



Introduction to Designer

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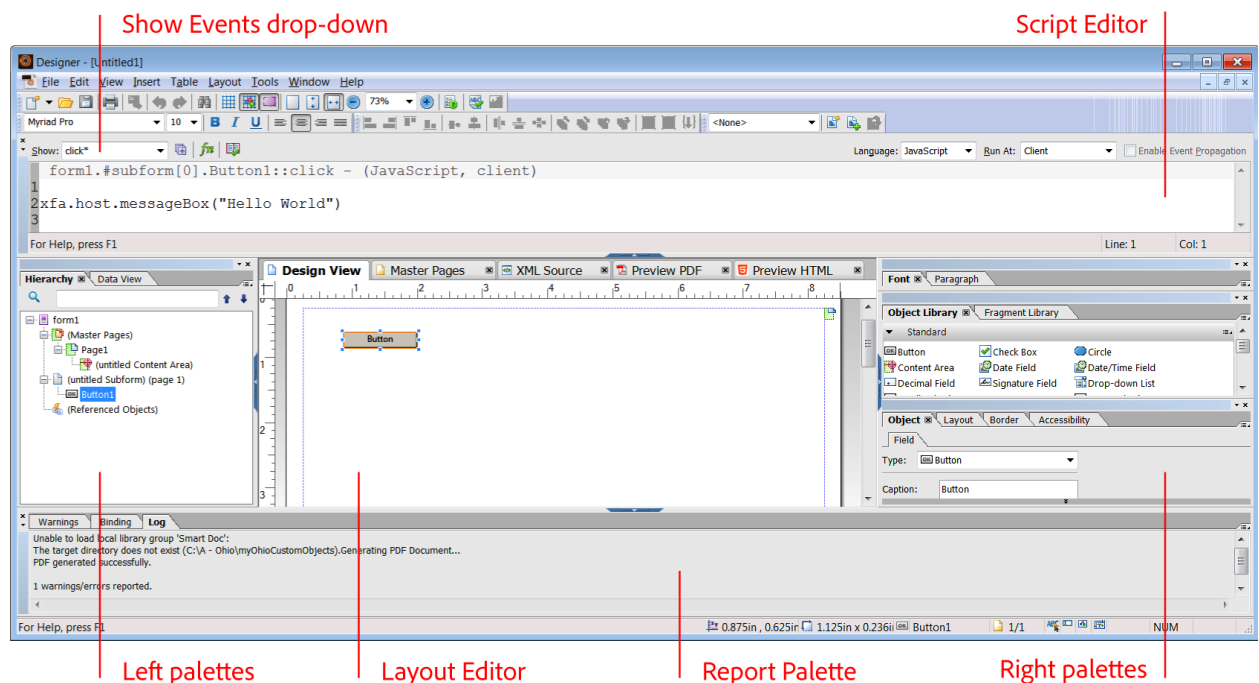
Introduction to Designer

Designer is a Microsoft Windows–based program that provides all the tools you need to create basic or sophisticated forms. You can create PDF or HTML forms with *Designer*. *Designer* is a multifaceted tool that supports the four most important requirements of smart forms:

- **Multiple format and device support:** With the new version of *Designer*, you can create one *Designer* file and render it in all the formats you need for your business. These formats include HTML, interactive and dynamic PDF forms, and read-only PDF documents. Your *Designer* forms and documents can be used on traditional PCs and Macintoshes and also on tablets and smartphones.
- **Data handling:** *Designer* makes it easy to get data structures into your forms and to output properly formatted data from your forms. Powerful tools are provided for data validation, data formatting, and data binding.
- **Scriptable interactivity:** *Designer*'s scriptable interactivity goes way beyond what is available in Acroforms and other form technologies. Virtually every form object is scriptable at any step in your process. *Designer* has a sophisticated object model, which you can use to add powerful interactivity to your forms.
- **Graphic precision and fidelity:** The three preceding features would usually be enough for an interactive forms tool, but *Designer* also offers the graphic precision and quality of an Adobe solution. For the last 30 years, Adobe has been the unquestioned leader in computer graphics with industry leading products in graphic design, marketing, and digital publishing tools. You don't need to compromise on typography, layout, or graphic quality with *Designer* forms, and your one form can be used for all your business needs.

The Workspace

The workspace consists of many editors, views, and palettes. These palettes can float or be docked like they are on the right. You can configure your workspace in many different ways, but this illustration shows a very typical and common configuration.



Designer's interface showing each of the major sections.

The Layout Editor

The Layout Editor is in the middle of the workspace, and it contains five main views: Design View, Master Pages, XML Source, Preview PDF, and Preview HTML. You'll see the Layout Editor when you have a document opened. The following is a brief introduction to each of the Layout Editor views:

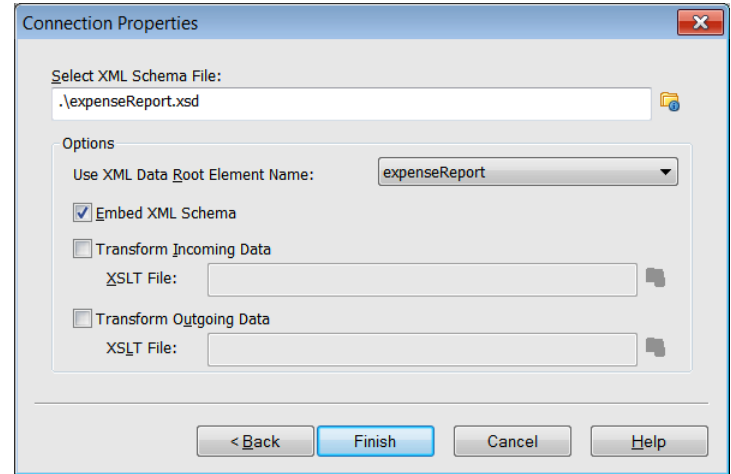
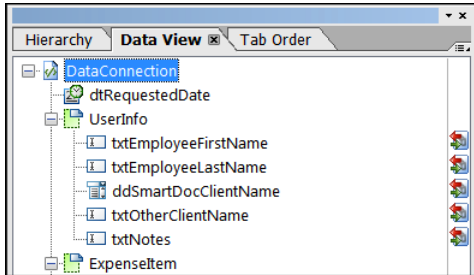
- **Design View:** Design View is the main view in the Layout Editor and the one that you'll use the most. This view displays a WYSIWYG view of your form and allows you to edit many of the visual properties of your form objects directly.
- **Master Pages:** The Master Pages tab shows an independent view of your master pages without any body page content. Master pages contain content areas that define the outer boundaries for body page objects.
- **XML Source:** If you don't see the XML Source tab, you can select it in the View menu. This is your form in XML format. The structure of Designer forms is all XML, and as you make additions and edits to your form in Design View, this XML is updated in the background. You can quickly locate the XML source code for any of your form objects by selecting the object in the Hierarchy palette while the XML Source view is open. You'll immediately see the XML Source view update, and your selected form object will be highlighted in the XML Source view.
- **Preview PDF:** You can preview your forms directly in Designer by switching to the Preview PDF tab. This tab uses your computer's default PDF viewer, so if you have Acrobat, you'll notice part of the familiar Acrobat interface wrapping around your form when you view it in this tab. You can see more of Acrobat by pressing Alt+F8.
- **Preview HTML:** If you don't see the Preview HTML tab, you can select it in the View menu. If it doesn't appear in your View menu, you're likely using a version of Designer prior to Designer ES4. You'll learn how to configure and use this view in, "HTML Forms."

The Left Palettes

The area on the left includes palettes you'll use to organize the structure of your form:

- **Hierarchy:** You'll spend a lot of time using this palette to view and organize the objects and structure of your form. When you select an object on your form, it's also selected in the Hierarchy palette, and vice versa. The Hierarchy palette displays your form's objects in a tree view, which is a great way to examine and edit your form's structure. Understanding this structure becomes particularly important when you start adding script to your form. The Hierarchy palette also displays referenced objects under the Referenced Objects node. A *referenced object* is an object that's added to a form only when it's required. Overflow leader and trailer subforms are examples of referenced objects. Whenever data flows across multiple pages or content areas, the overflow leader and trailer subforms are inserted into the form in the appropriate places.
- **PDF Structure:** This palette does not appear in the previous figure, but is available in Designer. It isn't usually relevant for the XML Forms Architecture (XFA) PDF forms you'll create with Designer. It's more relevant for Acroforms and PDF documents because it displays a hierarchical view of the accessibility tags in these types of PDFs. You'll use this feature in Designer if you're working with PDF forms with fixed pages and fixed background artwork. You add accessibility features to XFA PDFs with the Accessibility palette.
- **Data View:** When you open a form that's connected to a data source, the Data View palette shows you a graphical representation of your form's data elements. You can associate your forms with data sources through a process called data binding. You can bind your form objects to an XML Schema, a Sample XML Data file, an Adobe Data Model, a WSDL (Web Services Description Language) file, or an OLEDB (Object Linking and Embedding Database).

- **Tab Order:** The Tab Order palette shows all your form objects in a list that corresponds to the order that a user will see when tabbing through the form. You can change your form's tab order with this tool. The default tab order for Designer forms is left to right and top to bottom. If you don't see this palette, choose Window – Tab Order.

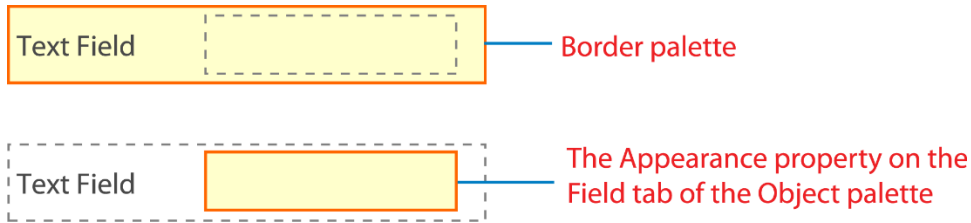


The Data View palette showing the schema binding on the SmartDoc Expense Report form.

The Right Palettes

The area on the right includes palettes you'll use to create and edit your form objects:

- **Font:** The Font palette enables you to edit the font family, size, and style of text in your objects. Many interactive form objects like Text Fields have both a caption and a value font property that can be set independently.
- **Paragraph:** The Paragraph palette enables you to edit the alignment, indents, and line spacing of your text.
- **Object Library:** The Object Library palette provides a collection of all available form objects. You can easily drag and drop form objects from this palette onto your form layout.
- **Fragment Library:** The Fragment Library palette provides a collection of your form fragments. Form fragments are reusable form parts that are saved as separate files. These fragments are ideal if you're creating or managing numerous forms that use the same form parts.
- **Object:** You use the Object palette to modify the properties of your form's interface objects. As you work with this palette, you'll learn that it's very useful and very adaptive. It enables you to edit and customize the most important aspects of your objects without having to provide any custom JavaScript. It's flexible because it reconfigures its options based on the object you select. For instance, if you select a master page object, you'll see the Master Page and Pagination tabs on the Object palette.
- **Layout:** The Layout palette works hand in hand with the Layout Editor. As you make changes to your object in the Layout Editor, they are reflected here, and vice versa.
- **Border:** Most of the information in the Border palette is self-explanatory. However, it's important to note that these border properties affect the entire object, not just the editable portion of the field. The entire area surrounding your field and caption will be outlined with a border that you set with this palette. If you want to edit the border around your field, use the Appearance property on the Field tab of the Object palette.
- **Accessibility:** You can use the Accessibility palette to set Screen Reader properties for your forms. You can set several different options for each field on your form; you'll learn more about this later.



The Border palette settings outline the entire object, but the Appearance property in the Object palette enables you to outline just the field.

The Script Editor

By default, the Script Editor is located directly above the Layout Editor and below the menu bar. You use this tool to create and edit scripts, and it's usually docked at the top of the Designer workspace. Scripts are an important part of smart forms because they enable you to customize the functionality of your forms at both the client and the server level. You'll learn more about this later in the manual.

The Report Palette

By default, the Report Palette is located directly below the Layout Editor and it's usually docked at the bottom of the Designer workspace. This palette displays messages about your Designer file so you can correct issues as you work.

Adobe XFA and XDP

Designer creates forms based on the Adobe XML Forms Architecture (XFA). You will save these forms as XML Data Packets (*.xdp). Designer forms can be rendered as many different types of PDFs and also as HTML forms. Designer enables this flexibility because it creates well-structured XFA to describe each aspect of your form. For instance, this is the well-structured XFA that describes a Text Field.

```

Design View  Master Pages  XML Source  Preview PDF  Preview HTML
<field name="TextField1" y="31.75mm" x="19.05mm" w="62mm" h="9mm">
  <ui>
    <textEdit>
      <border>
        <edge stroke="lowered"/>
      </border>
      <margin/>
    </textEdit>
  </ui>
  <font typeface="Adobe Clean"/>
  <margin topInset="1mm" bottomInset="1mm" leftInset="1mm" rightInset="1mm"/>
  <para vAlign="middle"/>
  <caption reserve="25mm">
    <para vAlign="middle"/>
    <value>
      <text>Text Field</text>
    </value>
  </caption>
</field>

```

Saving

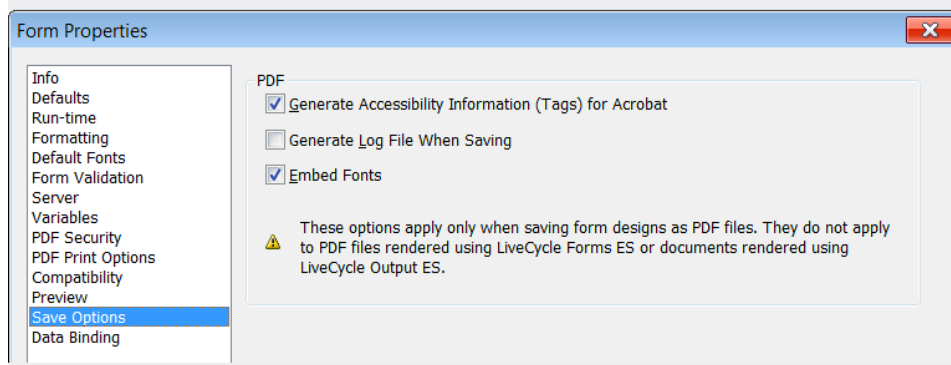
When you save your Designer file, you need to consider how it will be used. The following is a list of file format options available in Designer. You'll learn how and when to use these formats throughout the training.

File Formats

- **Adobe Static PDF Form (*.pdf):** Saves forms as static PDFs based on the Acrobat and Adobe Reader target version specified in the form properties. Even if you specify a dynamic, flowable layout, this type of PDF form will still be static and will not re-render in response to user action. The fields on this form type can be interactive or non-interactive.
- **Adobe Dynamic XML Form (*.pdf):** Saves forms as dynamic PDFs based on the Acrobat and Adobe Reader target version in the form properties. In this case, a dynamic, flowable layout will re-render in response to user action. A user can add or remove table rows and even entire form sections with this type of PDF.
- **Adobe XML Form (*.xdp):** Saves forms in the native XML-based file format created by Designer. Use this option if you'll be using and AEM Forms Server to render PDF or HTML forms. The form design can contain dynamic and interactive elements.
- **Adobe Designer Template (*.tds):** Saves the basic structure for a form as a template. It can contain components and settings, such as fonts, page layout, formatting, and scripts. Use it as a starting point for a new form.
- **Adobe Designer Style Sheet (*.xfs):** Saves the internal style sheet in the form as an external style sheet. Style sheets can be used to provide consistent formatting to all your forms. Style sheets can control the look of caption and field value text, the appearance of object borders and background colors, as well as the size and style of Radio Buttons and Check Box objects.

Options for PDFs

When you create a PDF, Designer provide a few additional parameters. You can select these parameters in the Form Properties dialog. Select **File – Form Properties – Save Options**.

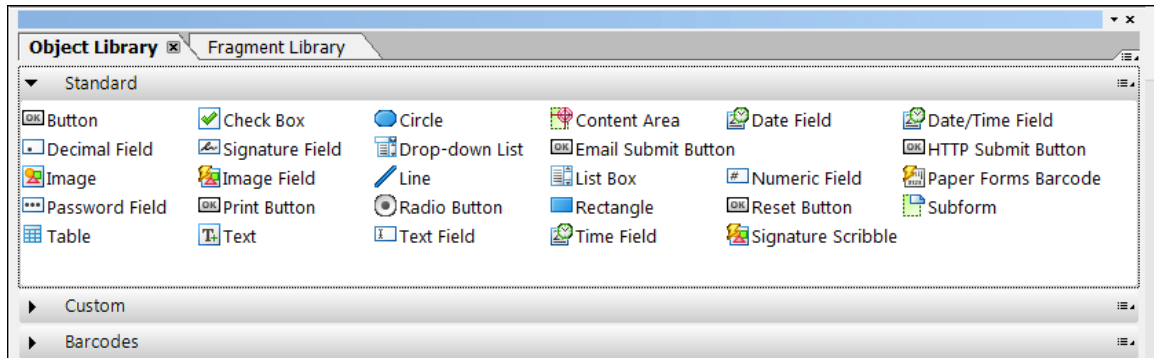


This is a summary of each option and you will see more details in the training.

- **Generate Accessibility Information (Tags) for Acrobat**
This option is necessary to make your PDF forms accessible for devices like screen readers.
- **Generate Log File When Saving**
This option will generate a log file which you can view in your Report palette.
- **Embed Fonts**
This option will put specific font information in your PDF file. On one hand this is beneficial because you can be assured that your fonts will render properly on a form-filler's machine. On the other hand, selecting this option makes your file much larger, which results in longer download times for your user. The performance advantage of smaller PDF forms is so substantial that you should think twice before choosing to embed fonts.

Standard Objects

Designer includes a library of standard form objects. These objects can be added to your form by dragging and dropping from the *Standard Object Library* to the *Layout Editor*.



Text objects and Text Field objects

These are often confused by new students. The *Text* object is simply static label text. You can use it for labels or for paragraphs of text. It is possible to make *Text* objects dynamic by introducing *floating fields*.

Text Field objects are interactive and dynamic. They provide users with a way to enter data on the form. *Text Field* objects support all the following features.

- Captions and interactive data entry fields
- Multiline text
- Display and validation patterns
- Rich Text

Numeric Field objects

Like *Text Field* objects, *Numeric Field* objects should be used when you need to collect or display data. However, unlike *Text Field* objects, *Numeric Field* objects should be used for numeric data like floats, integers, and currency values. The following are characteristics of this object type.

- Numeric fields only accept numeric input.
- Numeric fields support display and validation patterns.
- Numeric fields are *context-sensitive* to the Locale setting. A U.S. Locale setting will use a comma to denote thousands (1,000.) while a German Locale setting will use a decimal point to denote thousands (1.000).

Image objects and Image Field objects

These objects are like *Text* and *Text Field* objects because an *Image* object is also static, and an *Image Field* object is also interactive. If you need a static image on your form, use the *Image* object. If you need an image that the user can change at runtime, use the *Image Field* object.

Drop-down List objects

A *Drop-down List* is an ideal form object for an enumeration or an array. It displays a list of items and facilitates the user's selection of an item from the list. Consider these points about a *Drop-down List*.

- It accepts custom user entries.
- Although it initially displays only one item, once it is selected, it shows the entire list.

List Box objects

A *List Box* is like a *Drop-down List* because it can display a list of items and facilitate the user's selection of an item from the list. However, keep the following points in mind when considering the use of a *List Box*.

- It requires more form real estate than a *Drop-down List*.
- It does not accept custom entries from the user.

Button objects

Designer's standard *Button* object can be configured for any action your form may need. You can set the Control Type to Regular and write JavaScript on the click event to perform the functionality. Or, you can set the Control Type to Submit to configure a form submission. Here is a short summary of Control Types for the *Button* object.

- Select **Regular** for the Control Type to run the JavaScript in the click event.
- Select **Execute** for the Control Type to execute a database query or call a web service.
- Select **Submit** for the Control Type to submit the form's data to a web service or other endpoint.

Specialty Button objects

In addition to the standard *Button* object, Designer also has these specialty Button objects.

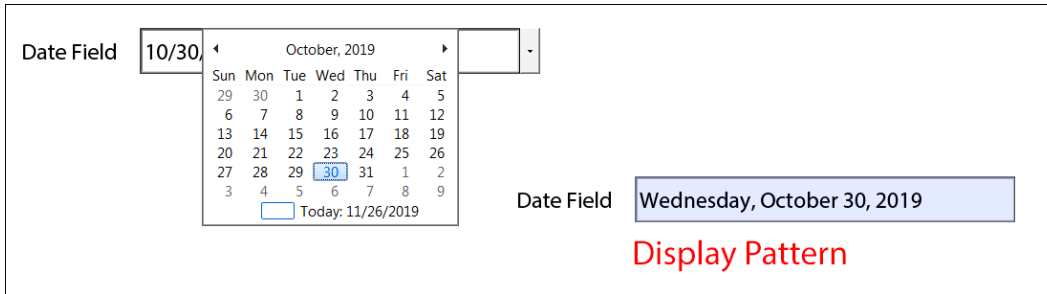
- The *Print Button* initializes the Print Dialog box.
- The *E-mail Submit Button* submits the form to a specified email address.
- The *HTTP Submit Button* creates an HTTP submission of the form to a specified URL.
- The *Reset Button* removes all the data input from the form.

Radio Button objects and Check Box objects

Radio Buttons objects are part of an exclusion group, but Check Box objects are not. Therefore, you will likely use Radio Button objects in cases of mutually-exclusive choices and Check Box objects in cases where one or more choices can be selected. You can set the style of either object to be a square or a circle. You also have a variety of check styles for each object.

Date Field objects

The *Date Field* object presents the user with a visual calendar drop-down to select the date. Once selected, the date is automatically formatted according to the Display Pattern property of the object.



Signature Field objects and Signature Scribble objects

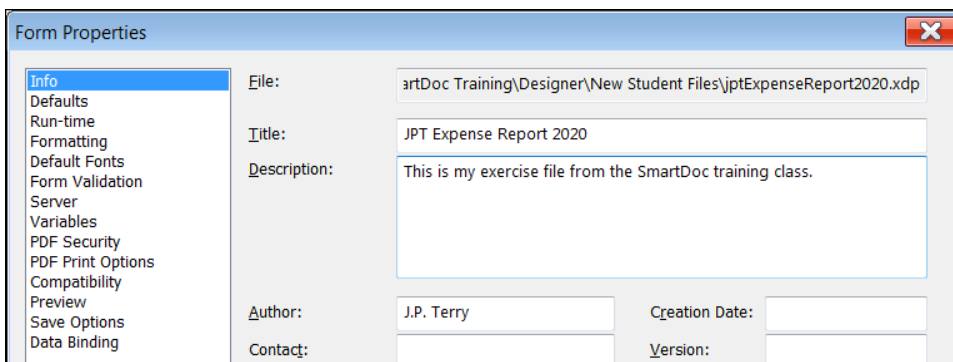
In short, the *Signature Field* object is used for PDF forms and the *Signature Scribble* object is used for HTML forms. The *Signature Field* object requires the end user to have a valid Adobe Acrobat digital signature to sign. The *Signature Scribble* object can be signed simply by scribbling a signature with a mouse or a stylus. If the end user has a touch device like an Apple iPad, they can sign the *Signature Scribble* object with their finger.

Exercises

Work with Objects

In this exercise you will be adding the different interactive elements to your form. You will be setting certain properties for each of the elements so that the element is relevant and works well in your form.

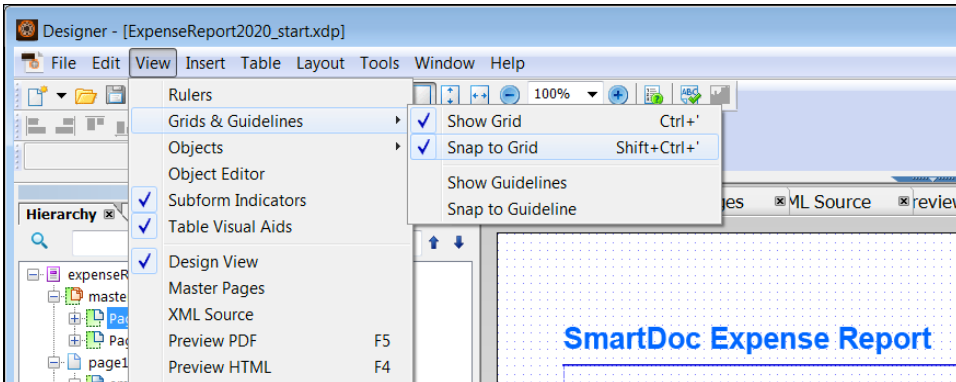
1. Open **ExpenseReport2020_start.xdp** from your Student Files.
2. Save the file as **<yourname>ExpenseReport<year>.xdp**.
3. Select **File – Form Properties**.
4. Enter **<your name> Expense Report <year>** for the Title.
5. Enter **This is my exercise file from the SmartDoc training class** for the Description.
6. Enter **<your name>** for the Author.



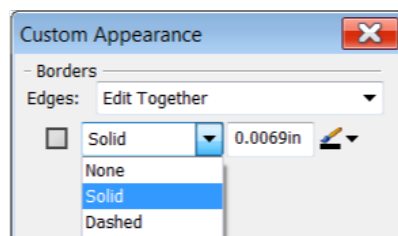
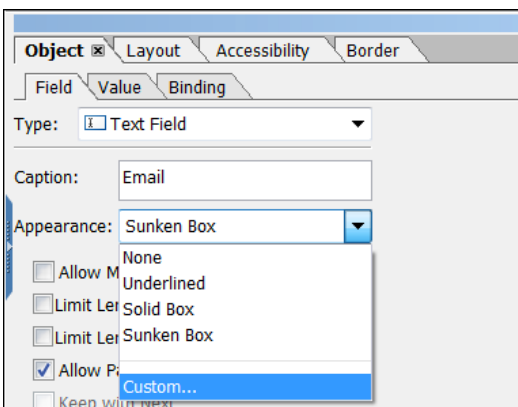
Note: This metadata will appear in AEM after the XDP file is uploaded to an AEM Server.

7. When you are done, click **OK**.

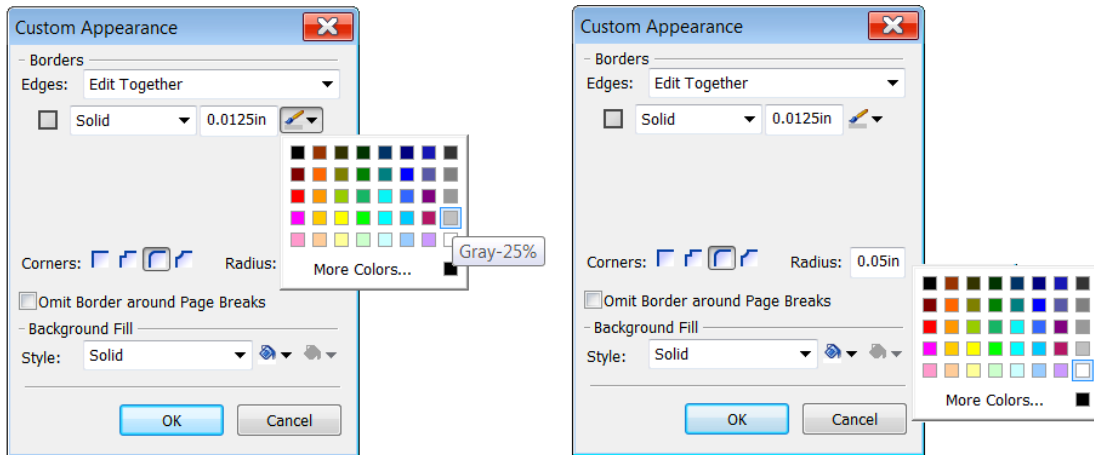
8. Expand your **Drawing Aids** palette. If you don't see your **Drawing Aids** palette, you can select **Window – Drawing Aids** to display the palette.
9. Notice that the X Interval is set to 16/in and the Y Interval is also set to 16/in. This will produce a 1/16 inch grid.
10. You can close the **Drawing Aids** palette now by clicking the small X in the top-right corner.
11. Select **View – Grids & Guidelines – Show Grid**.
12. Select **View – Grids & Guidelines – Snap to Grid**.



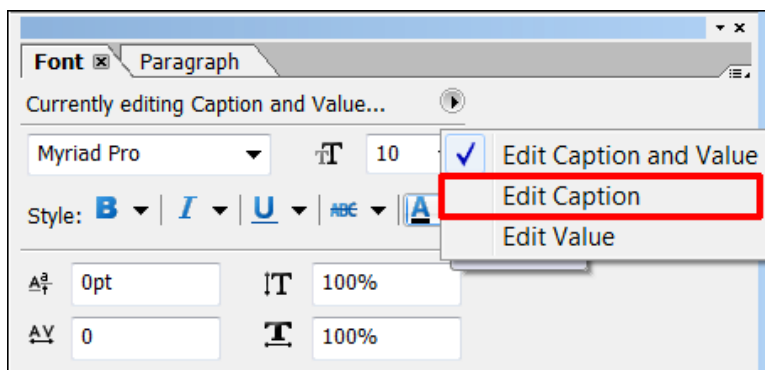
13. Drag and drop a **Text Field** object from the *Standard* Library to the *employee* subform on *page1*.
14. With the Text Field selected, enter **Email** for the Caption property. This property is located on the *Field* tab of the *Object Palette*.
15. Select the *Binding* tab and enter **email** as the Name for the object.
16. Click the *Field* tab and select **Custom** for the Appearance property (see illustration). The Custom Appearance dialog box will open.
17. Select **Edit Together** and select **Solid** for the Edges (see illustration).



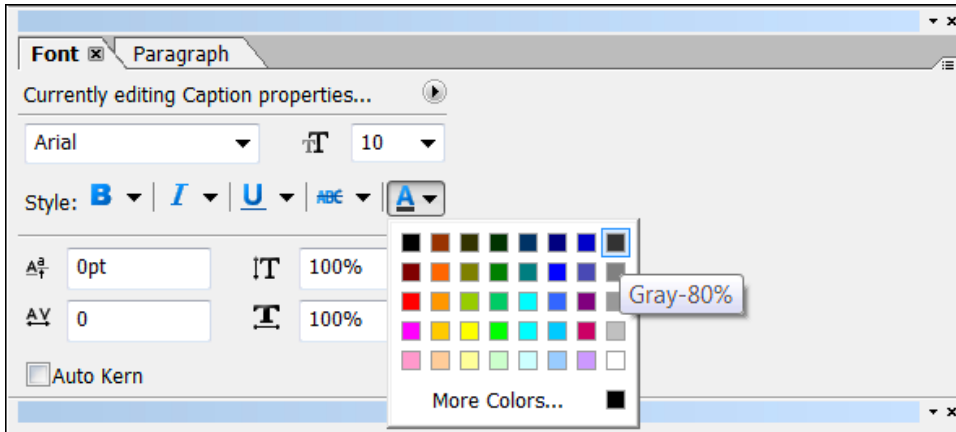
18. Enter **0.0125in** for the line size and select **Gray-25%** for the color (see illustration below).
19. Select a round corner and enter **0.05in** for the Radius.
20. Select **Solid** for the *Background Fill* and select **White** for the Fill Color (see illustration below).



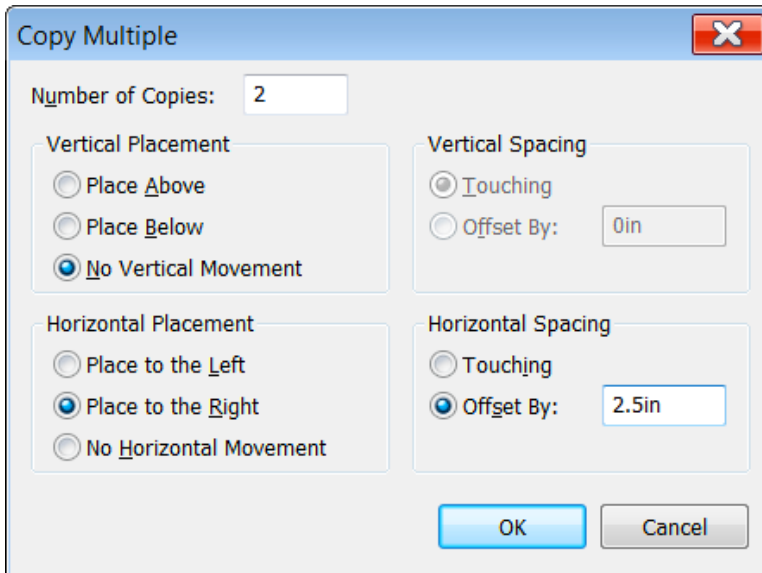
21. Click **OK** when you are done.
22. Select **Limit Length** and enter **255** for Max Chars.
23. Select the **Value** tab of the Object palette.
24. Select **User Entered – Required**.
25. Select the *Layout* palette and change the *Caption Position* from Left to **Top**.
26. Enter **0.25in** for the *Caption Reserve*.
27. Enter **0in** for each of the four margins.
28. Enter **.5in** for *X* and **1.1875in** for *Y*.
29. Enter **2.5in** for *Width* and **0.5625in** for *Height*.
30. Open the Font palette if it is not already opened.
31. Click **Currently editing Caption and Value properties** in the Font Palette and select **Edit Caption**.



32. Select **Arial** and **10pt** for the caption font.
33. Select **Gray-80%** for the color (see illustration).



34. Click **Currently editing Caption properties** in the Font Palette and select **Edit Value**.
35. Select **Georgia** and **10pt** for the value font.
36. Select **Edit – Copy Multiple**
37. Enter **2** for Number of Copies.
38. Select **No Vertical Movement**.
39. Select **Place to the Right**.
40. Select **Offset By** and enter **2.5in**.



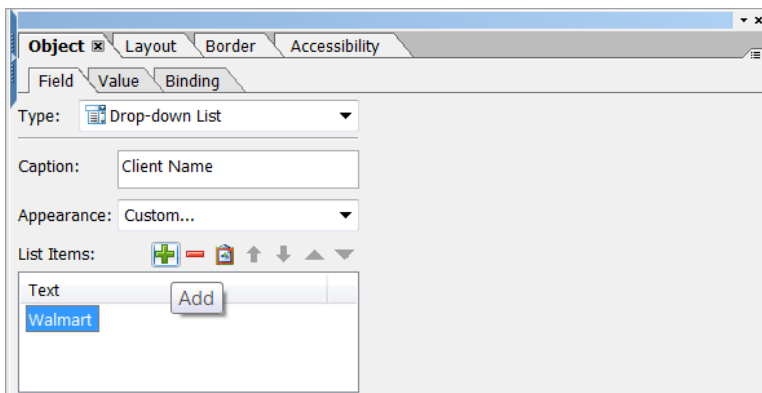
41. Click **OK** and your 2 new fields will be created.
42. With all three fields selected, click **Edit – Copy Multiple**.
43. Enter **1** for *Number of Copies*.
44. Select **Place Below** for *Vertical Placement*.
45. Select **Offset By** and enter **.6875in** for *Vertical Spacing*.

46. Select **No Horizontal Movement**.
47. Click **OK**.

Your form should now look like this.

The screenshot shows a form titled "SmartDoc Expense Report" on a dotted grid background. The form contains six text fields arranged in two rows of three. Each field is labeled "Email" and has a red circle with a number (2 through 6) next to it. The fields are arranged in a 2x3 grid. The top row has fields 2, 3, and 4. The bottom row has fields 5, 6, and 7. The fields are labeled "Email" and have a red circle with a number next to them.

48. Select Text Field #2 and enter **firstName** for the name and **First Name** for the caption.
Note: You can change the name in the Hierarchy palette and the caption in the Field tab of the Object palette.
49. Select Text Field #3 and enter **lastName** for the name and **Last Name** for the caption.
50. Select Text Field #4 and enter **reportName** for the name and **Report Name** for the caption.
51. Select Text Field #5 and enter **clientName** for the name and **Client Name** for the caption.
52. Select Text Field #6 and enter **total** for the name and **Total** for the caption.
53. Select **clientName** and change the Type to **Drop-down List**. The Type property can be found on the *Field* tab of the *Object* palette.
54. Click **Add** (the plus icon) on List Items (see illustration).
55. Enter **Walmart** as a List Item in the new Drop-down List.



56. Click **Add** (the plus icon) again and add **Amazon, Target, Costco, Home Depot** as *List Items*. You will need to click **Add** each time to enter a new list item.
57. Select **total** and change the Type to **Numeric Field**. The Type property can be found on the *Field* tab of the *Object* palette.
58. Click the **Patterns** button.

59. Make sure the field has a useful Display Pattern. Here is one suggestion: `num.currency{}`
60. Click **OK**.
61. Select each of your 6 text fields and set the Data Binding property to **Use name**. You can find this in the Binding tab of the Object palette. This is likely the default value.
62. Click **Preview PDF** to see your form in action.
63. Enter values for your fields.

You should see something that looks like this (*see illustration*).

SmartDoc Expense Report

Email: First Name: Last Name:

Report Name: Client Name: Total:

Week Of:	Category	Amount
<input checked="checked" type="checkbox"/>	Meals	

The Client Name dropdown menu is open, showing options: Walmart, Amazon, Target (selected), Costco, Home.