



# Creating a Purchase Order Form That Has a Flowable Layout

**Adobe® LiveCycle® Designer ES2**

November 2009

Version 9

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Adobe® LiveCycle® Designer ES2 (9.0) Creating a Purchase Order Form That Has a Flowable Layout for Microsoft® Windows®  
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# About this tutorial

In this tutorial, you will learn how to change a form's fixed layout to a flowable layout by using subforms so that the form displays all the orders that one of your clients requested. You will also learn how to merge a form with data.

Start this tutorial with the form created in the [Creating a purchase order form](#) tutorial. You will rework the form to have a flowable layout. A flowable layout means that the form will adjust to accommodate data so that it displays all the orders that one of your clients requested.

The form design in this tutorial presents information from a data source. The resulting form is a non-interactive form that you can print or store electronically.

## Additional information

| For information about       | See  |
|-----------------------------|--|
| Other form design tutorials | <a href="#">Creating a purchase order form</a><br><a href="#">Creating and using fragments in form designs</a> |

# Creating a purchase order form that has a flowable layout

Here are the steps to changing a form's layout to a flowable layout using subforms:

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# About creating a purchase order form that has a flowable layout

When you finish working through this tutorial, the form you create will look like this purchase order form merged with data.



**Finance**  
corporation

|   |  |
|---|--|
| <p><b>Purchase Order</b></p> <p>Ordered By <u>Any Company Name</u></p> <p>Address <u>555, Any Blvd.</u></p> <p>City <u>Any City</u> State <u>ST</u> Zip Code <u>12345</u></p> <p>Country <u>Any Country</u></p> <p>Phone Number <u>(123) 456-7890</u></p> <p>Fax Number <u>(123) 456-7899</u></p> <p>Contact Name <u>Contact Name</u></p> | <p>P.O. Number <u>8745236985</u></p> <p>P.O. Date <u>8-Feb-2004</u></p> <p>Deliver To <u>Any Company Name</u></p> <p>Address <u>7895, Any Street</u></p> <p>City <u>Any City</u> State <u>ST</u> Zip Code <u>12346</u></p> <p>Country <u>Any Country</u></p> <p>Phone Number <u>(123) 456-7891</u></p> <p>Fax Number <u>(123) 456-7899</u></p> <p>Contact Name <u>Contact Name</u></p> |
|---|--|

| Part No.  | Description  | Quantity | Unit Price | Amount   |
|-----------|--------------|----------|------------|----------|
| 00010-100 | Monitor      | 1        | \$350.00   | \$350.00 |
| 00010-200 | Desk lamps   | 3        | \$55.00    | \$165.00 |
| 00025-275 | Phone        | 5        | \$85.00    | \$425.00 |
| 00300-896 | Address book | 2        | \$15.00    | \$30.00  |

Terms and Conditions

Account number: 123456

Authorized By \_\_\_\_\_

|               |                          |                   |
|---------------|--------------------------|-------------------|
| Total         |                          | \$970.00          |
| State Tax %   | <u>7.00%</u> State Tax   | \$67.90           |
| Federal Tax % | <u>8.00%</u> Federal Tax | \$77.60           |
|               | Shipping Charge          | \$50.00           |
|               | <b>Grand Total</b>       | <b>\$1,165.50</b> |


To complete this tutorial, you need a schema and a data file. You can use those that come with Designer ES2 if you have installed the samples. The schema and data file are in the following location, by default:

- \EN\Samples\Forms\Purchase Order\Schema\Schema\Purchase Order.xsd
- \EN\Samples\Forms\Purchase Order\Schema\Data\Purchase Order.xml

## Opening the purchase order form

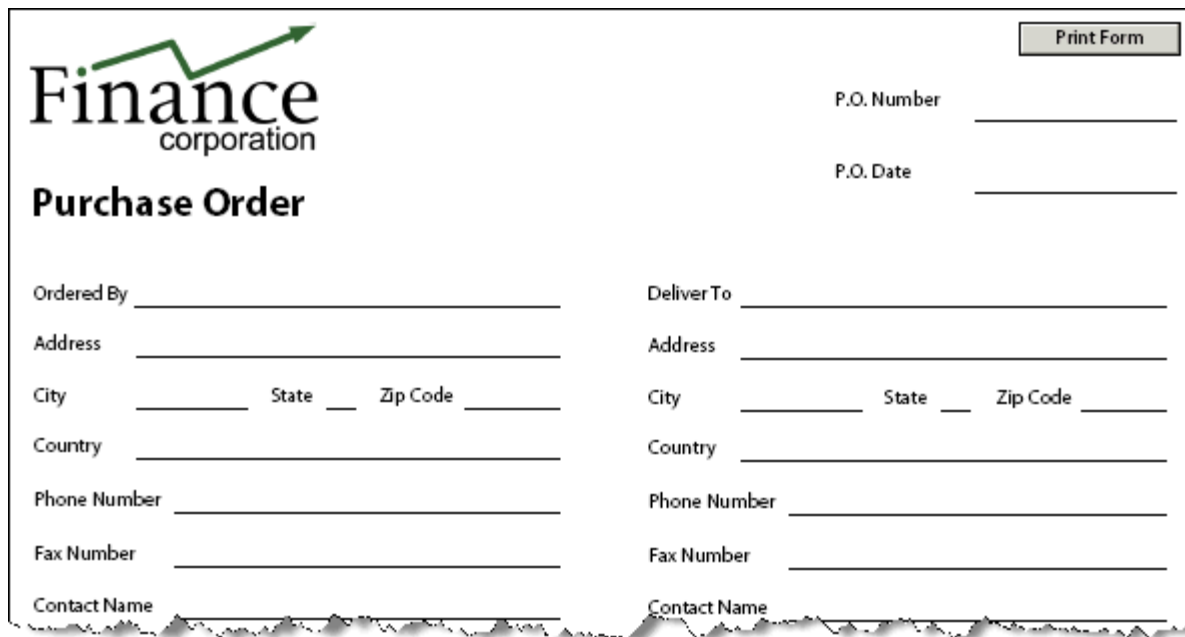
To start, you will open the Purchase Order form that you saved in the previous tutorial.

- 1 Select File > Open.
- 2 Locate the form that you saved in the previous tutorial and click Open.
- 3 Select File > Save As and select Adobe Dynamic XML Form (\*.pdf) from the Save As Type list.
- 4 Change the name of the file.
- 5 Click Save.

 If you plan to create more forms that have a flowable layout instead of forms that have a fixed layout, you can set the default file type for new forms to Dynamic PDF Form file in the Tools > Options dialog box (Document Handling tab).


## Enhancing the format of the form

To enhance the format of the form for printing, you can make the field objects above the table an underline instead of a sunken box.



The screenshot shows a 'Purchase Order' form for 'Finance corporation'. The form includes a 'Print Form' button in the top right corner. Below the logo, the title 'Purchase Order' is displayed. The form is divided into two columns of input fields. The left column contains: 'Ordered By', 'Address', 'City', 'State', 'Zip Code', 'Country', 'Phone Number', 'Fax Number', and 'Contact Name'. The right column contains: 'P.O. Number', 'P.O. Date', 'Deliver To', 'Address', 'City', 'State', 'Zip Code', 'Country', 'Phone Number', 'Fax Number', and 'Contact Name'. All input fields are underlined, and the entire form area has a decorative, torn-edge border at the bottom.

- 1 Select the P.O. Number field.
- 2 In the Object palette, click the Field tab and, in the Appearance list, select Underlined.
- 3 Repeat for the remaining field objects above the table.

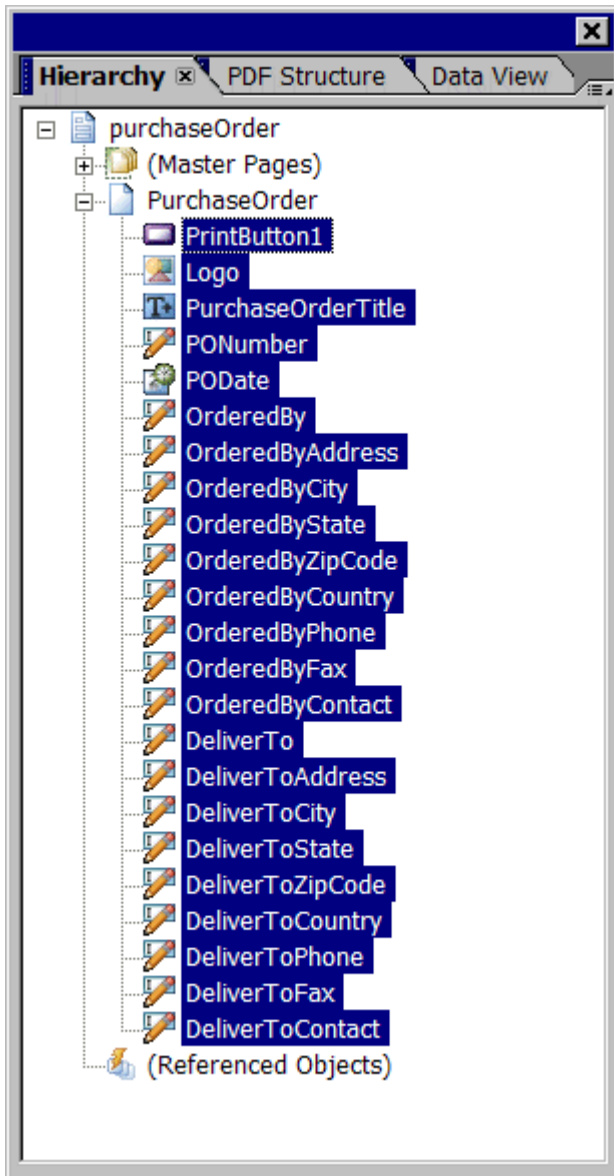
 You can change selected objects of the same type all at once.

- 4 Select all the field objects above the table, except for the Print Button, Logo, and Purchase Order title.
- 5 In the Paragraph palette, click Align Bottom.
- 6 View the form in the Preview PDF tab.
- 7 Click the Design View tab to continue editing the form design.

## Organizing the form

To create a form that has a flowable layout, you must organize the sections into subforms to merge with data. Subforms are objects that act as containers for other objects, including fields, boilerplate objects, and other subforms. They help to position objects relative to each other and provide structure in form designs that have a flexible layout.

- 1 In the Hierarchy palette, select all the items that appear above the table.

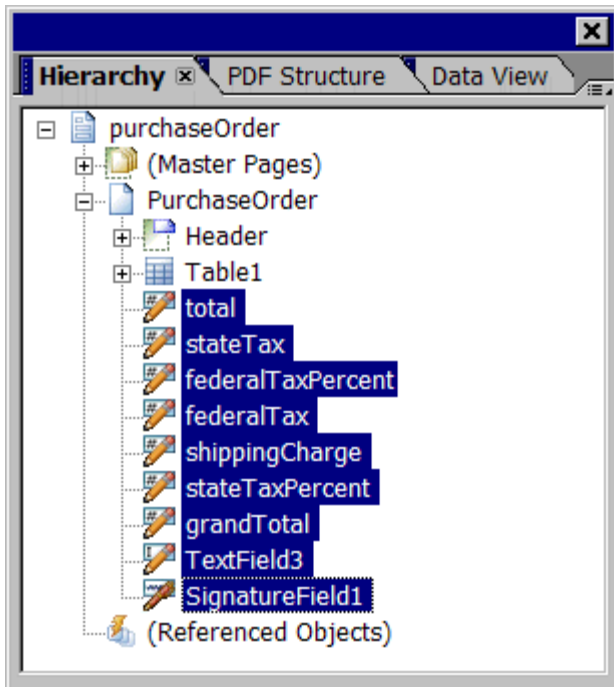


- 2 Select Insert > Wrap in Subform.
- 3 Select the (untitled Subform), right-click, and select Rename Object.
- 4 Type `Header` and press Enter.
- 5 To ensure that the Header subform has space above it, make sure that the Layout palette is displayed and, in the Height box under Size & Position, type `4.5 in.`

## Organizing the form

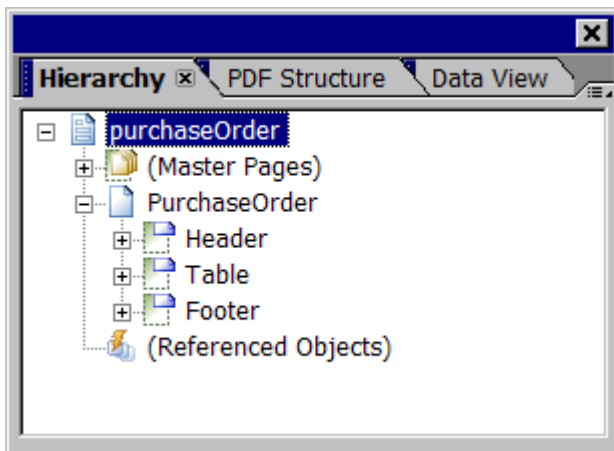
## Creating a Purchase Order Form That has a Flowable Layout

- 6 Collapse all the items in the hierarchy.
- 7 Repeat steps 1 and 2 for all the items below the table (total to SignatureField1) and rename this new (untitled Subform) Footer.



- 8 To ensure that there is space before the Footer subform, make sure that the Layout palette is displayed and, in the Top box under Margins, type 0.25in.

This is what you should see in the Hierarchy palette if you collapse everything under PurchaseOrder.




## Formatting the footer

To enhance the format of the footer, you can make the fields below the table show an underline instead of a sunken box. You can also set the captions and values to be bottom-aligned and set just the values in the fields to be center-aligned.

The screenshot shows a footer section with two main parts. On the left, there is a 'Terms and Conditions' field with a large empty box below it, and an 'Authorized By' field with a red arrow pointing to the right. On the right, there is a 'Total' table with the following items:

|               |              | Total           |                |
|---------------|--------------|-----------------|----------------|
| State Tax %   | <u>6.00%</u> | State Tax       | <u>\$0.00</u>  |
| Federal Tax % | <u>8.00%</u> | Federal Tax     | <u>\$0.00</u>  |
|               |              | Shipping Charge | <u>\$50.00</u> |
|               |              | Grand Total     | <u>\$50.00</u> |

- 1 Drag to select the fields in the footer, except for the Terms and Conditions and the Authorized By fields.

 *If you try to drag to select the fields and you have the Move pointer, click anywhere along the edge of the form design to change the pointer to an arrowhead shape.*

- 2 In the Object palette, click the Field tab and, in the Appearance list, select Underlined.
- 3 In the Paragraph palette, click Align Bottom.
- 4 In the Currently Editing palette, select Edit Value to change the paragraph alignment of just the value.
- 5 Click Align Center.

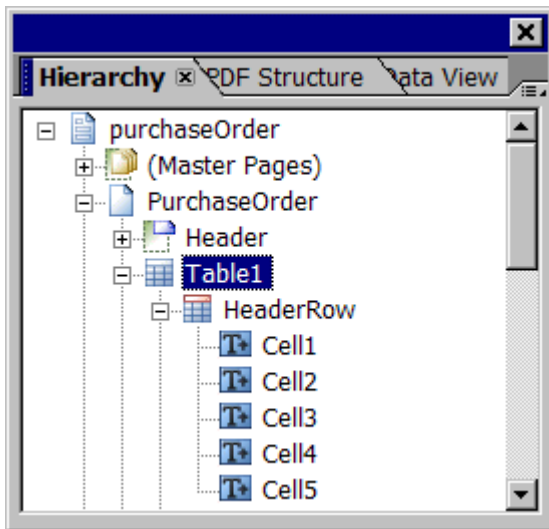
## Setting the table to dynamically grow

In a form that has a flowable layout, you may not know how much data the data source contains; therefore, you cannot specify how many rows the table should have. You have to set the table to be dynamic. To do this, you include only one body row that is set to repeat, depending on how much data there is in the data source.

- 1 Drag to select the rows that are below the first row.

| Part No. | Description | Quantity | Unit Price | Amount |
|----------|-------------|----------|------------|--------|
|          |             |          |            |        |
|          |             |          |            |        |
|          |             |          |            |        |
|          |             |          |            |        |
|          |             |          |            |        |
|          |             |          |            |        |

- 2 Select Table > Delete > Row.
- 3 In the Hierarchy palette, select Table1.



- 4 Select Insert > Wrap in Subform.  
 This action creates a section in the form that contains the table. You need to separate this section from the remainder of the form to make it dynamically grow to fit the data.
- 5 With the (untitled Subform) selected in the Hierarchy palette, in the Object palette, click the Subform tab and, in the Content list, select Flowed.
- 6 Rename the (untitled Subform) to Table.

- 7 In the Hierarchy palette, select Row1.
- 8 In the Object palette, click the Binding tab and select Repeat Row For Each Data Item.  
Now you need to set the entire form to flow.
- 9 In the Hierarchy palette, select the PurchaseOrder subform.
- 10 In the Object palette, click the Subform tab and, in the Content list, select Flowed.

Setting the entire form to flow, formats each subform in the form, one after another, leaving no space between them.

## Fixing the calculation for the Total field

Now that you have reorganized the contents of your form, the calculation for the total needs to reference the new Table subform.

- 1 Select the Total field.
- 2 Drag the Script Editor palette bar until the palette is the required size to show multiple lines.
- 3 In the Script Source field, revise the script to show the following calculation:  
`sum(Table.Table1.Row1[*].amount[*])`
- 4 Deselect the Total field to add the script to your form design.

## Setting the fields to read-only

For a printable form, you do not want users to edit the fields; therefore, you must set the fields to read-only.

- 1 In the Hierarchy palette, open the Header subform and select all the text fields (such as PONumber, OrderedBy, OrderedByAddress).
- 2 In the Object palette, click the Value tab and, in the Type list, select Read Only.
- 3 In the Hierarchy palette, open the Table subform and select the text fields (partNo and description).
- 4 In the Object palette, click the Value tab and, in the Type list, select Read Only.
- 5 Repeat for quantity, unitPrice, and amount.
- 6 Repeat for the items in the Footer subform (except for the SignatureField).

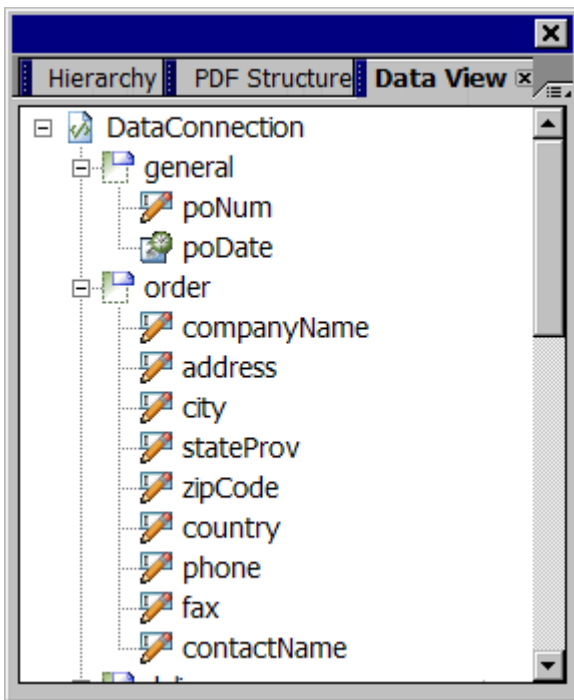
## Connecting to a data source

To merge data with your form, you need to connect to a data source. After you connect, you need to bind the data to a field in your form design.

When you bind the fields in a form design to a data source, you create an association between the form design and the data source that allows you to capture, present, move, process, output, and print information associated with the form design.

- 1 Select File > New Data Connection.
- 2 Select XML Schema and click Next.
- 3 If you or your administrator installed the samples that come with Designer ES2, locate the schema named Purchase Order.xsd and click Open.  
This file is located in \EN\Samples\Forms\Purchase Order\Schema\Schema.
- 4 Click Finish.

The data appears in the Data View palette.



The Data View palette displays a hierarchy view of each data source. The top node in the hierarchy represents the data connection and displays the name that you assigned when you created the connection.

## Binding the data to fields and table cells

After you connect to a data source, you need to indicate where you want to see the data in the form design:

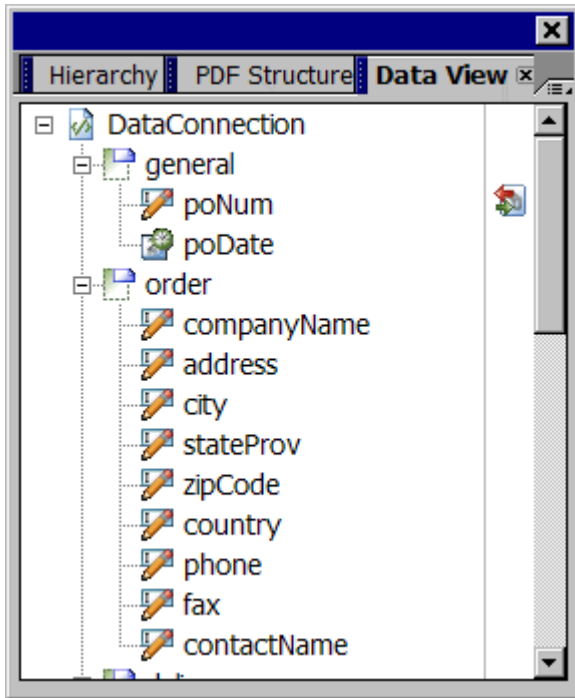
- To bind single fields, such as the P.O. Number and P.O. Date, you can use the drag and drop method.
- To bind repeating objects, such as the row in the purchase order table, to repeating items in the schema, use the Data Binding box in the Binding tab of the Object palette. After the row is bound, you can bind cells in the row to nodes in the schema, which makes these bindings relative to the row binding.

### To bind the data to fields in the form design

- 1 In the Data View palette, select poNum and drag it to the P.O. Number field.
- 2 In the Binding Properties dialog box, select Don't Update Any Related Properties, and then click OK.

**Binding the data to fields and table cells**

Binding associates an existing form field with an item from the data source. In the image, the icon to the right of poNum shows that the node is bound. Because you chose not to update any related properties, Designer ES2 keeps the formatting you have already applied to the field object intact.



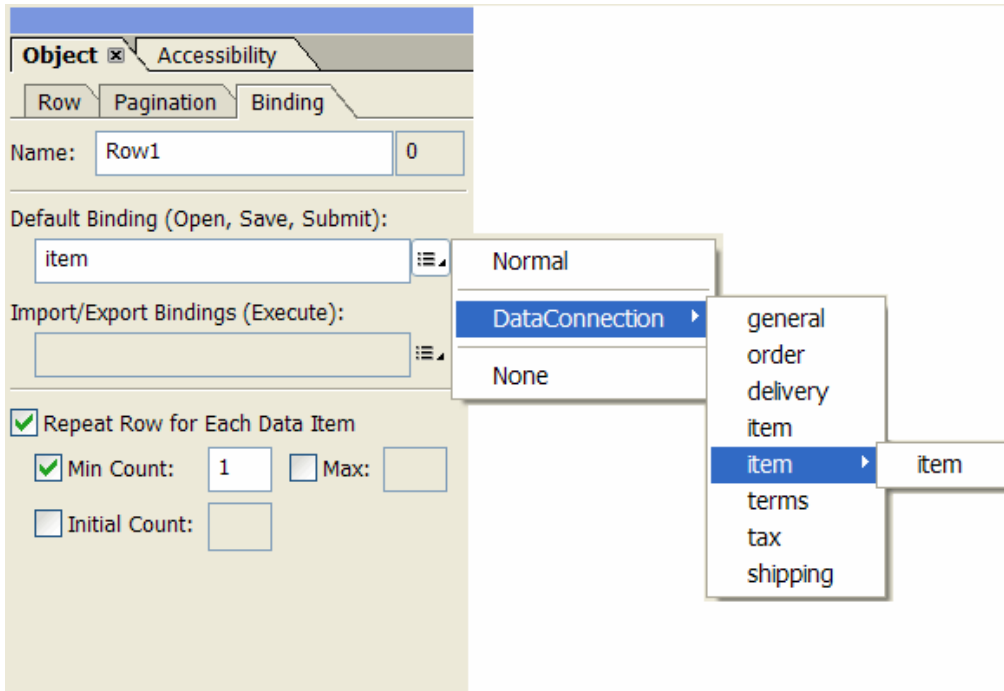
- 3 Repeat for the remaining items in the Data View palette (except for partNum, description, quantity, and unitPrice). For example, companyName should be bound to the Ordered By field.

**To bind the data to table cells in the form**

- 1 In the Hierarchy palette, select Row1.
- 2 In the Object palette, click the Binding tab.

## Specifying a data file

- Click the triangle beside the Data Binding (Open, Save, Submit) box and select a binding. For example, select DataConnection > item > item.



The following string appears in the Data Binding (Open, Save, Submit) box:

```
$record.item.item[*].
```



You can type this string into the Data Binding (Open, Save, Submit) box instead of selecting it.


- Open the Data View palette.
- To ensure that the binding is set the way you prefer, bind each node to a cell by using the drag and drop method. For example, in the Data View palette, select partNum, and drag it to the cell under the heading Part No.
- In the Binding Properties dialog box that appears, select Don't Update Any Related Properties and click OK.
- Repeat for the remaining items in the Data View palette under item (description, quantity, and unitPrice).

## Specifying a data file

The last task is to point to a data file to merge with the form.

- Select File > Form Properties and click the Preview tab.
- In the Preview area, browse for the location of the data file you want to use.  
For example, if you or your administrator installed the samples that come with Designer ES2, locate the data file named Purchase Order.xml, which is located in \EN\Samples\Forms\Purchase Order\Schema\Data.
- Click Open and then click OK.
- View the form in the Preview PDF tab.

Your form should now look like this illustration.



**Purchase Order**

Ordered By Any Company Name

Address 555, Any Blvd.

City Any City State ST Zip Code 12345

Country Any Country

Phone Number (123) 456-7890

Fax Number (123) 456-7899

Contact Name Contact Name

P.O. Number 8745236985

P.O. Date 8-Feb-2004

Deliver To Any Company Name

Address 7895, Any Street

City Any City State ST Zip Code 12346

Country Any Country

Phone Number (123) 456-7891

Fax Number (123) 456-7899

Contact Name Contact Name

| Part No.  | Description  | Quantity | Unit Price | Amount   |
|-----------|--------------|----------|------------|----------|
| 00010-100 | Monitor      | 1        | \$350.00   | \$350.00 |
| 00010-200 | Desk lamps   | 3        | \$55.00    | \$165.00 |
| 00025-275 | Phone        | 5        | \$85.00    | \$425.00 |
| 00300-896 | Address book | 2        | \$15.00    | \$30.00  |

Terms and Conditions

Account number: 123456

Authorized By \_\_\_\_\_

Total \$970.00

State Tax % 7.00% State Tax \$67.90

Federal Tax % 8.00% Federal Tax \$77.60

Shipping Charge \$50.00

Grand Total \$1,165.50

The Purchase Order.xml data file that comes with Designer ES2 contains four records. You can modify this XML file so that you can test the layout of the form to verify that it adjusts to accommodate data by using a data file that contains more data.

**(Optional) To test the Purchase Order form to ensure it that is flows the merged data properly:**

- 1 Open the XML file and find the following lines:

```

<item>
  <partNum>00300-896</partNum>
  <description>Address book</description>
  <quantity>2</quantity>
  <unitPrice>15.00</unitPrice>
</item>

```

Below the previous lines, you can add more items. For example, you can add these lines:

```

<item>
  <partNum>00300-300</partNum>
  <description>Clipboard</description>
  <quantity>3</quantity>
  <unitPrice>5.00</unitPrice>
</item>
<item>
  <partNum>00300-325</partNum>
  <description>Paper Punch</description>
  <quantity>1</quantity>
  <unitPrice>8.00</unitPrice>
</item>
<item>
  <partNum>00300-350</partNum>
  <description>Ruler</description>
  <quantity>5</quantity>
  <unitPrice>1.00</unitPrice>
</item>
<item>
  <partNum>00300-400</partNum>
  <description>Scissors</description>
  <quantity>2</quantity>
  <unitPrice>2.00</unitPrice>
</item>
<item>
  <partNum>00300-425</partNum>
  <description>Tape</description>
  <quantity>2</quantity>
  <unitPrice>2.50</unitPrice>
</item>
<item>
  <partNum>00300-450</partNum>
  <description>Glue Stick</description>
  <quantity>2</quantity>
  <unitPrice>1.00</unitPrice>
</item>
<item>
  <partNum>00300-475</partNum>
  <description>Stapler</description>
  <quantity>2</quantity>
  <unitPrice>4.00</unitPrice>
</item>
<item>
  <partNum>00300-500</partNum>
  <description>Highlighters</description>
  <quantity>1</quantity>
  <unitPrice>5.00</unitPrice>
</item>
<item>
  <partNum>00300-550</partNum>
  <description>Selfstick Notes</description>
  <quantity>4</quantity>
  <unitPrice>5.00</unitPrice>
</item>

```

**What's next?**

```
<item>
  <partNum>00300-575</partNum>
  <description>Composition Notebook</description>
  <quantity>5</quantity>
  <unitPrice>8.00</unitPrice>
</item>
```

- 2 Save the revised data file with a new name.
- 3 In the Form Properties dialog box, click the Preview tab and find the revised data file.
- 4 Click OK and view the form in the Preview PDF tab again.

## What's next?

If you have worked through the tutorials, you know the basics of how to set up a form. You may now want to include the header row in the table on subsequent pages. You also may want to add page numbering. For additional information about forms with a flowable layout, see the topic "Working with forms that have a flowable layout" in [LiveCycle Designer ES2 Help](#).