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## **Designing a Survey with FormReturn**

Tutorial by Academy Technologies  
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# Designing a Survey with FormReturn

Designing a survey with FormReturn consists of the following steps:

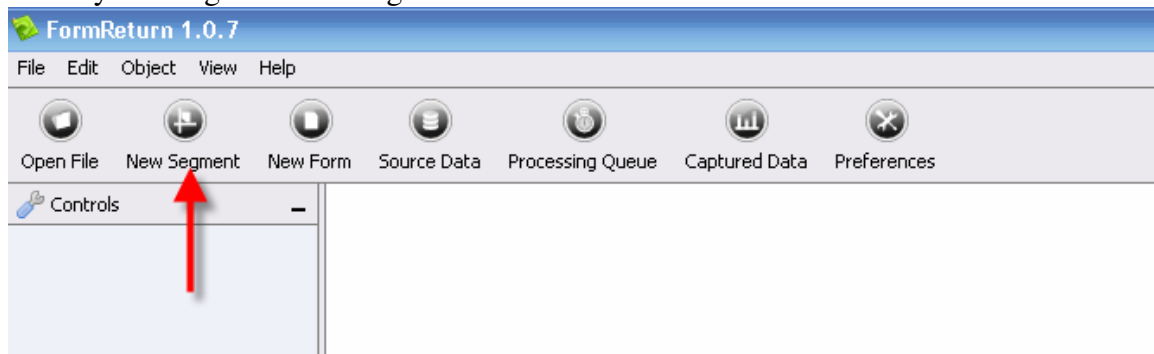
1. [Design Segment](#)
2. [Create Form](#)

After successfully creating a new form, it must be published before FormReturn can process filled-in and scanned forms. This process is described in another tutorial.

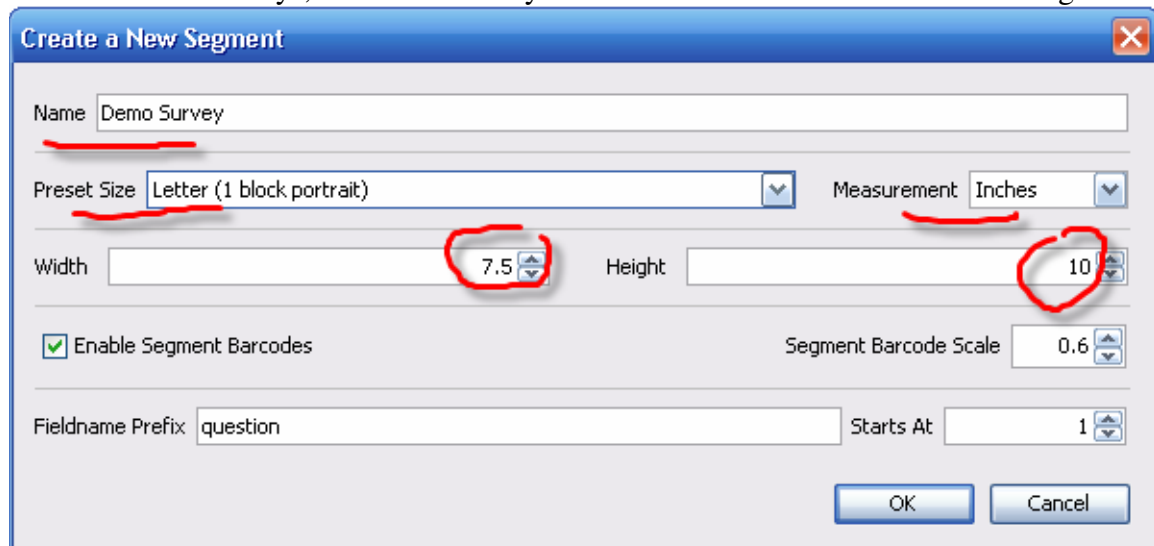
## 1. Design Segment

FormReturn comes with a very rudimentary designer that is intuitive and easy to use.

Start by clicking on <New Segment> in the tool bar.



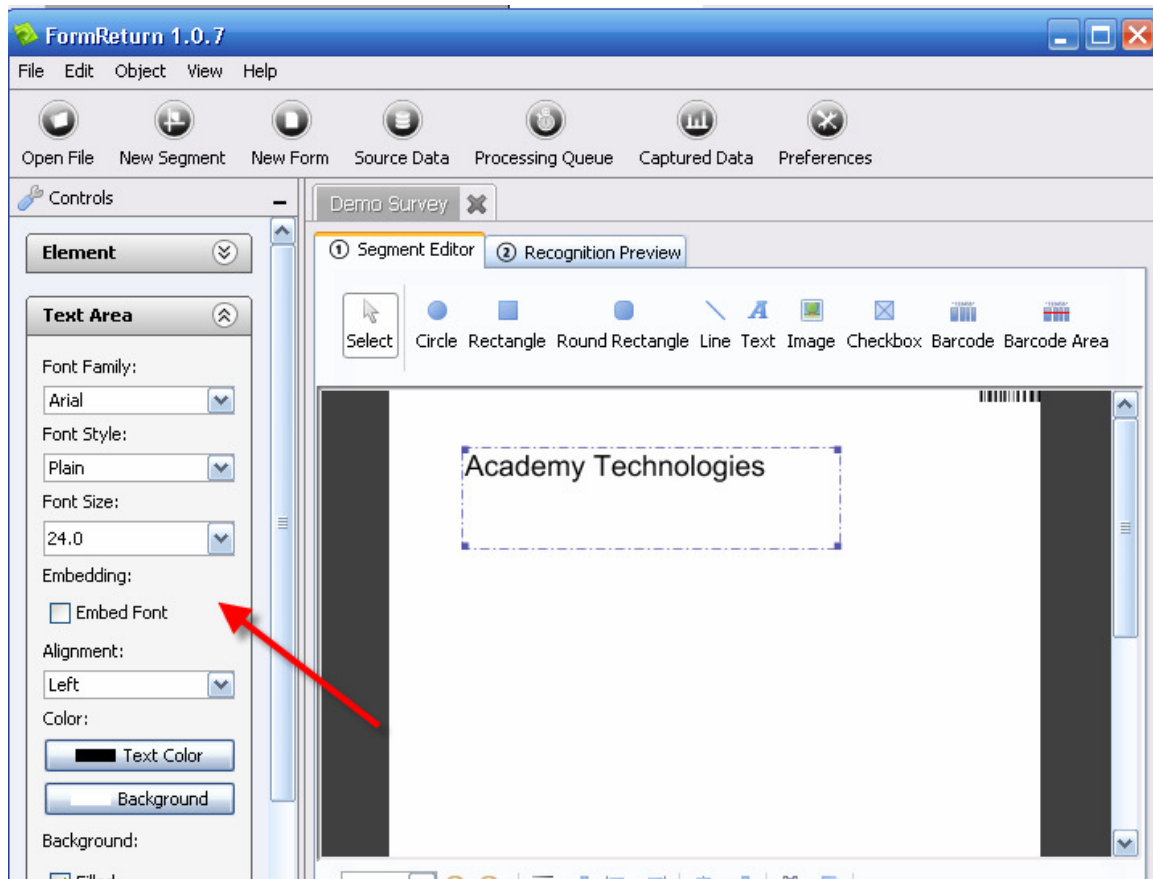
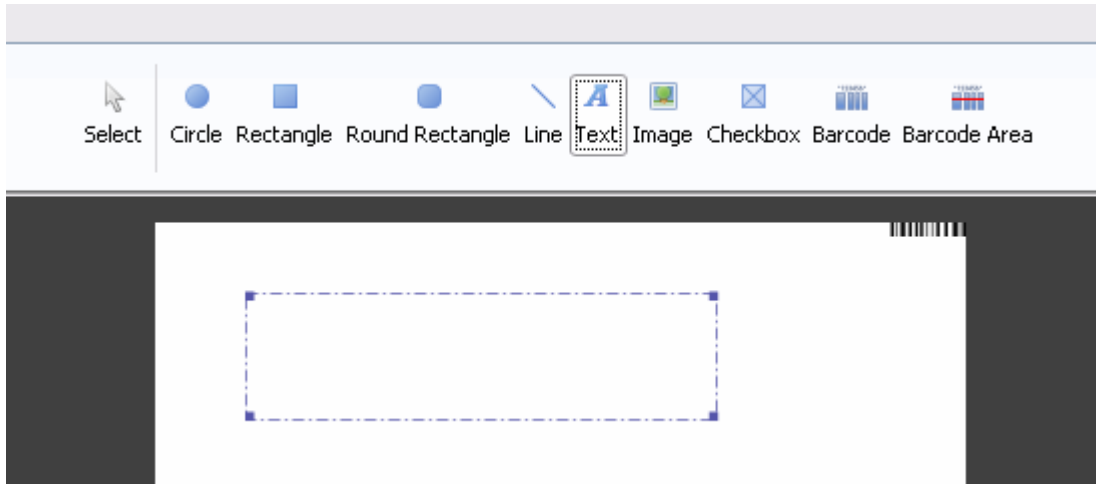
For Letter-size surveys, we recommend you select a width of 7.5" x 10" for the segment.



This will create a segment canvas. In the top right and bottom left hand corners is a segment barcode. FormReturn uses these barcodes to identify the form fields. You can now begin to design your form.

## TEXT

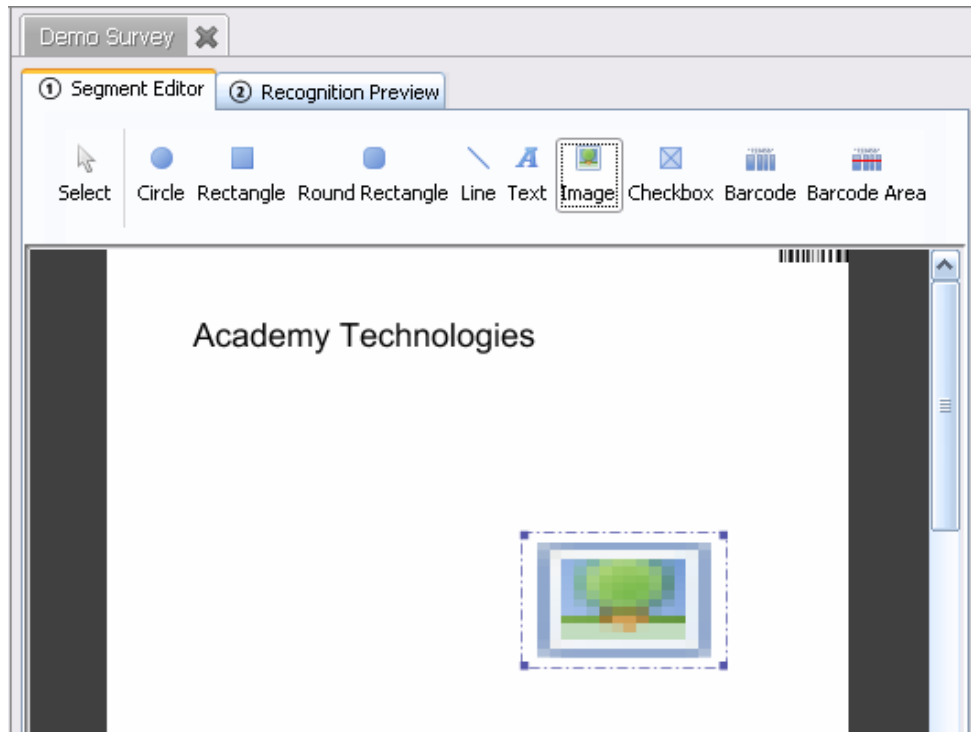
Select the Text icon above the canvas. Then draw a text box on the canvas. You can later move and resize this text box. Enter the desired text in the new text box. Be aware that at the current release level all text in a text box shares the same properties (font, font style, font size, alignment, text color, background color, and where or not there is a background at all ('filled')).



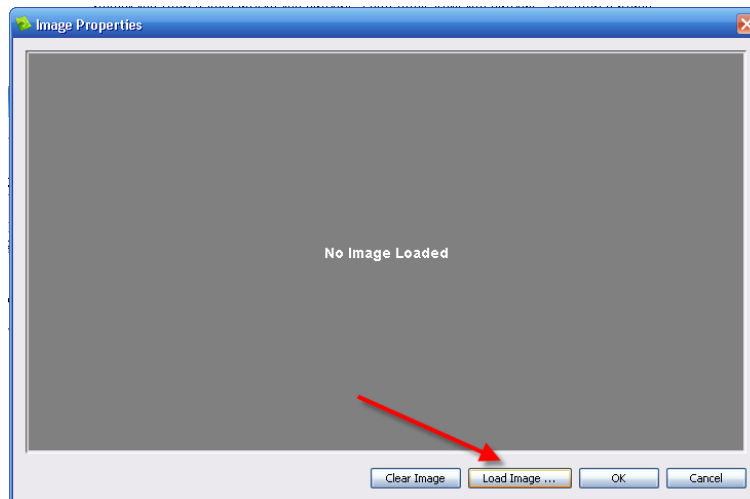
## IMAGES (LOGOS)

Images are ideally vector graphics (.png works very well) or bit maps of a high resolution. For more information on graphics support visit the developers web site: [http://www.formreturn.com/svg\\_support.html](http://www.formreturn.com/svg_support.html).

Select the Image icon above the canvas. Then click onto the canvas. The image place holder will be placed onto the canvas. You can move and size the place holder (and later the image) at anytime.

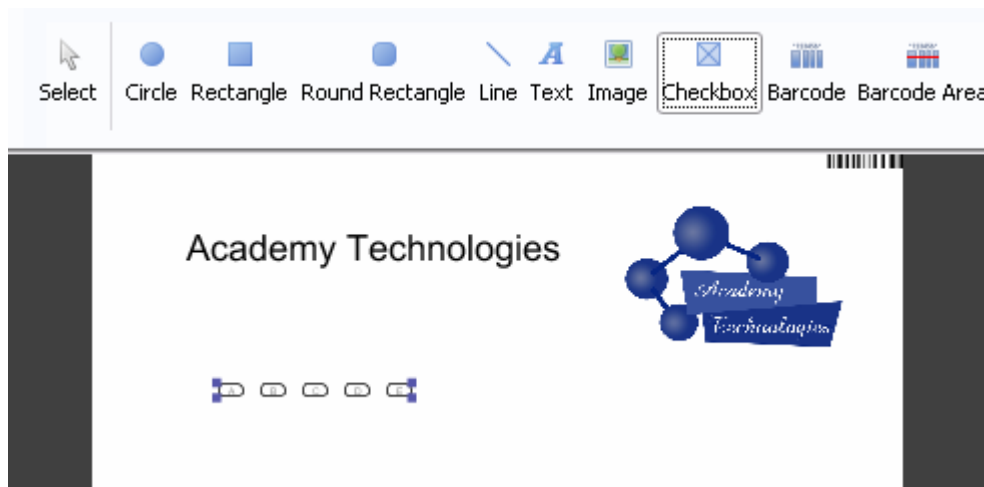


Double-click into the image place holder. Then select <Load Image> and browse to the desired image.

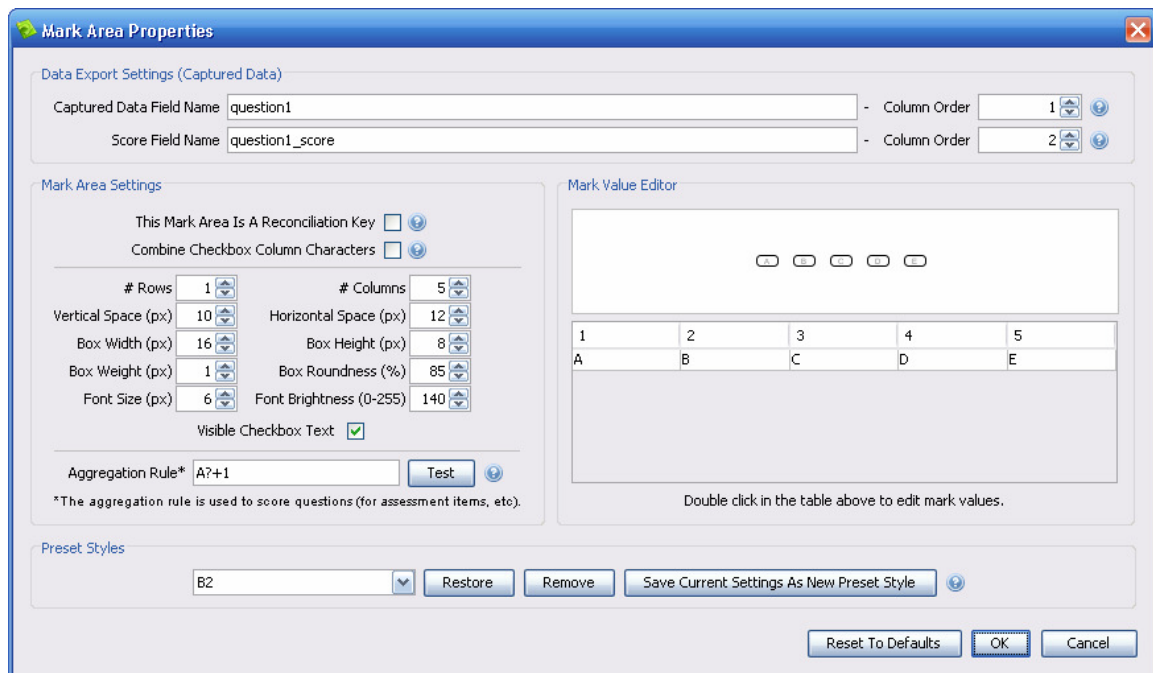


## CHECKBOXES

The main element of an OMR form are of course the OMR checkboxes (aka 'bubbles'). Select the Checkbox icon above the canvas. Then click onto the canvas. A default row of checkbox will be placed onto the canvas. You can move and size the place holder (and later the image) at anytime.



Double-click the checkbox area to open the checkbox properties. Here you can modify the number of columns and rows, the labeling of the individual bubbles, size and spacing.



## Tips:

- To ensure a uniform design of your form, select <Save Current Settings As New Preset Style> once you have configured the checkbox properties to your liking. When adding additional checkboxes you can easily select the previous settings from the drop down list under 'Preset Styles' and clicking <Restore>.
- To make the lettering inside the bubbles more readable (i.e. darker) DECREASE the Font Brightness. A value of 120 or 100 should be dark enough.
- FormReturn treats each checkbox area as one 'field' (later when data is read).
  - o If you create something like an ID block, you will want FormReturn to return one field value (consisting of for instance 3 digits). To accomplish this create a checkbox area consisting of 10 rows and 3 columns. Label the bubbles in each columns 0-9 (Mark Value Editor) then check the box labeled <Combine Checkbox Column Characters>. You may want to also assign a 'Captured Data Field Name' and 'Column Order' value now. We recommend you do this as a final step once the design is complete.

**Mark Area Properties**

Data Export Settings (Captured Data)

Captured Data Field Name: Student ID - Column Order: 1

Score Field Name: question1\_score - Column Order: 2

Mark Area Settings

This Mark Area Is A Reconciliation Key

Combine Checkbox Column Characters

# Rows: 10 # Columns: 3

Vertical Space (px): 10 Horizontal Space (px): 12

Box Width (px): 16 Box Height (px): 8

Box Weight (px): 1 Box Roundness (%): 85

Font Size (px): 6 Font Brightness (0-255): 140

Visible Checkbox Text

Aggregation Rule\*: A?+1 Test

\*The aggregation rule is used to score questions (for assessment items, etc).

Mark Value Editor

1	2	3
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
.	.	.

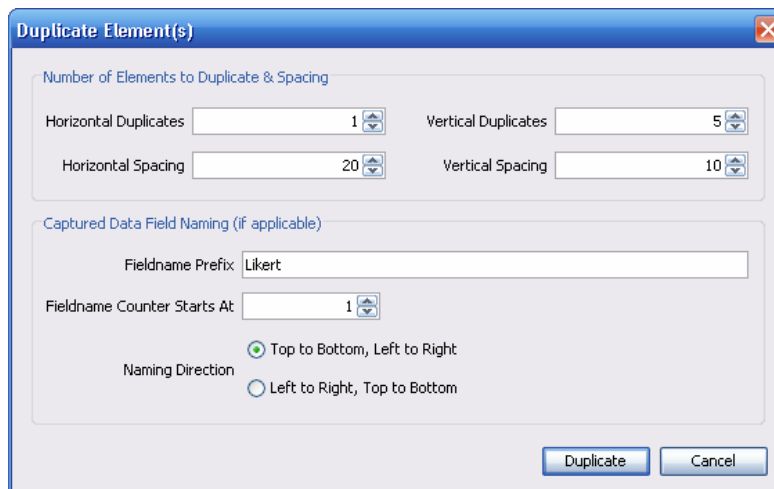
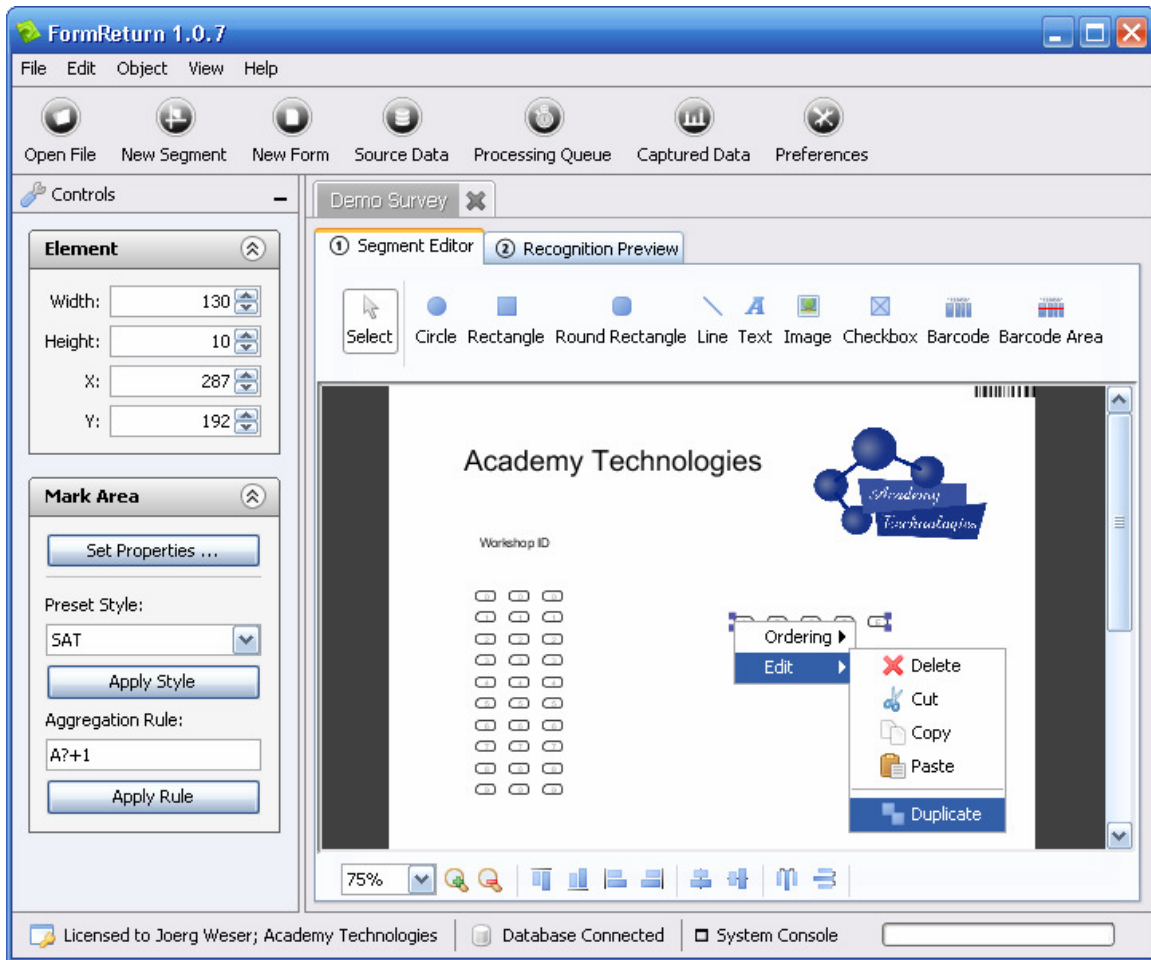
Double click in the table above to edit mark values.

Preset Styles

B2 Restore Remove Save Current Settings As New Preset Style

Reset To Defaults OK Cancel

- If you have a question block of for instance five questions that all use a Likert scale, first create one checkbox area for one question, then right click the checkbox area and 'duplicate' it.



**Pitfalls:**

- If you are printing labels inside the bubbles, make sure they are small enough to leave plenty of white space inside the bubble.
- Leave a plenty of white space in between bubbles.
- Avoid placing text or other elements too close to the bubbles.
- At the current release level, FormReturn cannot properly read single-bubble checkbox areas or checkbox areas where ALL bubbles in that area are marked. Two bubbles labeled YES/NO and a bubble 'All of the above' are current workarounds.
- At the current release level, FormReturn cannot properly read multi-column checkbox areas when there is text in between the columns.

The option 'This Mark Area Is A Reconciliation Key' is not used in anonymous surveys.

**LINES/BOXES/CIRCLES**

To draw other elements such as lines, boxes or circles, click on the respective icon above the canvas and then draw the element on the canvas.

Please be aware, that any elements (line) close to checkbox areas should be dotted or dashed. Solid lines can cause misreads.

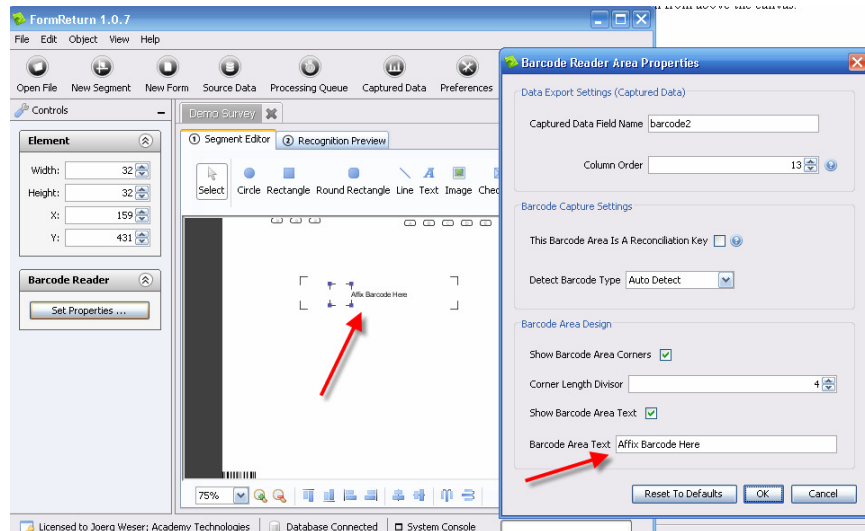
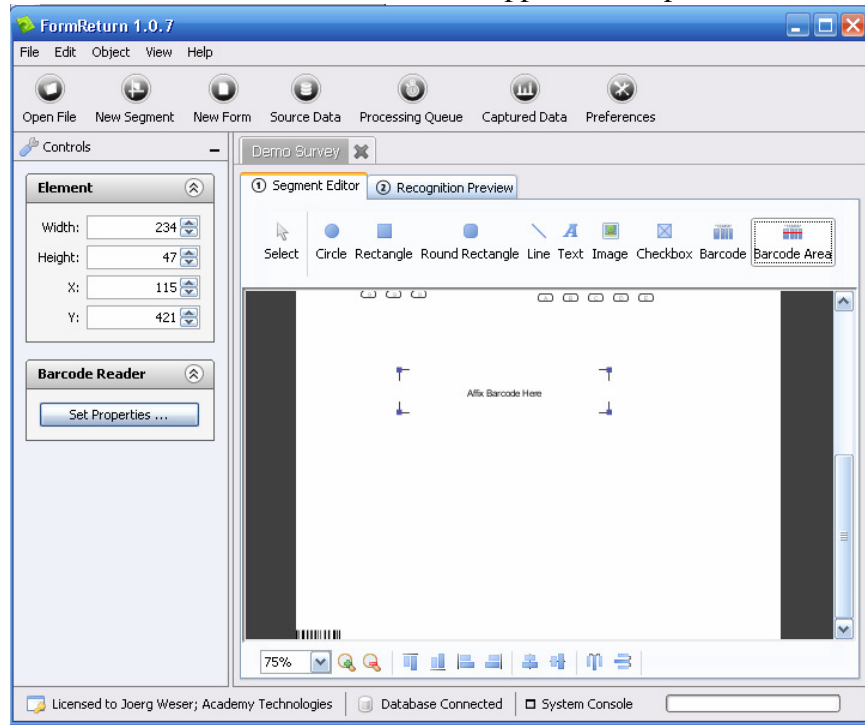
## BAR CODES

For a survey as the one discussed in this tutorial, there are only two uses of the FormReturn barcode feature.

1. Place a static barcode on the form. This barcode information will apply to ALL the survey forms. [Barcode icon]
2. Place a barcode place holder on the form. This could be used to read a unique barcode label later, such as a label applied to identify a particular workshop or a respondent. [Barcode Area icon]

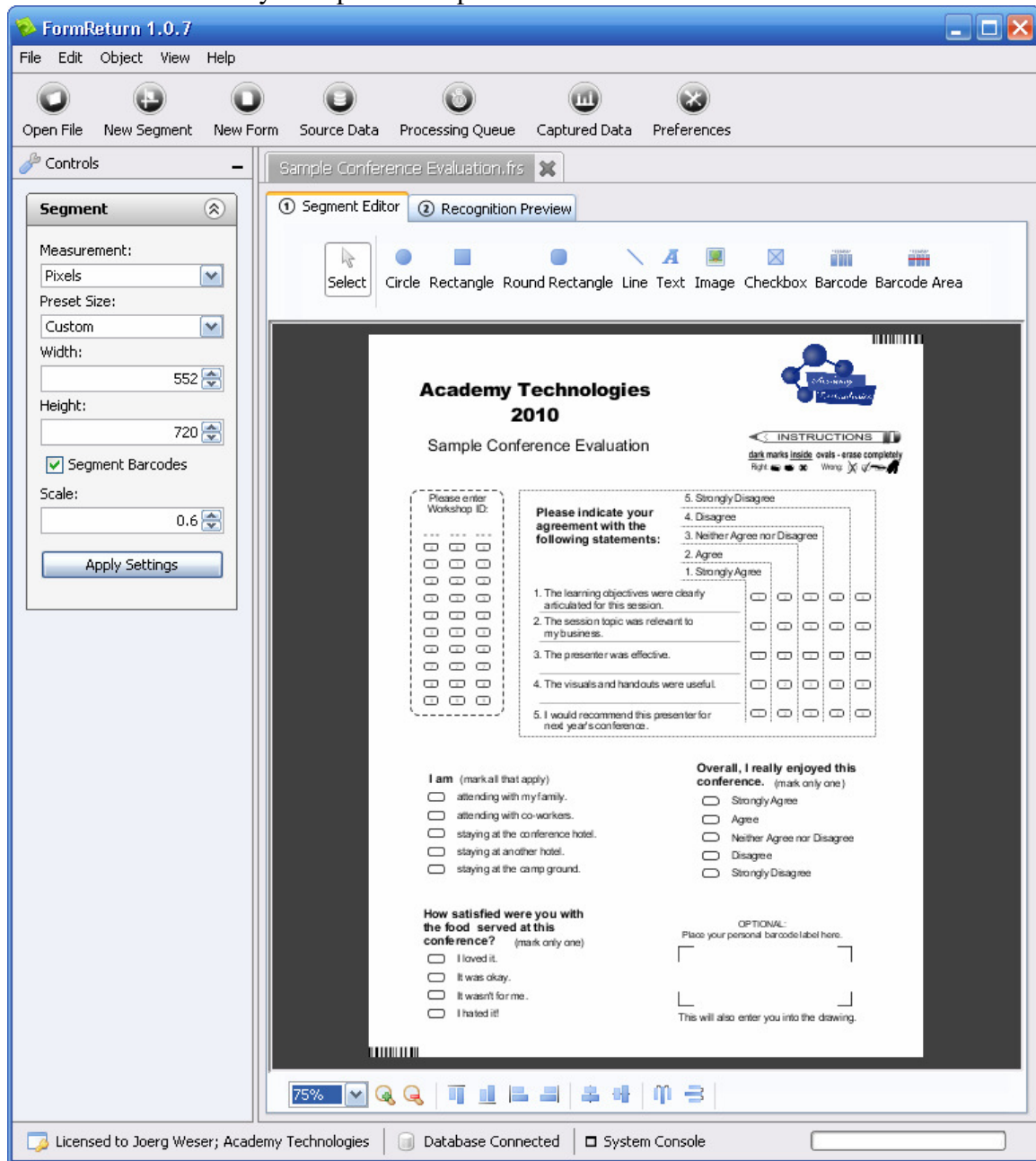
Select the Barcode icon or Barcode Area icon from above the canvas.

Edit the properties as needed. Be careful not too enter too much text in a Barcode Area. This could be misread as a barcode if no label is applied in its place.



When the layout of the segment is completed, we recommend you assign field names and field order. Do this by double-clicking each checkbox area and barcode area in the order you want to display the results. Then modify the Captured Data Field Name (anything you like – this will be the column heading/field label for this particular field) and enter values in ascending order in the Column Order fields. Although for a survey we will not be using the Score Field Name, you should still enter a value in its Column Order field.

For example, in the following form, we want the Workshop ID to be the first field, questions 1-5 to be the subsequent fields, followed by ‘I am ...’, then ‘Overall...’, ‘How satisfied...’ and finally the optional respondent ID from the barcode field.



We double-click each of the respective checkbox areas and lastly the barcode area and enter the following values:

Workshop ID:

Captured Data Field Name: <b>Workshop ID</b>	Column Order: <b>1</b>
Score Field Name: [leave at default]	Column Order: <b>2</b>
Likert Question 1:	
Captured Data Field Name: <b>Q1</b>	Column Order: <b>3</b>
Score Field Name: [leave at default]	Column Order: <b>4</b>
Likert Question 2:	
Captured Data Field Name: <b>Q2</b>	Column Order: <b>5</b>
Score Field Name: [leave at default]	Column Order: <b>6</b>
Likert Question 3:	
Captured Data Field Name: <b>Workshop ID</b>	Column Order: <b>7</b>
Score Field Name: [leave at default]	Column Order: <b>8</b>
Likert Question 4:	
Captured Data Field Name: <b>Q1</b>	Column Order: <b>9</b>
Score Field Name: [leave at default]	Column Order: <b>10</b>
Likert Question 5:	
Captured Data Field Name: <b>Q2</b>	Column Order: <b>11</b>
Score Field Name: [leave at default]	Column Order: <b>12</b>
I am ... Question:	
Captured Data Field Name: <b>I am</b>	Column Order: <b>13</b>
Score Field Name: [leave at default]	Column Order: <b>14</b>
Overall ... Question:	
Captured Data Field Name: <b>Overall</b>	Column Order: <b>15</b>
Score Field Name: [leave at default]	Column Order: <b>16</b>
How Satisfied ... Question:	
Captured Data Field Name: <b>Satisfaction</b>	Column Order: <b>17</b>
Score Field Name: [leave at default]	Column Order: <b>18</b>
Barcode Area:	
Captured Data Field Name: <b>RespondentID</b>	Column Order: <b>19</b>
Score Field Name: [leave at default]	Column Order: <b>20</b>

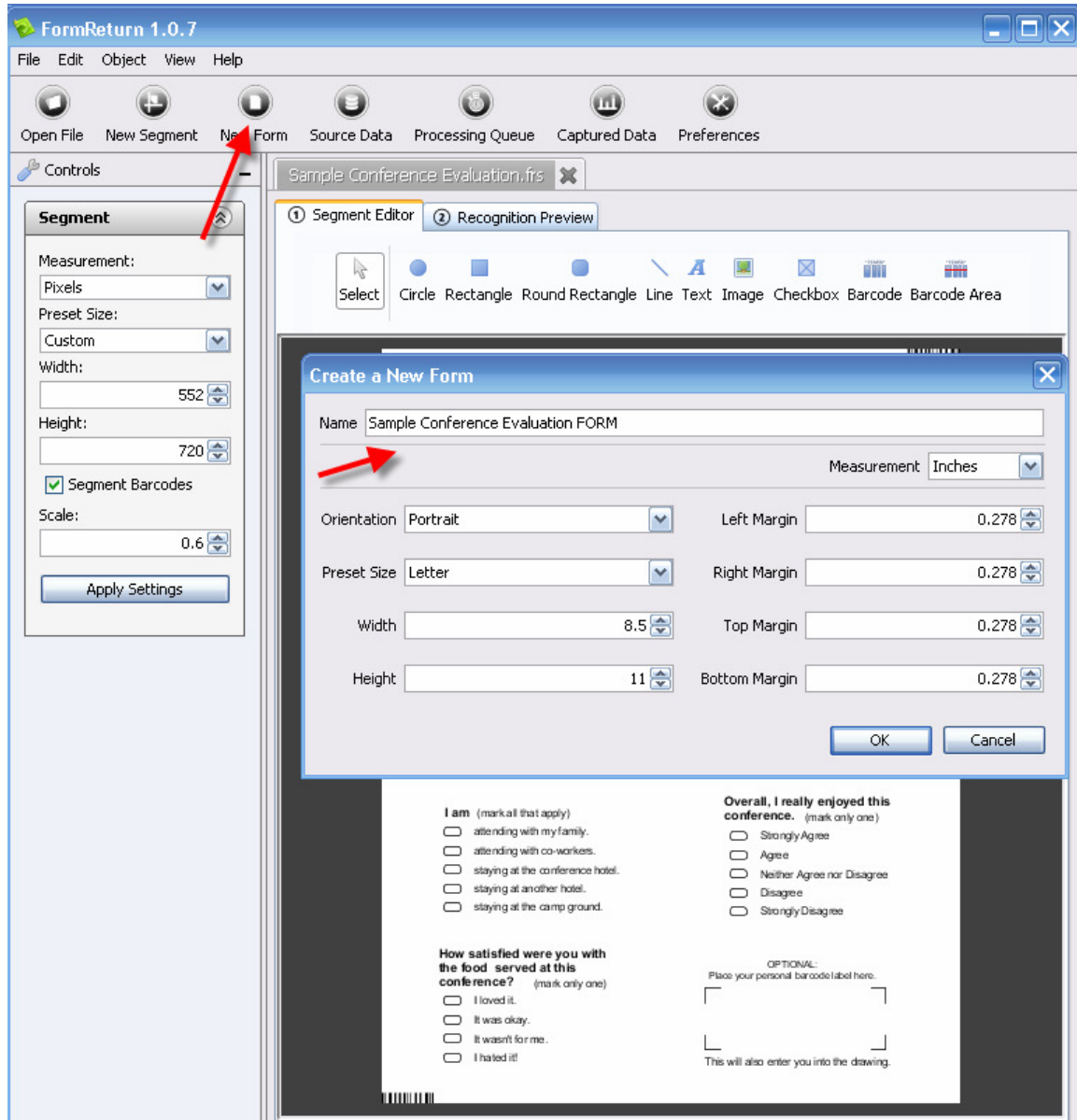
The design of the segment is now complete.

Save the segment on your computer. Remember the location as you will need to find the segment again when creating the form.

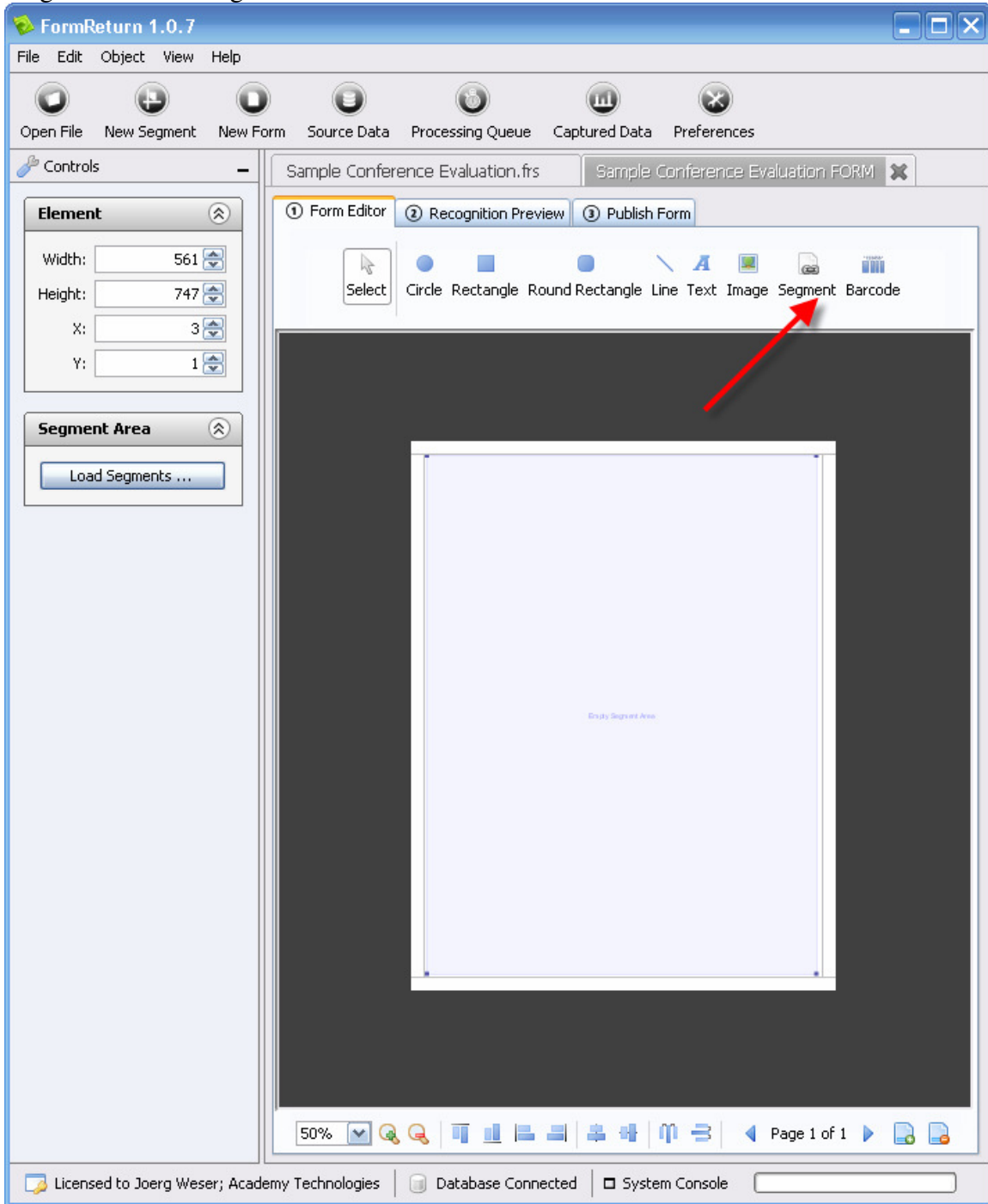
## 2. Create Form

With the segment designed, we can now create a form.

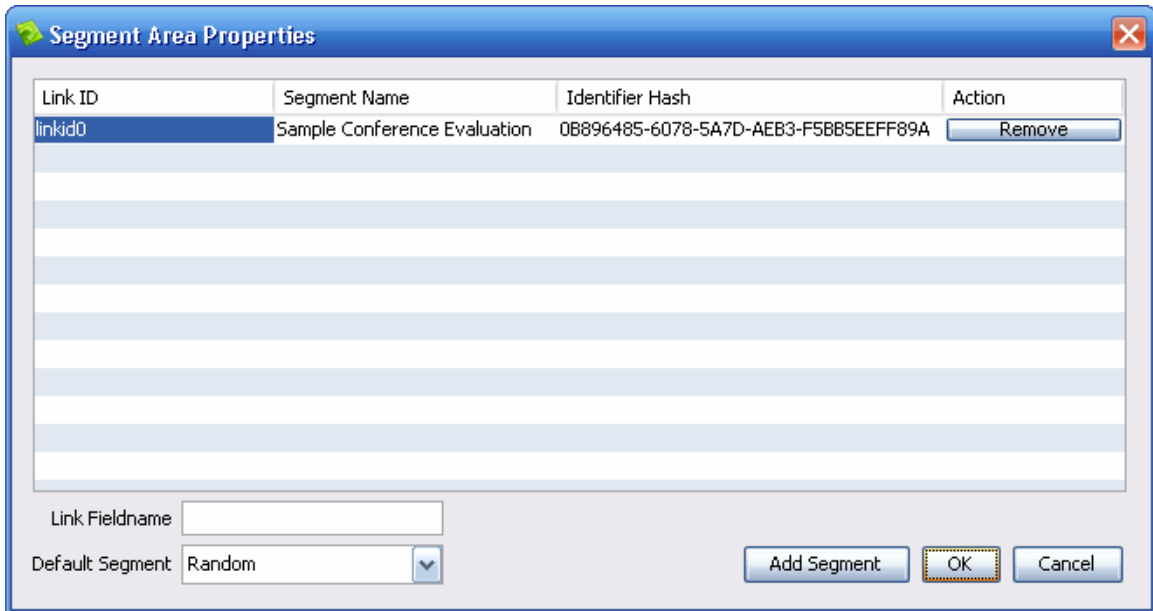
Click on the <New Form> icon in the tool bar. Then enter a name for the new form and modify the margins as desired.



To add the segment to the form, click on the <Segment> icon above the canvas. Then drag a box for the segment on the canvas.

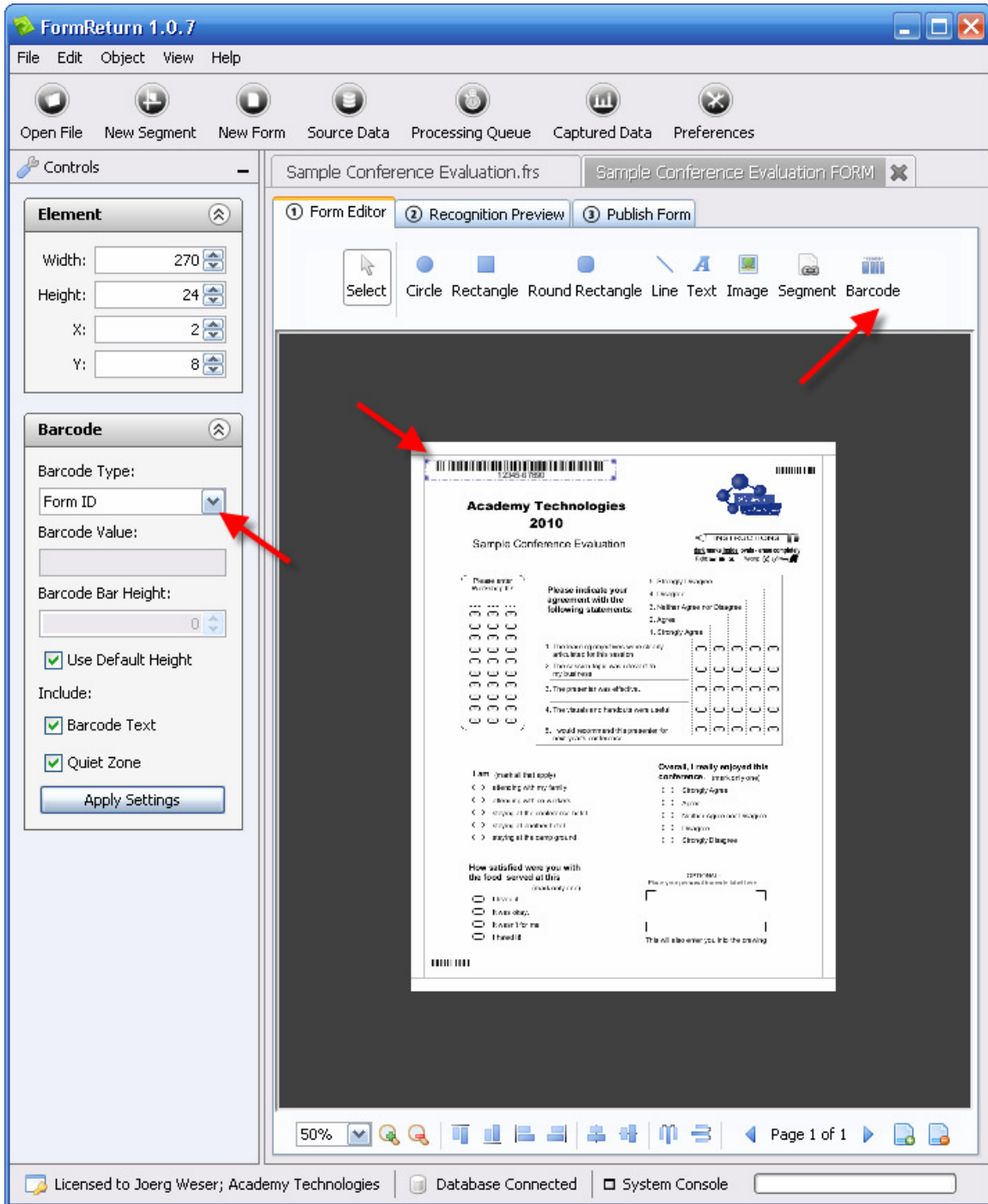


Double-click into the segment area. Select <Add Segment>, browse to the segment you created earlier and load it. Click <OK> to load the segment into the form.



Adjust the positioning of the segment as desired by clicking on the segment (to select it) and moving it with your mouse.

Add a FormID barcode to the form by clicking on the <Barcode> icon above the canvas. Click on the canvas to place the barcode, then move it into the top left hand corner of the form. Verify the Barcode Type is “Form ID”.



Save the form (File – Save As).  
Your new form is now ready for publication.