Advanced Guide to InfoPath 2007

Division of Biomedical Informatics

Cincinnati Children's

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Before you begin

The *Advanced Guide to InfoPath 2007* should be read after you have mastered the tools and features described in the *Getting Started with InfoPath 2007* guide. The purpose of this document is to demonstrate how to use some of the advanced features of InfoPath. You will learn how to create multi-page forms, add buttons, validate data, display new options based on user input, and use other features designed to help you build interactive forms.

Creating a multi-page form

You can create a form that utilizes multiple pages. Suppose you have a long list of questions and want to break up the questions into different pages. To create a multi-page form, use the InfoPath View feature. By default, your original form includes a single view, View 1 (default), as shown in the Views section of your Design Task pane. To add additional views, complete the following steps:

1. Open your form in InfoPath.

2. Click View/Design Task. Then click Views. Or click on "Views" in the Design Tasks pane on the right side of your InfoPath window.

3. Click "Add a New View…" under the "Actions" section. The "Actions" section is located at the bottom of the pane on the right side of your InfoPath window.

4. When the pop-up screen appears, enter the name of your view.

5. You should see your new view in the Design Task window. You can toggle your views anytime by clicking on a view name.

6. Add controls and other elements to your new view as you wish.

    Note: You can include the same control, bound to the same field, in multiple views. For example, your form might include a screen-friendly view and a printer-friendly view. In this case, you could simply copy the controls in your screen-friendly view, paste them to your printer-friendly view, and reformat them accordingly.

7. Repeat Steps 1-6 to add more views.

Using buttons to switch views

Adding a button to your form will allow your users to be able to move between different views of your form (page 1 to page 2 to page 3 and so on). Follow the instructions below to add a button to your form.

1. Place your cursor in your document where you want to create a new button.

2. Click View/Design Task. Then click Controls. Or click on "Controls" in the Design Tasks pane on the right side of your InfoPath window.

3. Select "Button" in the "Standard" section.

4. Double-click your new button.

5. By default, your button is labeled "Button" in the "Label" text box. You can rename your button according to your specific needs. Examples include Next,

Previous, Back and Forward.

6. Click the "Rules…" button.

7. Click the "Add…" button.

8. By default, the initial rule is labeled "Rule 1" in the "Name" text box. You can rename your rule according to your specific needs. Examples include Next, Previous, Back and Forward.

9. Click the "Add Action…" button.

10. Select "Switch views…" from the "Action" drop-down list box.

11. Select the view you want the button to move to from the "View" drop-down list box.

12. Click OK to close the Action window.

13. Click OK to close the Rule window.

14. Click OK to close the Rules window.

15. Click OK to close the Button Properties window.

16. View the form in Preview mode.

17. Repeat Steps 1-16 to add multiple buttons to you form.

Validating your form input data

You can set rules ("If a=b, then do c") to validate data entered by your users. Validating data will help you to avoid problems like incomplete or inaccurate data. Follow the instructions below to create an error message that will appear on the screen based on the data validation rules you set.

1. Double-click the control (text box, button, drop-down list box, etc.) to which you want to add data validation.

2. Click the "Data Validation…" button.

3. Click the "Add…" button.

4. Under "If this condition is true," use the available options in the drop-down list boxes to define the condition(s) that must be met for the error message to be displayed.

Note: You can insert as many conditional statements as you wish, joining them with the "and/or" drop-down list box.

Note: If you want to create a conditional statement that includes nested or parenthetical expressions (for example, "If (a or b), then do c)," it's possible to do so. Email the BMI Help Desk at help@bmi.cchmc.org for assistance.

5. Under "Then show this error alert," enter a screen tip in the "ScreenTip" text box. The ScreenTip is the title of the message you are going to display to the user if the conditional is met.

    Note: Do not enter a message in the "Message" text box under the "Then show this error alert:" section. Dialog box messages do not work in browsers.

6. Click the "Show dialog boxes immediately when users enter invalid data" check box.

7. Click OK to close the first Data Validation window.

8. Click OK to close the second Data Validation window (this window display the name of the "Conditions with data validation:" you just created).

9. Click OK to close the Properties box.

10. View the form in Preview mode.

    Note: When the condition you create is met by the user, the control will be highlighted in red. The user will not be able to publish the form until the error has been resolved.

Creating an action based on user input

You can create actions based on user input such as setting a field's value or opening a new form. To create an action, complete the following steps:

1. Double-click a control (text box, button, drop-down list box, etc.).

2. Click the "Rules…" button.

3. Click the "Add…" button.

4. By default, the initial rule is labeled "Rule 1" in the "Name" text box. You can rename your rule according to your specific needs.

5. Click the "Add Action…" button.

6. Select one of the following options in the "Action" drop-down list box:

- Show a dialog box message
- Set a field's value

Note: There are other options available, but please consult a BMI software developer before proceeding with options other than the ones listed above. If you are unsure whom to contact, email the BMI Help Desk at help@bmi.cchmc.org.

7. If you selected "Show a dialog box message" in Step 6 above, enter a message in the "Message" text box and click OK.

   If you selected "Set a field's value" in Step 6 above, enter the field's name in the "Field" text box or click on the "Field" icon to select a field. Next, enter the value you want to be used for the field you selected.

8. Click OK to close the Action window.

9. Click OK to close the Rule window.

10. Click OK to close the Rules window.

11. Click OK to close the Properties window.

12. View the form in Preview mode.

13. Repeat Steps 1-12 to add multiple buttons to you form.

Using repeating tables and sections

Repeating tables and sections are used when you want to allow your users to add additional items to the form on the fly. For example, your form may include three controls for gathering medication information. You could place these controls in a repeating table or section to allow the user to add information about as many medications as necessary.

Note: Repeating tables and sections have one caveat. Data is stored in the database as a single text field, separated by commas. If you plan on filtering data from a repeating table or section, it may be difficult to filter on a specific entry. For example, a user enters ten (10) medications; one of the medications listed is Tylenol. If you want to later filter your patients' by type of medication, you will not be able to select users based on Tylenol.

Creating a repeating table

Suppose you want to create a list of procedures including a subject's name, date, and procedure name. You can create a repeating table with any number of columns and enable your users to insert new rows (records) as needed.
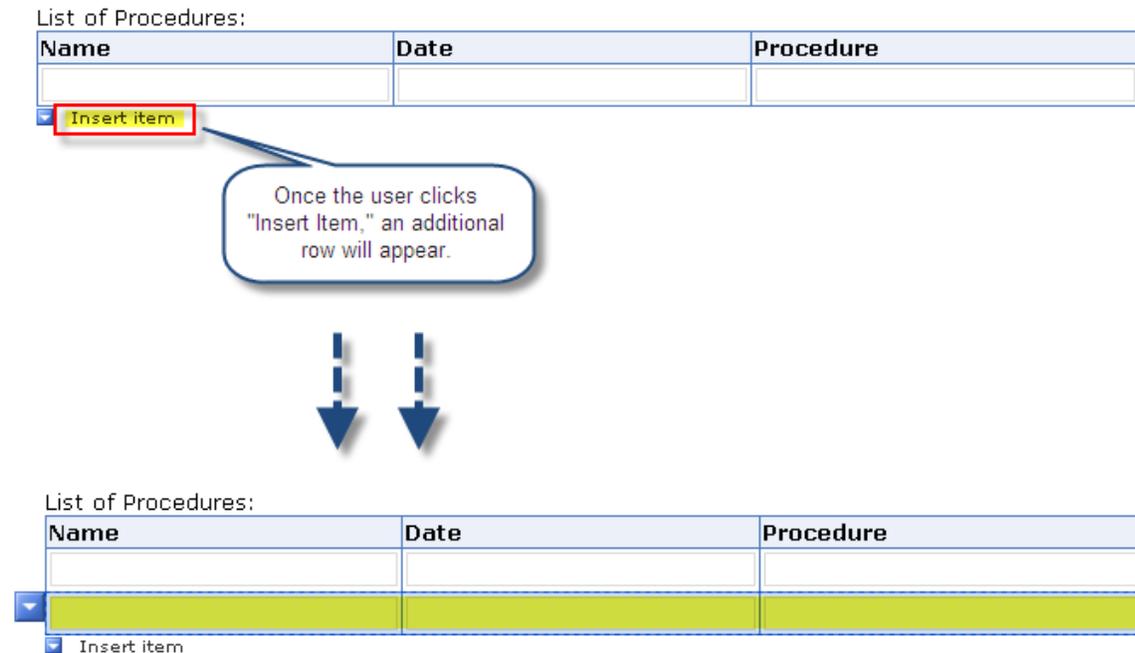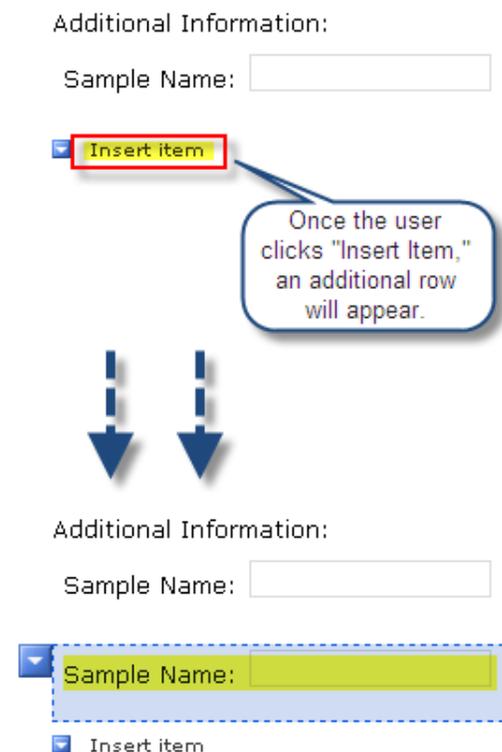

To add a repeating table to your form:

1. Place your cursor in your document where you want to create a new repeating table.

2. Click View/Design Task. Then click Controls. Or click on "Controls" in the Design Tasks pane on the right side of your InfoPath window.

3. Select "Repeating Table" in the "Repeating and Optional" section.

4. An "Insert Repeating Table" message window will appear. By default, the "Number of columns" is set to 3. You can enter a number greater than or less than three (3) depending on your specific needs. You can also use the up/down arrows to select the number of columns. Enter or select the number of columns you want to use for your repeating table.

5. Click OK.

6. By default, InfoPath places a text box in each column of the table. You can switch these text boxes to different controls by right-clicking them, selecting "Change to" and selecting a different control type.

7. Double-click each control in the table, go to "Field name," replace the default name with a descriptive name, and click OK to save your changes. For more about naming fields, see the *Getting Started with InfoPath 2007* guide.

8. View the form in Preview mode.

9. Once in Preview mode, click on the "Insert item" or down arrow under the repeating table you entered. A new row will be added. If you set your repeating table to three (3) columns, three (3) new fields will be added.

Creating a repeating section

Repeating sections work just like repeating tables except that controls are not organized in a tabular way.
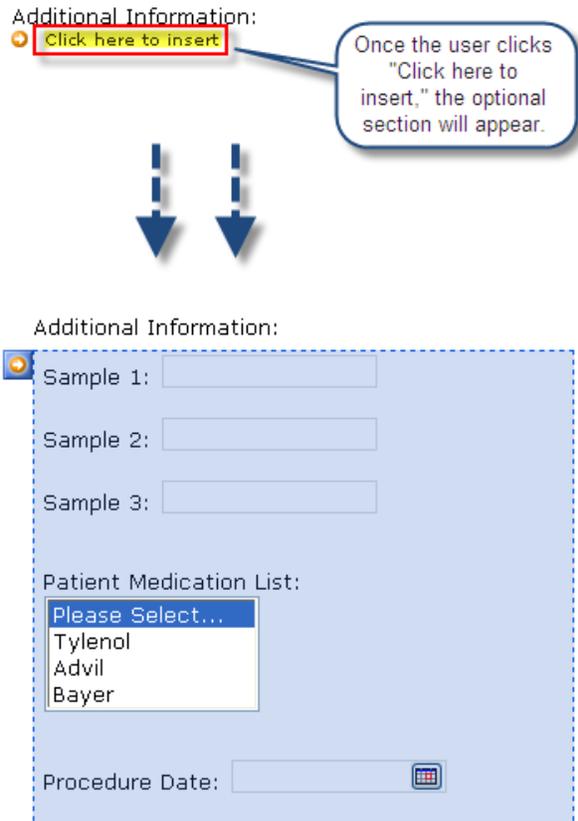

To add a repeating section to your form:

1. Place your cursor in your document where you want to create a new repeating section.

2. Click View/Design Task. Then click Controls. Or click on "Controls" in the Design Tasks pane on the right side of your InfoPath window.

3. Select "Repeating Section" in the "Repeating and Optional" section.

4. Click inside the optional section you just created.

5. Insert as many controls as you wish, making sure to double-click each to rename the associated field to something more descriptive. (See the *Getting Started with InfoPath 2007* guide for more information about naming fields.)

6. View the form in Preview mode.

7. Click on the "Click here to insert" link to the right of the orange arrow (where you created your repeating section).

Creating an optional section

You can create sections that are optional to your users. Unlike repeating tables and sections, optional sections do not appear at all on the form until the user clicks an "insert" link:

To create an optional section:

1. Place your cursor in your document where you want to create an optional section.

2. Click View/Design Task. Then click Controls. Or click on "Controls" in the Design Tasks pane on the right side of your InfoPath window.

3. Select "Optional Section" in the "Repeating and Optional" section.

4. Click inside the optional section you just created.

5. Insert as many controls as you wish, making sure to double-click each to rename the associated field to something more descriptive. (See the *Getting Started with InfoPath 2007* guide for more information about naming fields.)

6. View the form in Preview mode.

7. Click on the "Click here to insert" link to the right of the orange arrow (where you created your optional section).

Applying conditional formatting

Conditional formatting allows you to do one or more of the following based on a condition "met" by an end-user:

- Hide or show a control or section
- Disable a control
- Change font color and shading
- Underline, bold, strikethrough or italicize text

Multiple conditions can be required before formatting takes place. Follow the instructions below to add conditional formatting to your controls.

1. Double-click on the control to which you want to apply conditional formatting.

2. Click on the "Display" tab.

3. Click on the "Conditional Formatting…" tab.

4. Click Add. A screen appears for defining conditions.

5. By default, the control you selected in step 1 is already selected as the subject of the conditional statement:
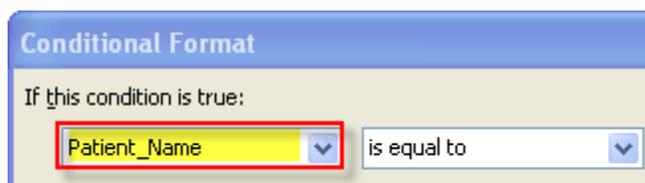
If you want to make a different control the subject of the conditional statement, select a different control from the drop-down list box:
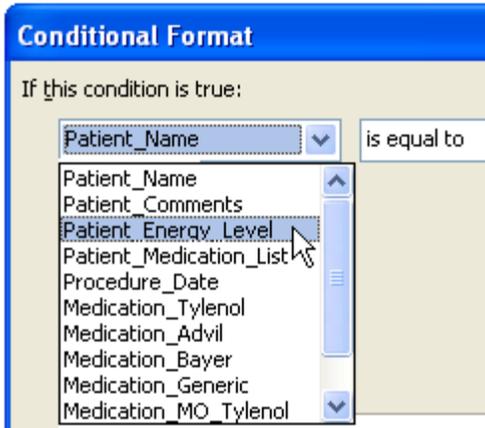
6. Select a condition in the second drop-down list box:


7. Select an option from the third drop-down list box to determine how you want to complete your conditional statement.

In our example, we are using the Patient_Energy_Level control. When the Patient Energy Level is equal to "Always Tired," we want the control to be highlighted in red. So first we select "Type text…":

Then we type the text that, when entered by the user, should trigger the conditional formatting:
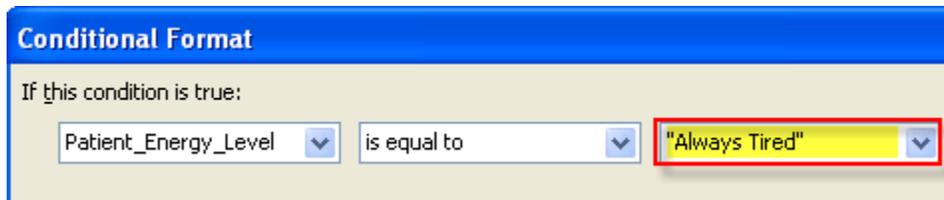
8. You can add additional formatting conditions by clicking the "Add" button.

9. To delete a row of conditional criteria, click on the "Delete" button.

10. Select the formatting you want to apply when your condition(s) are met:

- Hide this control – When the condition you set in the steps above is met, the control will be hidden from view on your form. When this option is selected, all other formatting options will not be available.
- Disable this control – When the condition you set in the steps above is met, the control will be visible but disabled on your form. When this option is selected, the font color option will not be available.
- Bold – When the condition you set in the steps above is met, the control's font will be bolded.
- Italic– When the condition you set in the steps above is met, the control's font will be italicized.
- Underline– When the condition you set in the steps above is met, the control's font will be underlined.
- Strikethrough – When the condition you set in the steps above is met, the control's font have a strikethrough, or a line through the font.
- Font color – When the condition you set in the steps above is met, the control's font will change to the color you select.
- Shading – When the condition you set in the steps above is met, the control's font will be shaded to the color you select.

As you apply formatting options, you can preview the changes in real-time.
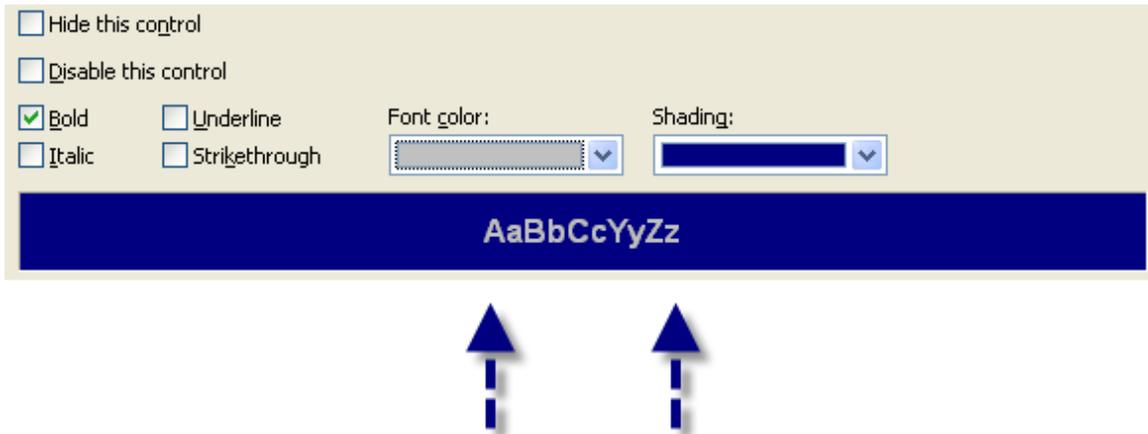
11. When you are finished defining your formatting, click OK to save your changes.

Calculating fields

In some cases, you may to automatically calculate the value of a field based on data in other fields.

Example:

Follow the instructions below to add a calculation formula to a field:

1. Double-click the control in which you want to display a calculated value.

2. Click on the *fx* button under the Data Value section.

   When the Insert Formula pop-up window appears, click the "Insert Field or Group…" button.

3. Select the first field to include in your calculation. Click OK.

   Note: You cannot type in the field name. You must select the field from the drop-down list box.

4. Enter the operation symbol you want to use in your calculation. Your choices include:

Operation	Symbol
Add	+
Subtract	-
Multiply	*
Divide	/

5. Click the "Insert Field or Group…" button.

6. Select the second field you want to include in your calculation. Click OK.

   The formula for our example would look like the following.

   Formula:
   field21 * field22

   Notes: You can verify your formula by clicking on the "Verify Formula" button. If no errors occur, the pop-up window will display "The formula does not contain any errors." Click OK.

   You can also nest formulas. To nest a formula, insert parenthesis around each calculation. **Example:** (field19 * field20) + (field21 * field22)

7. Click OK.

   Your formula should be entered in the "Value" text box.

   Default Value
   Value: field21 * field22

8. Click OK.

   Preview your form to test your new formula.