales," and "Gross Profit" figures (B2...F4). ➢ Use the number formatting Status Bar button  to change the number type from "General" to "Currency." ➢ Further format these numbers through the decimal place status bar button  by changing the setting from "2" to "0." ➢ First select cells A2...A4, and then while holding down the Ctrl key on the keyboard, continue to highlight cells B1...F1. ➢ Use the Bold SmartIcon  to format these two ranges simultaneously. ➢ Highlight cells B1..F1 and center align them using the center align SmartIcon.  ➢ Highlight cells B3..F3 and underline them using the underline SmartIcon. 	All numerical values change to currency formatting with two decimal places. All numerical values change the decimal place setting to 0. The cell range A2...A4 becomes highlighted. In addition to cell range A2...A4 the cell range B1...F1 also becomes highlighted. Labels in these two ranges become bolded. Labels in cell range B1...F1 become centered. Labels in cell range B3...F3 become underlined.
Use drawing tools.	➢ Click on the Oval drawing SmartIcon  and drag out an oval around the negative total for the Q2 column. (Cell C4) ➢ Right mouse click on the oval. From the drop down menu, select "Shape properties..." to bring up the InfoBox. ➢ On the Lines and Colors Tab, select the "Transparent" check box to allow the value of C4 to be seen through the oval. ➢ Increase the "Line" width to the thickest setting and change the "Edge" color to red.	An oval appears over the value of C4. The InfoBox appears with the Shape properties. The value of C4 reappears on top of the oval. The line thickens and is turned red.
Set spreadsheet viewing options.	➢ In the center of the InfoBox title bar, click the drop down list to change the focus of the InfoBox to "Lotus Spreadsheet." ➢ Click the Basics tab and in the "Sheet name" field, rename the Sheet "Gross Profit." ➢ Click on the Show tab and check the "Worksheet tab" checkbox. ➢ In the "Show" area, uncheck the Column headings, Row headings, and Gridlines checkboxes.	InfoBox title and tabs change to reflect properties for entire spreadsheet. Name changes from "Sheet1" to "Gross Profit." Spreadsheet tab appears at the top of the spreadsheet component with the label, "Gross Profit."

	➢ In the "Rows" and "Columns" areas, click the Show only checkboxes to expose only 4 rows and 6 columns.	Spreadsheet column headings, row headings, and gridlines disappear. Spreadsheet resizes to show only 4 rows, and six columns.
Add header background color and add a border.	➢ Without closing the InfoBox, highlight the cell that contains the label "Q1." (Cell B1) ➢ In the center of InfoBox title bar, change the focus of the InfoBox from Lotus Spreadsheet to the cell B1. ➢ Click on the Lines and Colors tab, and in the Interior area change the "Fill color" to blue. ➢ In the Border area, choose the first border option in the drop down list to add a border to all cell sides, next change the border to a solid line, and finally make the line black. ➢ Close the InfoBox. ➢ With the cursor still in cell B1, click the FastFormat Icon  and "paint" the remaining header cells (C1...F1) by dragging the mouse over these cells.	InfoBox title and tabs change to reflect properties for cell B1. Cell B1 becomes blue with a solid black line around all borders. InfoBox disappears. Cells C1...F1 adopt the background and border formatting of cell A1.



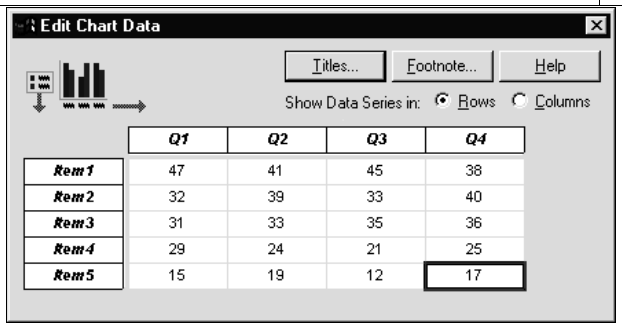
Your final Lotus Spreadsheet Component should look like this.

***Optional Steps**		
Add an additional worksheet.	➢ Right mouse click on the "Gross Profit" worksheet tab. ➢ Select Append worksheet from the right mouse button menu. ➢ Click on "Sheet2" tab to view the added worksheet.	A right mouse button menu appears. A new worksheet appears with the tab label "Sheet2". The new sheet comes to the front when the tab is clicked.
Export and open with 1-2-3 or Excel.	➢ From the Spreadsheet menu, choose the "Export file..." option. ➢ Choose the file type, (either 1-2-3 or Excel), give the file a name, and save it to your hard drive. ➢ Open this same file in your 1-2-3 or Excel application to review the file and see the cross-product compatibility of the Lotus Spreadsheet Component.	Export Worksheet dialogue appears and then disappears as you choose OK.

Lotus Chart Component

This 10 minute exercise provides a hands-on introduction to the features and functionality of the Lotus Chart Component. It will walk you through inserting a Lotus Chart Component into a Notes Release 4 document, creating a chart on specified data, producing chart titles, legends and footnotes, and changing chart types and 3D perspectives.

☑ What to do	☞ How to do it	💻 What to see
Create Lotus Chart Component.	➢ Click on the Lotus Components Palette [Lotus Components] located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Chart" from the drop down menu. ➢ Enlarge the size of the Chart component window by dragging out a corner of the window.	A Lotus Chart Component will appear in your e-mail showing a 3D bar graph with sample data. The Chart component will become larger.
Enter sample Chart data. (In the Gold version of Lotus Components, you will have the option to link the Chart Component directly to data in the Spreadsheet Component)	➢ Click on the "Show Data Grid" SmartIcon.  ➢ Enter the following data into the data grid: Item #1 Row: 47, 41, 45, 38 Item #2 Row: 32, 39, 33, 40 Item #3 Row: 31, 33, 35, 36 Item #4 Row: 29, 24, 21, 25 Item #5 Row: 15, 19, 12, 17 ➢ Close chart data grid.	The data grid appears. The data grid disappears.

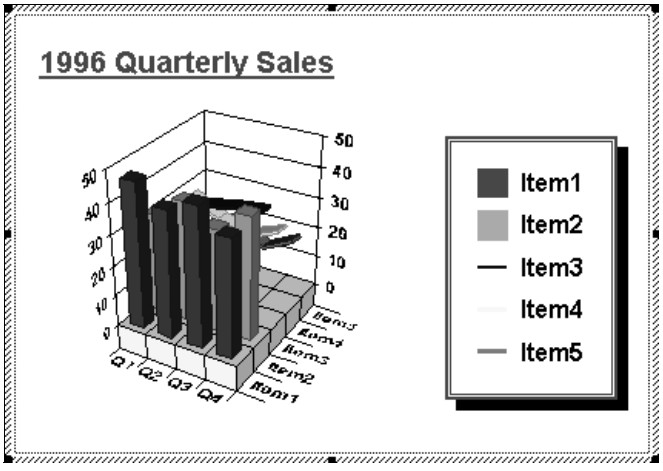


After data is entered, the grid should look like this.

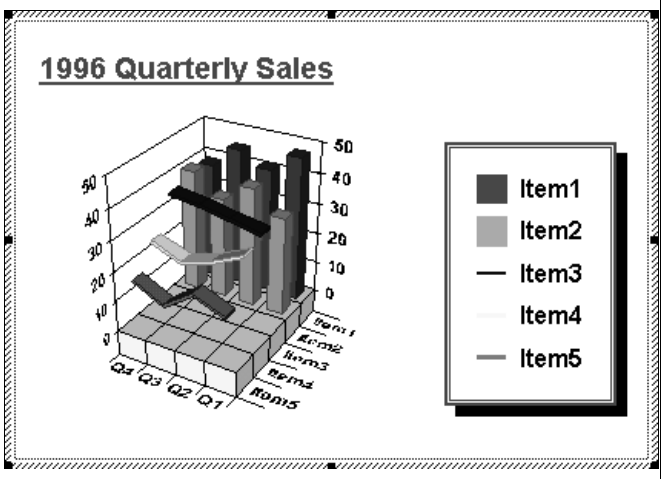
Add Chart Title.	➢ Expose the Chart title by clicking the "Show Title" SmartIcon.  ➢ Click on the title once to select it. ➢ Right mouse click on the "Chart Title" text that appears, and select "Title Properties...". In the field box labeled "Text" enter the following title: 1996 Quarterly Sales ➢ Move the Title to the top left corner of the chart by selecting the top left radio button in the "Position" area. Then click on the font properties tab and change the title	The text "Chart Title" appears above the center of the chart. The InfoBox appears with the "Title Layout" tab on top. The text "1996 Quarterly Sales" appears in the chart. The title moves to the top left corner of the chart. Title is enlarged, is underlined, bolded and made red.

	font size to 14, then format the title to be underlined, bold and red.	
Add Legend.	➢ Click on the drop down box in the middle of the InfoBox title bar, and choose "Legend". ➢ Click the Line & Colors tab and in the Border area, unclick the "Same Color as Interior" checkbox. ➢ Change the border color to red, select the bottom border style in the drop down list, and check the shadow checkbox.	The InfoBox properties change to reflect properties of the Legend. The InfoBox comes up. A red border appears around the legend. The border style changes and a black shadow appears.
Change Chart Type and 3D perspective.	➢ In the InfoBox title bar drop down list, change the focus of the InfoBox to "Chart". ➢ Browse the chart types available and then select the mixed chart category. Choose the mixed chart on the upper right..  ➢ Close the InfoBox. ➢ Since chart items 3 through 5 are difficult to see, spin the chart around 180 degrees by holding down the Ctrl key, clicking on the chart, and dragging the mouse to the left or right.	Various chart types appear and then the 3D chart type is left on screen. The chart rotates around 180 degrees exposing items 5 through 1 in reverse order. The 3D purple line should be in front followed by the yellow and blue lines, and then the green and red 3D bars.

Before Chart Rotation



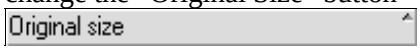
After Chart Rotation



Your final Lotus Chart Component should look like this.

Lotus File Viewer Component

This 5 minute exercise provides a hands-on introduction to the features and functionality of the Lotus File Viewer Component. It will walk you through inserting a Lotus File Viewer Component into a Notes Release 4 document, adjusting viewing preferences, working with zoom features, and launching to edit with associated applications.

☑ What to do	☞ How to do it	💻 What to see
Create Lotus File Viewer Component.	➢ Click on the Lotus Components Palette  located in the upper right corner of the Notes Release 4 title bar. ➢ Select "File Viewer" from the drop down menu. ➢ From the "Lotus File Viewer - Import File" dialogue box, import either a Freelance Graphics or Powerpoint presentation file. (If you haven't access to any "presentation files" import either a spreadsheet or word processing document) ➢ Enlarge the size of the File Viewer component window by dragging out the an object corner.	A "Lotus File Viewer - Import" dialogue box will appear prompting you to select a file to import. A Lotus File Viewer Component will appear in your e-mail with an imported file at an "original size" setting. The File Viewer window will become larger.
Change viewing preferences.	➢ In the far right side of the File Viewer Status Bar, change the "Original Size" button  to: "Stretch, ignoring original proportions." ➢ Then to keep the original proportions, change it to "Stretch, keeping original proportions."	File image stretches to fill File Viewer window. File image stretches to fill File Viewer window retaining original proportions.

Your Lotus File Viewer Component should look something like this.

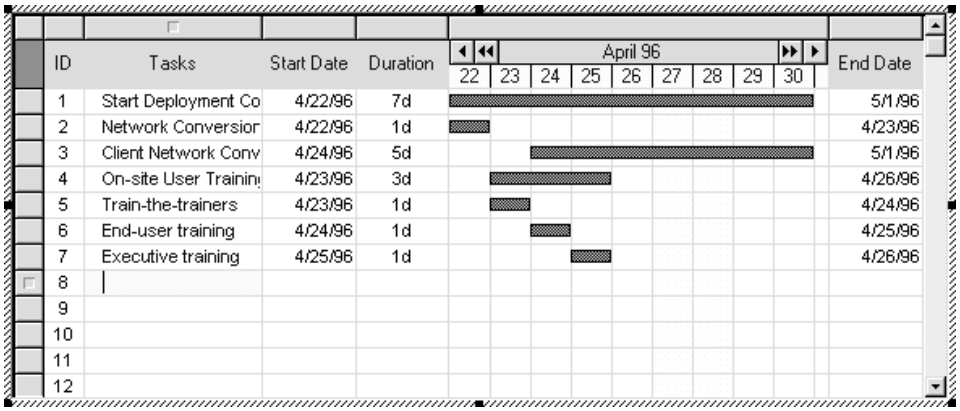
Scroll through multiple pages in file.	➢ Use the "Fit Window to Bitmap Image" SmartIcon  to eliminate any unused space around your file in the File Viewer Window. ➢ View various pages of your file by clicking on the tabs "Page 1, Page 2, etc."	The File Viewer window shrinks to fit your file image. The File Viewer allows you to see all pages of your document.

Adjust zoom settings.	➢ Click the "Zoom In"  and "Zoom Out"  SmartIcons. ➢ Click the "Zoom to Full Screen" SmartIcon.  ➢ Press the Esc key on your keyboard to return to normal viewing. ➢ Select an item on a presentation page which you'd like to view up close. With the mouse, start at the top left of the object and drag right and down creating a square around the object desired. ➢ Click the "Zoom Selection" SmartIcon  to zoom in on that object. ➢ Click the <u>V</u>iew, menu and select "Zoom Reset" to reset the zoom setting.	Your file becomes larger and smaller within the File Viewer window. Your file enlarges to takes up the entire screen and then returns to normal size within the file Viewer. A yellow lined square appears around your selected object. The file Viewer zooms in on the object. The file is reset to its original size.
Launch to edit file.	➢ Click on the "Launch Using Associated Editor" SmartIcon  to launch the file to edit it.	Your editing application launches with the file from the Lotus File Viewer Component, now ready for editing.
**Note: You can choose the "Launch Using Selected Editor"*  *to manually select an editing application from a list of all those registered on your computer.*		

Lotus Project Scheduler Component

This 15 minute exercise provides a hands-on introduction to the features and functionality of the Lotus Project Scheduler Component. It will walk you through inserting a Lotus Project Scheduler Component into a Notes Release 4 document, entering project tasks, working with primary and secondary timelines, linking related tasks, demoting tasks to sub tasks and adjusting viewing preferences.

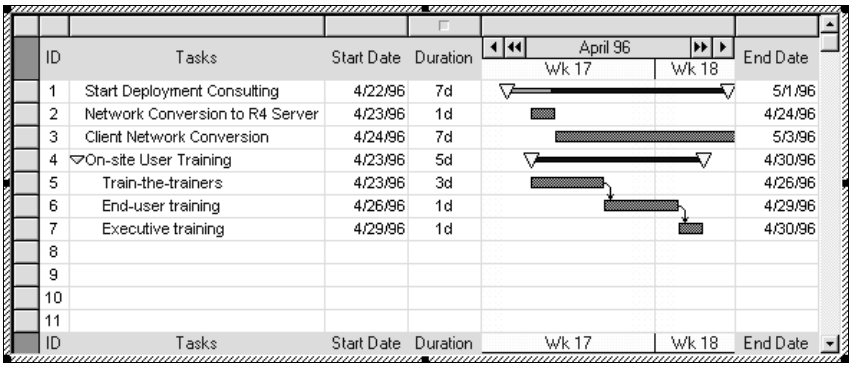
☑ What to do	☞ How to do it	💻 What to see
Create a Lotus Project Scheduler Component.	➢ Click on the Lotus Components Palette [Lotus Components] located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Project Schedule" from the drop down menu.	A Lotus Project Scheduler Component will appear in your e-mail showing 12 blank task rows.
Enter sample data.	➢ Place the cursor in the "Tasks" column, in row #1. Enter the following data into Task rows 1-7: Row 1: Start Deployment Consulting Row 2: Network Conversion to R4 Server Row 3: Client Network Conversion Row 4: On-site User Training Row 5: Train-the-trainers Row 6: End-user training Row 7: Executive training ➢ From the Project Scheduler menu, select "Unlink all Tasks." Answers "Yes" to the "Are you sure... " dialogue box. ➢ Enter the following start dates and duration times into the "Start Date" and "Duration" columns in rows 1-7: Row 1: 4/22/96; 7d Row 2: 4/22/96; 1d Row 3: 4/24/96; 5d Row 4: 4/23/96; 3d Row 5: 4/23/96; 1d Row 6: 4/24/96; 1d Row 7: 4/25/96; 1d	Default start dates, durations, and graphical indicators will be automatically entered into each task row while the sample data is entered. All tasks (that by default are linked) will be unlinked. Task graphical indicators move to the correct start date and indicate the correct durations.



This is what your Project Scheduler Component should like after sample data is entered.

Adjust timeline indicators.	➢ Using the "Increase Timeline Toward Years" SmartIcon,  change the Secondary timeline to weeks.	The secondary timeline changes to indicate weeks instead of days.
Change timeline type.	➢ Right mouse click on the "Start Deployment Consulting" task's graphical indicator, and choose "Properties..." to bring up the InfoBox. ➢ On the "Basics" tab, change the "Timeline Style" to the timeline with the yellow triangles.  ➢ Change the "Fill Color" to dark blue, and close the InfoBox	The "Start Deployment Consulting" task's graphical indicator changes to the timeline style with yellow triangles. The timeline color changes to dark blue. InfoBox disappears.
Mark percentage completed on a task.	➢ Indicate that this first task (Start Deployment Consulting) is about 20% completed by placing the cursor in the graphical timeline indicator where the yellow triangle on the left touches the start of the blue line. (The cursor changes to a percentage sign.) ➢ Drag your mouse to the right until the status pop-up box approximates 20%	A status pop-up box appears and the time line becomes partly green, indicating the task is now roughly 20% completed.
Use calendar tool.	➢ On task row 3, "Client Network Conversion," indicate that this task will start on April 23rd instead of the 22nd. To do this, click on the "Show/hide Calendar" SmartIcon  to bring up the calendar.  ➢ Click on the forward and backward controls until you arrive at the month April, 1996. Drag-and-drop the new start date by clicking on the date of April 23rd, and dragging it down to the "Client Conversion to R4" row in the "Start Date" column and letting go of the mouse button. ➢ Close the Calendar tool.	The Calendar tool appears. The timeline moves forward one day indicating the changed start date of this task. The Calendar tool disappears.
Demote tasks.	➢ Highlight the entire task rows of tasks 5-7 by dragging the mouse over these rows on the column to the left of the ID column.	Rows 5-7 are highlighted. The graphical indicator of the "On-Site Training" task changes to the timeline style with the yellow triangles and a

	➢ Click on the "Demote Selection" SmartIcon,  to demote these tasks. They then become sub-tasks of the On-Site Training task.	gray expand/collapse tool appears before the task. Tasks 5-7 become indented.
Link tasks.	➢ With the task rows 5-7 still highlighted, click on the "Link Selected Tasks" SmartIcon  to link these tasks.	Tasks 5-7 become linked.
Extend task duration graphically.	➢ On task row 9, "Train-the-trainer," indicate that this task will take 2 days longer than anticipated. Do this by placing the mouse on the rightmost part of the graphical indicator for task 9, (cursor changes to a right arrow) and dragging the timeline out two days time. **Notes that the Lotus Project Scheduler Component has accounted for the fact that Apr. 27-28 is a weekend and moves the timelines out accordingly.*	The graphical indicator for "Train-the-trainer" is lengthened to the right two more days. The duration time in the "Duration" column has changed from 1 to 3 days.
Collapse and expand sub tasks.	➢ Collapse the On-Site Training's sub-tasks by double-clicking on the gray expand/collapse tool. ➢ Expand the On-Site Training's sub-tasks by double-clicking on the gray expand/collapse tool.	The sub tasks of "On-Site Training collapse and expand accordingly.
Expose column headers on top and bottom of schedule.	➢ Right mouse click on the "Tasks" column heading and choose "Properties..." to bring up the InfoBox. ➢ On the Lines & Color tab, choose "Show at Top and Bottom" in the Title Position drop down box.	InfoBox appears. The Column headers appear along the bottom of the columns as well as the top.

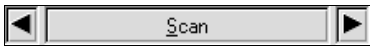


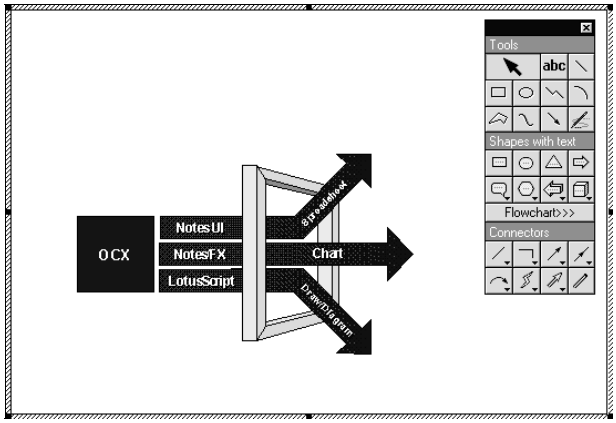
ID	Tasks	Start Date	Duration	April 96 Wk 17	April 96 Wk 18	End Date
1	Start Deployment Consulting	4/22/96	7d			5/1/96
2	Network Conversion to R4 Server	4/23/96	1d			4/24/96
3	Client Network Conversion	4/24/96	7d			5/3/96
4	On-site User Training	4/23/96	5d			4/30/96
5	Train-the-trainers	4/23/96	3d			4/26/96
6	End-user training	4/26/96	1d			4/29/96
7	Executive training	4/29/96	1d			4/30/96
8						
9						
10						
11						
ID	Tasks	Start Date	Duration	Wk 17	Wk 18	End Date

Your final Lotus Project Scheduler Component should look like this.

Lotus Draw/Diagram Component

This 15 minute exercise provides a hands-on introduction to the features and functionality of the Lotus Draw/Diagram Component. It will walk you through inserting a Lotus Draw/Diagram Component into a Notes Release 4 document, working with its library of pre-made diagrams and clip art, drawing shapes and text blocks, and linking drawing objects with connectors.

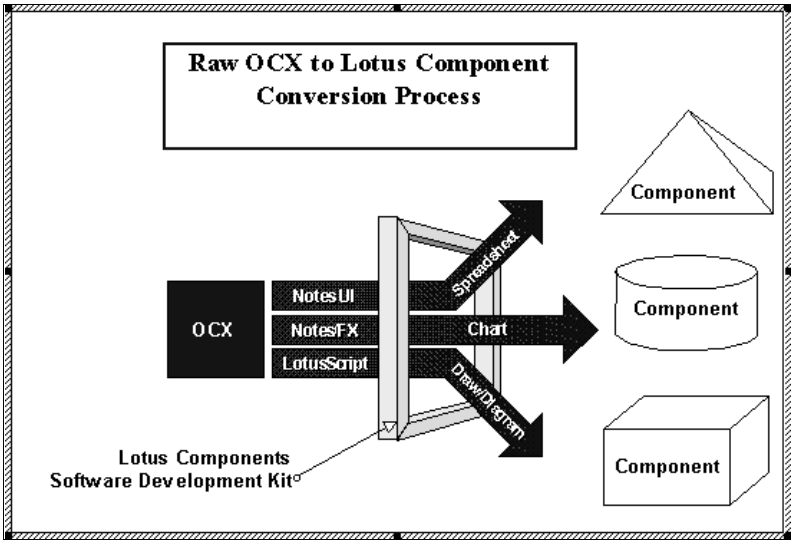
☑ What to do	☞ How to do it	💻 What to see
Create Lotus Draw/Diagram Component.	➢ Click on the Lotus Components Palette  located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Draw/Diagram" from the drop down menu.	A Lotus Draw/Diagram Component welcome dialogue box appears and asks if you would like to use a ready made diagram, or make your own diagram.
Select a diagram from the Clip Art/Diagram Library.	➢ Choose to use a ready-made diagram. ➢ Press the "Scan" button  to view the various diagram types available. ➢ Press the "Stop Scan"  button, pull down the drop down box and select "branch" to jump to the branch type diagrams. ➢ Press the right arrow once to see the 7th and 8th branch "process" diagram choices. Choose the branch diagram on the left which shows three arrows passing through a frame. 	The "Add Clip Art or Diagram" dialogue box appears and presents you with various ready-made diagrams. After your press the "Scan" button, the button label becomes red and changes to "Stop." The branch diagram chosen appears in the Lotus Draw/Diagram Component window.
Enlarge the component window.	➢ Enlarge the size of the Draw/Diagram component window by dragging out a corner of the window.	The Lotus Draw/Diagram Component will become larger exposing more columns and rows.
Add text to pre-templated diagram text blocks. (This diagram illustrates the process for independent software venders (ISV) to create a Lotus Component from an existing OCX)	➢ Enter the following text in the described areas: Green Box on left: OCX Top arrow, left of frame: Notes UI Middle arrow, left of frame: Notes/FX Bottom arrow, left of frame: LotusScript Top arrow, right of frame: Spreadsheet Middle arrow, right of frame: Chart Bottom arrow, right of frame: Draw/Diagram	Text appears in designated areas.



Your initial Lotus Draw/Diagram Component should look like this.

Add a title to diagram.	➢ In the toolbox, click on the textbox tool abc and then drag out a rectangle near the top of the component window--about the same length of the entire diagram. ➢ Add the following text in the textbox for the title: Raw OCX to Lotus Component [Return] Conversion Process ➢ Click outside of the box when finished. ➢ Click the title once to select it. Use the status bar to change the font to Times New Roman, Times New Roman font size 14 14 and bold. B ➢ Right mouse click on the title, and choose "Text Properties..." to bring up the InfoBox. Click the alignment tab and change the alignment to "centered." ➢ Change to the Line & Color tab to add a border. Add a thick one line blue border by choosing the continuous line under the "Style" drop down box, the color blue under the "Color" drop down box, and the fourth line down in the "Width" drop down box.	A rectangle appears along the top of the component window with a cursor inside. The title text appears as typed. Title type changes font style, becomes larger and bold. The InfoBox appears. The title text is centered with in the text box. A blue border appears around the entire title.
Draw shapes with text.	➢ In the middle area of the toolbox below the words "Shapes with text" add three shapes to the right of the arrows in the diagram. Click on the 3D cube to access and choose the 3D pyramid, the cylinder and the cube. ➢ Add the word "Component" to each of the objects by clicking the object once to select it, and a second time to enter the text box in the object. ➢ Select all three of these objects by holding down the "Shift" key and clicking on each of the three object one at a time.	Three objects are created and placed to the right of the arrow heads. The word "Component" appears as typed on each of the objects. The Align dialogue box appears.

	➢ Vertically align these three objects by clicking on the Draw menu, selecting "Align," and choosing the "Center in a Column" radio button.	The three objects align with one another in a vertical line.
Add text box.	➢ Click the textbox tool abc from the toolbox and dragging out a rectangle underneath the diagram to the left. ➢ Click inside the text box rectangle and add the text: Lotus Components [Return] Software Development Kit" ➢ Use the status bar to make the text font size 10 10 and bold. B ➢ Right align the text box contents by clicking on the Draw menu, selecting "Text Alignment" and choosing "Right."	"A text box appears below the diagram in the bottom left corner of the Draw/Diagram component. The text appears as it is typed in the textbox. The text is made smaller, bolded and right justified.
Use connectors to link textbox to the diagram.	➢ Ungroup the elements of the main diagram by selecting it, and then clicking on the Ungroup SmartIcon. This step allows each individual piece of the diagram to be available to connectors. ➢ Add an "arrow connector" by selecting the arrow in the toolbox in the bottom area under the words "Connectors." Click on the arrow that has a small circle on one end and an arrowhead on the other. ➢ Place the connector down just right of the Lotus Components SDK text box. Dragging with the mouse, guide the back of the arrow (the circle) to the textbox's lower right corner. Then guide the arrow head to attach to the frame.	The diagram is broken into individual pieces. An arrow connector appears and is guided to hook to the Lotus Components SDK text box and the diagram frame. (With the arrow facing the frame)

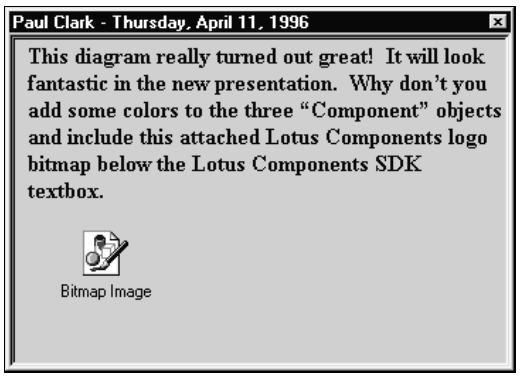


Your final Lotus Draw/Diagram Component should look like this.

Lotus Comment Component

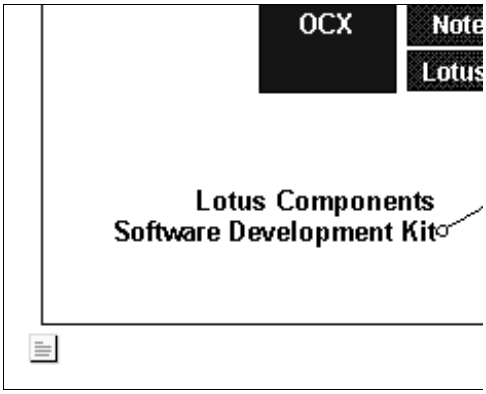
This 10 minute exercise provides a hands-on introduction to the features and functionality of the Lotus Comment Component. It will walk you through inserting a Lotus Comment Component into a Notes Release 4 document, adjusting formatting options, entering data, attaching files, and setting up workgroup security features.

☑ What to do	☞ How to do it	💻 What to see
** For this exercise, use the Notes e-mail document created in the Draw/Diagram Walk-Through exercise. (Or any other e-mail completed in the Walk-Through exercises of this guide)*		
Create a Lotus Comment Component.	➢ Place the cursor to the right of the Draw/Diagram component in the e-mail, then press [Return]. ➢ Click on the Lotus Components Palette [Lotus Components] located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Comment" from the drop down menu.	A Lotus Comment Component will appear in your e-mail, below the Draw/Diagram component.
Choose formatting options for comment.	➢ Using the status bar buttons, change the font to Times New Roman, [Times New Roman] font size 12, [12] bold [B] and dark blue. ➢ Change the Comment background color to light blue.	The text properties change to Times New Roman, font size 12, bold and dark blue. The Comment background changes to light blue.
Enter sample text into comment.	➢ Make a comment on the Lotus Draw/Diagram Component in the e-mail by typing the following into the Lotus Comment Component: This diagram really turned out great! It will look fantastic in the new presentation. Why don't you add some colors to the three "Component" objects and include this attached Lotus Components logo bitmap below the Lotus Components SDK textbox.	Text appears as it is entered.
Add attachment in comment.	➢ Click on the Create menu and select Object. ➢ In the Create Object dialogue box, check the "Create from file" and "Display as Icon" checkboxes and select any bitmap image you might have to serve as a logo file in this exercise.	The Create Object dialogue box appears, and a file icon is inserted into the Comment Component.



The final content of your Lotus Comment Component should look like this.

Assign security rights to comment.	➢ Right mouse click on the comment and choose "Properties..." to bring up the InfoBox. ➢ Change to the Security tab (the second tab). ➢ Choose the "Quick Protection" option to define your workgroup and give them defined access to your Comment. ➢ Click on the first "Can" drop down box and choose "Edit" as the defined access level. Click on the Group Icon to bring up the Comment Component Protection dialogue box. In the "New person" field, enter in the following names: Bill: [Add] Jane: [Add] Mark: [Done] ➢ Close the InfoBox.	The InfoBox appears. The Comment Component Protection dialogue box appears. The Comment Component Protection dialogue box disappears. The InfoBox disappears.
Minimize Comment Component.	➢ Right mouse click on the Comment and choose "Minimize Note."	Comment Component is minimized.



Your final Lotus Comment Component should look like this with the Lotus Draw/Diagram Component.

Walk-Through Exercises for Notes Application Developers

This section of exercises in intended for Notes Application Developers. In order to complete "The Walk-Through Exercises for Notes Application Developers" section of this guide, you should be somewhat familiar with all aspects of Notes development, including form development, field generation, and a basic understanding of Notes Release 4 Actions. Additionally you should understand the concept behind Notes/FX, and possess a basic level of programming experience, preferably with LotusScript. After completing these exercises, you will be able to do the following:

1. Fully FX-enable the Lotus Project Scheduler and Spreadsheet Components.
2. Insert any Lotus Component automatically via LotusScript.
3. Insert any Lotus Component dynamically via LotusScript using Notes Actions.
4. Obtain a handle to any Lotus Component and then drive it programmatically via LotusScript.

These exercises require that you use the Windows 95 or NT 32 bit version of Notes Release 4 with accessibility to a standard Notes Release 4 Mail database. You can either use your own personal Mail database, or create a new one for the purpose of completing the exercises in this guide.

> You can easily create a new Notes Release 4 Mail database by clicking on the "File" menu, and selecting "Database," and then "New...". In the bottom portion of the "New Database" dialogue box, choose to create a database using the Mail (R4) template. Give the database a title and file name, and then press the "OK" button.

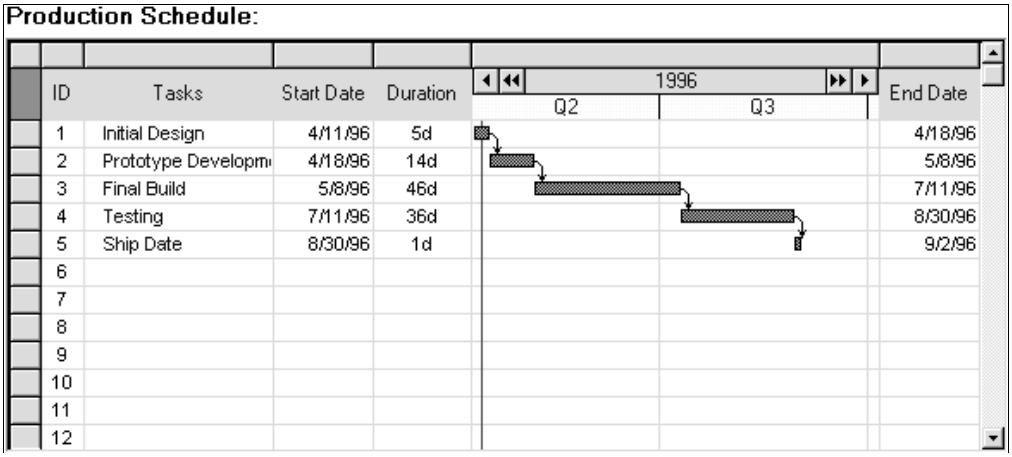
Before beginning each exercise below, open a standard Notes Release 4 mail database to a Notes view.

Implementing Notes/FX 2.0 with Lotus Components

This 25 minute exercise provides a hands-on introduction to the implementation of Notes/FX 2.0 with Lotus Components. It will walk you through creating a new Notes form, adding static text, creating and Notes fields, inserting Lotus Components into a Notes form and finally setting up Notes/FX 2.0 with the Lotus Project Scheduler and Spreadsheet Components.

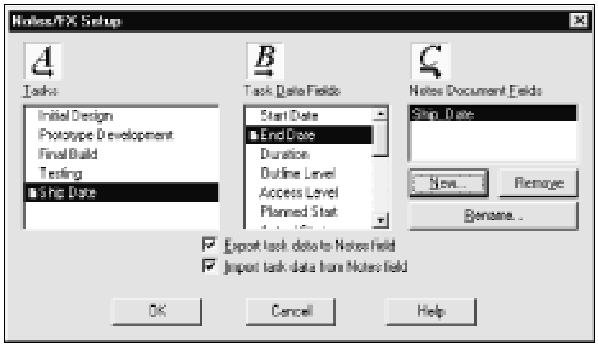
☑ What to do	☞ How to do it	💻 What to see
Create a new form.	➢ Click the Create menu. ➢ Select "Design," and then "Form." ➢ Click "Yes" to the Notes "template authorization" warning message that might appear.	A Notes "template authorization" warning message might appear. A new "blank" form is brought up.
Add static text titles. **Note: Lets pretend that this form is part of a Product Management application that tracks Production Schedules and*	➢ Type the following text at the top of the form as a title and subtitle: New Product Form [Return] [Return] [Return] Production Schedule: [Return] ➢ Highlight the text "New Product Form," increase the font size to 16, bold it, underline it,	Title and subtitles appear as they are entered. Title font size is increased, bolded, underling and centered on the form.

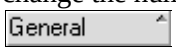
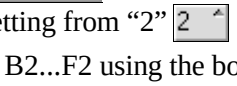
Revenue Forecasts of new products.	and center it using the SmartIcons and/or status bar buttons.	
Setting up Notes/FX 2.0 with the Lotus Project Scheduler Component.		
Insert a Lotus Project Scheduler Component.	➢ Place the cursor on the line below the subtitle, "Production Schedule:" ➢ Click on the Lotus Components Palette [Lotus Components] located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Project Schedule" from the drop down list.	A Lotus Project Scheduler Component appears showing 12 blank task rows.
Add tasks and durations. (These are the company's standard production tasks and durations for new products. They will provide a starting point for the end user each time a document is created.)	➢ Enter the following tasks and durations: Task 1: Initial Design; 5d Task 2: Prototype Development; 14d Task 3: Final Build; 46d Task 4: Testing; 36d Task 5: Ship date; 0d	The project scheduler component is populated with tasks and schedule durations as it is entered. Graphical indicators appear and are by default linked. Timeline expands to display "Years" in the Primary timeline indicator and "Quarters" in the secondary timeline indicator.
Increase the timeline.	➢ Click on the "Increase timeline toward years" SmartIcon  until the secondary timeline indicator first shows quarters. (i.e. Q1, Q2, Q3, Q4)	The primary time line expands to indicate "Years." The secondary timeline expands to indicate "Quarters."



Your final Lotus Project Scheduler template in the new form should look like this.

Setup Notes/FX 2.0.	➢ Click on the Project Scheduler menu. ➢ Select "Notes/FX Setup."	The Notes/FX Set Up dialogue box appears.

(Specifications for this Notes application requested a Notes view of new products by their ship dates. Using Notes/FX that information can be pulled out of the Lotus Project Scheduler Component and exchanged it with a Notes field.)	➢ In the "A" column of the "Notes/FX Setup" dialogue box, choose the last task, "Ship Date." (This column lists all tasks currently listed in the Project Scheduler Component.) ➢ In the "B" column choose the "End Date" field. (This column lists all task data fields associated with the task in column "A.") ➢ In the "C" column that lists all available Notes data fields, click the "New..." button. (This column lists all Notes fields on the Notes form.) ➢ Since we haven't yet created any fields on the new Notes form, click the "New" button. ➢ In the "Notes/FX Field Name" dialogue box, enter "Ship_Date" in the field box and click "OK." ➢ Verify that both check boxes on the Notes/FX Set Up dialogue box (Export task data to Notes field, & Import task data from Notes field) are checked so the field exchange will be bi-directional. ➢ Click the "OK" button. ➢ Click outside the Lotus Project Scheduler Component to save and exit out of the component into the Notes form.	The "Ship Date" task is highlighted in column "A." The "End Date" task data field is highlighted in column "B." The "Notes/FX Field Name" dialogue box appears. The name, "Ship_Date" appears as entered into the field box. The "Notes/FX Field Name" disappears. The "Notes/FX Setup" dialogue box disappears.
 Your final Notes/FX Setup dialogue box should look like this.		
Add a static text field label.	➢ On the line directly below the Project Scheduler Component, type, "Ship Date:" and bold it using the bold SmartIcon. B	The static text label appears as entered into the form.
Add a text field.	➢ On the same line as "Ship Date:" add a "tab" and then create a Notes field by clicking on the Create menu and selecting "Field..."	The InfoBox appears with the Basics tab showing. The field name changes from "Untitled" to "Ship_Date."

	➢ In the InfoBox enter "Ship_Date." into the "Name:" field box. ➢ Close the InfoBox.	The InfoBox disappears.
Add a static text subtitle.	➢ On the Notes form after the "Ship_Date" field, enter the following keystrokes and text: [Return] [Return] Revenue Forecast: [Return] ➢ Highlight the subtitle, "Revenue Forecast:" and bold it using the bold SmartIcon. 	Text appears and is formatted.
Setting up Notes/FX 2.0 with the Lotus Spreadsheet Component		
Insert a Lotus Spreadsheet Component.	➢ On the line below the subtitle, "Revenue Forecast," click on the Lotus Components Palette  located in the upper right corner of the Notes Release 4 title bar. . ➢ Select "Spreadsheet" from the drop down list. ➢ Enlarge the component window to by dragging out a corner of the window.	A Lotus Spreadsheet Component appears showing 4 columns and 8 rows. The spreadsheet component window is made larger exposing more columns and rows.
Add text, formulas and formatting in spreadsheet. (The format, labels and formulas represent the company's standard forecasting table. They will provide a starting point for the end user each time a document is created.)	➢ Enter the following labels and formulas: A2: Domestic Sales A3: Int'l Sales A4: Total B1: Q1 C1: Q2 D1: Q3 E1: Q4 F1: Total B4: +B2+B3 C4: +C2+C3 D4: +D2+D3 E4: +E2+E3 F4: +F2+F3 ➢ Highlight cells B2...F4, and use the Status Bar buttons to change the number format from "General"  to "Currency" and the decimal place setting from "2"  to "0." Bold and Center cells B2...F2 using the bold  and center  SmartIcons. Bold cells A4...F4 using the bold SmartIcon. 	The spreadsheet is filled in with data, formulas and formatting.
Set spreadsheet viewing options.	➢ Click the InfoBox SmartIcon to bring up the InfoBox. ➢ Change the drop down box in the center of the InfoBox title bar to "Lotus Spreadsheet" to	The row and column heading disappear and the component window is reduced to show only 4 rows and 6 columns.

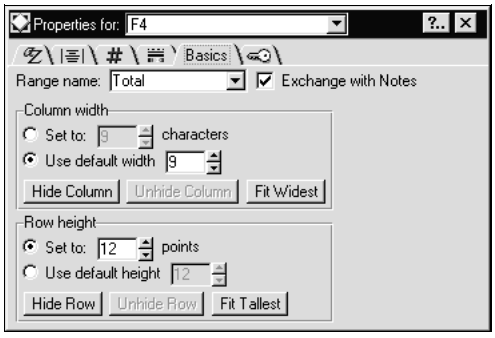
	reflect properties of the entire spreadsheet component. ➢ Click on the Show tab, and in the Show area, unclick the checkboxes for "Column headings" and "Row headings." ➢ In the Rows area click the "Show only" radio button and set it to display 4 rows. In the Columns area click the "Show only" radio button and set it to display 6 columns.	

Revenue Forecast:

	Q1	Q2	Q3	Q4	Total
Domestic Sales					
Int'l Sales					
Total	**$0**	**$0**	**$0**	**$0**	**$0**

Your final Lotus Spreadsheet template in the new form should look like this.

Setup Notes/FX 2.0. (Further specification requirements for this Notes application requested a Notes View of New products by first year's Forecasted Revenue Totals. Using Notes/FX that information can be pulled out of the Lotus Spreadsheet Component and exchanged it with a Notes field.)	➢ Right mouse click on the bottom right cell indicating the first year's Total Forecasted Value. (Cell F4) ➢ Select "Cell properties..." and click on the "Basics" tab. ➢ Give cell F4 a range name by entering the word "Total" into the field box entitled "Range name:" (press [Return] to validate) ➢ To exchange the value of this cell/range, click on the checkbox to the right of this field box entitled "Exchange with Notes." ➢ Click outside the Lotus Spreadsheet Component to save and exit out of the component into the Notes form.	InfoBox appears. The drop down box in the InfoBox title bar changes to "Lotus Spreadsheet." The "Basics" tab is brought to front. The range name "Total" appears as entered into the field box. A check mark appears in the "Exchange with Notes" checkbox.



Your final Notes/FX Setup should look like this:

Add a static text field label.	➢ Directly below the Spreadsheet Component, type "Total:" and bold it using the bold SmartIcon. 	The static text label appears as entered into the form.
Add a Notes number field.	➢ On the same line as "Total:" add a "tab" and then create a Notes field by clicking on the Create menu and selecting "Field..." ➢ In the InfoBox enter "Total" into the "Name:" field box ➢ In the "Type;" drop down box, choose "Number." ➢ Specify "Currency" by clicking on the radio button and then set the decimal place setting to "0" in the Decimal place setting field box. ➢ Close the InfoBox.	The InfoBox appears with the Basics tab showing. The word "Total" replaces "Untitled" as the fields new name. Options for currency formatting appear in the InfoBox. The InfoBox disappears.
Add static text label.	➢ Place the cursor on the line above the text "Production Schedule" and enter the following keystrokes and text: New Product Name: [Hard Return] [Hard Return] ➢ Highlight "New Product Name" and use the bold SmartIcon  to bold the static text, and the Status bar button change the font size to 12. 	The static text label appears and is formatted. The filed name appears as it is entered.
Add Notes text field. (In order to develop the two views specified as requirements for this application lets add one last field at the top of the form below the title.)	➢ Place the cursor on the same line as "New Product Name to the right of the colon, add a "tab" and click on the Create menu, and select "Field..." ➢ When the InfoBox appears, enter "New_Product" into the "Name;" field box. ➢ Close the InfoBox.	The InfoBox appears with the "Basics" tab showing. The InfoBox disappears.
Close Notes form and save.	➢ Press the Esc key, and click on "Yes" to save the new form. In the New Form dialogue box, that appears name your new form by entering, "New Product Form."	The "Do you want to save this form..." dialogue box appears. The "Save form as..." dialogue box appears. Your mail views appear in design mode.
**At this point two views should be developed based on the "Ship_Date" and "Total" fields. These would probably use Notes sorting options to present all New Product documents in a simple and coherent manner. This development of these views however, is beyond the scope and purpose of this guide.*		

Test the new form.	➢ Click on the menu, "Create" and choose "New Product Form." ➢ Enter "Widget" into the New Product field. ➢ Click on the Lotus Project Scheduler Component to activate it. ➢ Change the duration of any task and notice how your "Ship Date" field on the Notes form updates through the FX link you developed. ➢ Click outside of the Project Scheduler Component to exit it. ➢ Click on the Lotus Spreadsheet Component to activate it. ➢ Enter some Domestic and Int'l forecasted Sales figures into the spreadsheet and notice the value of the Total cell (F4) is calculated and exchanged with the "Total" Notes field in the Notes form through the FX link you developed. ➢ Exit the completed form by pressing the Esc. key, and then clicking "Yes" button to save the document.	A New Product Form comes up in edit mode. "Widget" appear in the New Product filed as you type it. The Lotus Project Scheduler Component activates and the graphical indicators change to reflect your changed duration time. The Ship Date field in the Note form update as you change the duration time. The Lotus Spreadsheet activates and the formulas calculate totals based on your defined formulas in the Notes form. The Total Notes field is updated as you enter your figures.

Inserting a Lotus Component via LotusScript

This 15 minute exercise provides a hands-on introduction to the use of LotusScript to programmatically insert Lotus Components into a Notes document. It will first walk you through creating a new Notes form, adding a static text title and creating one rich text field on a Notes form. Then the exercise furnishes two options for inserting a Lotus Component. *(The exercise can be repeated to master both options)*

- **Option #1:** Automatically inserting a Lotus Component when a new Notes document is created
- **Option #2:** Dynamically inserting a Lotus Component via an end user triggered Notes Action.

The exercise then continues with steps to test the form, and then offers additional suggestions for further development using the Notes and Component object classes.

☑ What to do	☞ How to do it	💻 What you'll see
Create a new Notes form.	➢ Click the Create menu, select "Design," and then choose "Form." ➢ Click "Yes" to the Notes "template authorization" warning message that might appear.	Notes "template authorization" warning message might appear. A new form comes up.
Assign the new form a name.	➢ Click on the Design menu and select "Form properties." ➢ Enter "Insert Component Test Form," into the Form name field box. ➢ Close the InfoBox. ➢ Click on the "Save" SmartIcon  to save your changes.	The InfoBox appears. The form name appears in the name field box as it is entered.
Add static text and labeling.	➢ On the top line of the form type "Lotus Component Insert Test Form." ➢ Highlight the text "Inserting a Lotus Component Test Form." ➢ Right mouse click on the highlighted area and choose "Text Properties..." to bring up the InfoBox. ➢ Use the Text tab to change the font size to 14, bold, and underline the title. From the Alignment tab, choose the center alignment button to center the title. ➢ Close the Infobox.	Title appears and is formatted. InfoBox appears. InfoBox disappears.
Add Notes rich text field.	➢ Press the [Return] key three times to add two blank lines between the form title and where the component will appear. ➢ Click on the "Text Align Paragraph Left" SmartIcon  to return to the left margin. ➢ Click on the Create menu and select "Field..."	The cursor moves down two lines. The InfoBox appears. The field name "Untitled" is replaced with "Component." The InfoBox disappears.

	➢ Replace the "Untitled" field name with the word "Component" ➢ In the "Type:" drop down box, choose "Rich Text." ➢ Close the InfoBox.	
Choose from either Option #1 or Option #2 below to complete this exercise.		
Option #1: Automatically inserting a Lotus Component when a new Notes document is created.		

Create a new script.
 	
(This exercise demonstrates a script that inserts a Lotus Spreadsheet Component.
 	
In order to insert any of the other Lotus Components in the place of *Lotus.Spreadsheet.1* found in the second to last line of the script, substitute the following:
 	
Lotus.Chart.1
Lotus.Comment.1
Lotus.Draw.1
Lotus.Project.1
Lotus.FileViewer.1)
	➢ In the Notes design pane, select "Insert Component Test Form [Form]" in the "Define" box.
	
	➢ Select [Options] from the Event box and click the Script radio button.
	
	➢ Enter the following code into the programming window below:
	
	`Sub AddSheet`
	`  Dim workSpace As New NotesUIWorkspace`
	`  Dim uiDoc As NotesUIDocument`
	`  Dim mySheet As Variant`
	`  Set uiDoc = workSpace.CurrentDocument`
	`  Call uiDoc.GotoField( "Component" )`
	`  Set mySheet = _`
	`  uiDoc.CreateObject("first",_`
	`  "Lotus.Spreadsheet.1")`
	`End Sub`
	
	➢ With the Define box still showing "Insert Component Test Form [Form]," go to the Event box:, scroll up and select the Postopen event and click the Script radio button.
	
	➢ Enter the following line of code on the line above the End Sub instruction in the body of the Postopen sub:
	
	`If Source.IsNewDoc Then`
	`  Call AddSheet`
	`End If`
		Script appears as entered.
		
		****Here is what is happening line for line:***
		
		i. Declare the variable workSpace and assign it a reference to the current Notes workspace object.
		
		ii. Declare the variable uiDoc, which will hold a reference to the current document object.
		
		iii. Declare the variable mySheet, which will hold a reference to a spreadsheet component.
		
		iv. Assign the variable uiDoc a reference to the current document on the workspace (to which the variable workSpace refers).
		
		v. Move the cursor to the "Component" field of the document.
		
		vi. Create an instance of the Lotus Spreadsheet Component and assign the variable mySheet a reference to that spreadsheet.
		
		(Postopen event) Makes call to AddSheet script if it is a new Notes document.

Option #2: Dynamically inserting a Lotus Component via an end user triggered Notes Action.		
Create a Notes Action.	➢ Click on the View menu and select "Action Pane." ➢ Click on the Create menu and select "Action..."	The Action Pane is exposed in the top right corner of the Notes IDE.

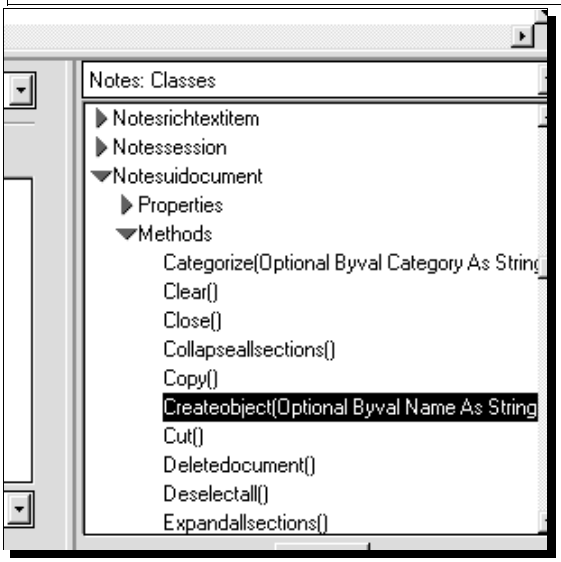
	➢ When the InfoBox appears, assign this new action a name by typing "Add Sheet" in the Title: field box. ➢ Click the enter button (with the green check mark) to validate the name. ➢ From the "Button icon" drop down list, select the "1-2-3" program icon and then close the InfoBox.	The Action's name is changed from Untitled to "Add Sheet". The InfoBox closes.

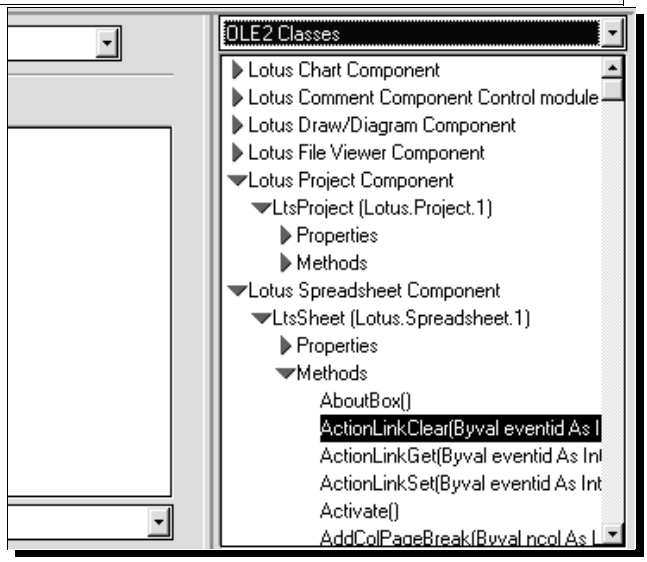
Assign the Notes Action a script.	➢ In the Action Pane, select the newly created "Add Sheet" action.
	➢ In the Notes design pane check the "Script" radio button.
	➢ Verify that the Event box is showing "Click" as the event.
	➢ Enter the following script on the line above the final line that reads "End Sub":
	`Dim workSpace As New NotesUIWorkspace`
	`Dim uiDoc As NotesUIDocument`
	`Dim mySheet As Variant`
	`Set uiDoc = workSpace.CurrentDocument`
	`Call uiDoc.GotoField( "Component" )`
	`Set mySheet = _`
	`  uiDoc.CreateObject("first",_`
	`  "Lotus.Spreadsheet.1")`
		Script appears as entered.
		Script is defined line for line in Option #1 above.

After completing either Option #1 or Option #2, continue the exercise through the steps below.		
Save and exit the form.	➢ Click on the "Save" SmartIcon  to save the form. ➢ Press the Esc key to exit the form.	Form closes and shows Notes views.
Test the new form.	➢ Click the Create menu and select "Insert Component Test Form." ➢ *For **Option #2:** From the Notes Action Bar, click on the "Add Sheet" button to insert a Lotus Spreadsheet Component.*	A new "Insert Component Test Form" appears. A Lotus Spreadsheet Component is inserted either automatically (Option #1) or dynamically when the Notes Action button is pressed by the end user (Option #2).

*Note 1: The key method to use when inserting a Lotus Component programmatically into a Notes document is the "CreateObject" method. This can be found in the Notes script browser under the "Notesuidocument Class" and easily pasted in using the "paste" button at the bottom of the browser.

*Note 2: Further development can be applied through the powerful Properties and Methods of each Lotus Component. These can be accessed directly through the Notes R4 design pane in the Script browser under OLE2 Classes.





Driving Lotus Component Programmability via LotusScript

This 15 minute exercise provides a hands-on introduction to the use of LotusScript to drive programmability of Lotus Components. It will first walk you through creating a new Notes form, adding a static text title and embedding a Lotus Component onto a Notes form. You are then shown how to give an embedded Component a handle name, and then drive it programmatically using the properties and methods associated with that component. Finally steps are provided to test the form.

☑ What to do	☞ How to do it	💻 What you'll see
Create a new Notes form.	➢ Click the Create menu, select "Design," and then choose "Form." ➢ Click "Yes" to the Notes "template authorization" warning message that might appear.	Notes "template authorization" warning message might appear. A new form comes up.
Assign the new form a name.	➢ Click on the Design menu and select "Form properties." ➢ Enter "Drive Component Test Form" into the Form name field box, and then close the InfoBox. ➢ Clicking on the "Save" SmartIcon  to save your changes.	The InfoBox appears The form name appears in the name field box as it is entered.
Add static text and labeling.	➢ On the top line of the form type "Lotus Component Driving Programmability Test Form". ➢ Highlight the text "Lotus Component Driving Programmability Test Form." ➢ Right mouse click on the highlighted area and choose "Text Properties..." to bring up the InfoBox. ➢ Use the Text tab to change the font size to 14, bold, and underline the title. From the Alignment tab choose the center alignment button to center the title. ➢ Close the Infobox.	Title appears and is formatted. InfoBox appears. InfoBox disappears.
Insert a Lotus Chart Component. (This exercise demonstrates driving the Lotus Chart Component programmatically. The process of inserting and obtaining a handle to an embedded Lotus Component would be the same for any other Lotus Component.)	➢ Press the [Return] key three times to add two blank lines between the form title and where the component will appear. ➢ Click on the Lotus Components Palette  located in the upper right corner of the Notes Release 4 title bar. ➢ Select "Chart" from the drop down list.	A Lotus Chart Component appears showing a 3D bar chart with sample data.

Obtain a handle to the embedded Component.	➢ Click outside and to the right of the Chart component. ➢ Press the left arrow key on your keyboard so that the cursor moves backward and rests on top of the Chart Component without activating it. ➢ Click on the "Lotus Chart Component" menu and select "Object Properties..." ➢ In the "Object Name:" field box, give the embedded component a name by typing "ChartExample" ➢ Click the enter button (with the green check mark) to validate the object name and then close the InfoBox.	The Chart is deactivated and the Notes menus and SmartIcons reappear. The cursor disappears and the "Lotus Chart Component". menu appears in the Notes menus. The InfoBox appears. The Infobox closes.
Create a Notes Action.	➢ Click on the View menu and select "Action Pane." ➢ Click on the Create menu and select "Action..." ➢ When the InfoBox appears, assign this new action a name by typing "Change Chart Type" in the Title: field box. ➢ Click the enter button (with the green check mark) to validate the name. ➢ From the "Button icon" drop down list, select the 3D Pie Chart icon and then close the InfoBox.	The Action Pane is exposed in the top left corner of the Notes IDE. The Action's name is changed from Untitled to "Change Chart Type". The InfoBox closes.
**Now that a handle has been obtained to the embedded Chart Component, through the use of this handle, the component can be further driven programmatically using any of the numerous properties and methods available in the Chart Component object class.*		

Assign the Notes Action a script.	➢ In the Action Pane, select the newly created "Change Chart Type" action.
	➢ In the Notes design pane check the "Script" radio button.
	➢ Verify that the Event box is showing "Click" as the event.
	➢ Enter the following script on the line above the final line that reads "End Sub."
	`Dim workSpace As New NotesUIWorkspace`
	`Dim uiDoc As NotesUIDocument`
	`Dim myChart As Variant`
	`Set uiDoc = workSpace.CurrentDocument`
	`Set myChart = _`
	`uiDoc.GetObject("ChartExample")`
	`myChart.ChartType = 13`
		Script appears as entered.
		****Here is what is happening line for line.***
		i. Declare the variable workSpace and assign it a reference to the current Notes workspace object.
		ii. Declare the variable uiDoc, which will hold a reference to the current document object.
		iii. Declare the variable myChart, which will hold a reference to a spreadsheet component.
		iv. Assign the variable uiDoc a reference to the current document.

		v. Retrieve the handle to the Chart Component into the myChart variable. *vi. Change the ChartType property of the Chart.*
Save and exit the form.	➢ Click on the "Save" SmartIcon  to save the form. ➢ Press the Esc key to exit the form.	Form closes and shows Notes views.
Test the new form.	➢ Click the Create menu and select "Drive Component Test Form." ➢ From the Notes Action Bar, click on the "Change Chart Type" button to insert a Lotus Spreadsheet Component.	A new "Drive Component Test Form" appears with a Lotus Chart Component already embedded in the form. The Chart changes from a 3D Bar chart type to a 3D Pie chart.

*Note 3: The key method to use when driving programmability of an embedded Lotus Component is the "GetObject" method. This can be found in the Notes script browser under the "Notesuidocument Class" and easily pasted in using the "paste" button at the bottom of the browser.