In this lab you will learn how to create and configure an Advanced Zone Locator. An Advanced Zone Locator allows you to extract data from a zone on a form at a fixed location (zonal OCR). You will also test extraction at run time by creating a job.

Lab 09-1

Advanced Zone Locator

Advanced Zone Locator

In this lab, you will setup an Advanced Zone Locator to extract data from the Standard and Variant application forms. As you will extract the same data from 2 different form layouts, you will define the advanced zone locator at the parent level. You will also set a default recognition engine.

1. Switch to the **Kofax Transformation Designer**.

2. Click the **Loan Applications ExtractionGroup** from **Recent Projects**.

3. **Open** the **Training Set** Test Document Set by selecting
    C:\KTAEssentials\LabFiles\Documents\Training Set
    Note: You can use the **Recent Documents** option if you have used a folder before.
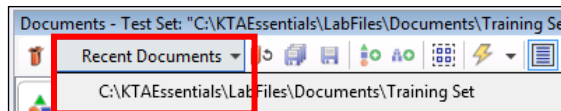
4. Right click over the word **Test Set** and select **Attach Document Set to Project**.
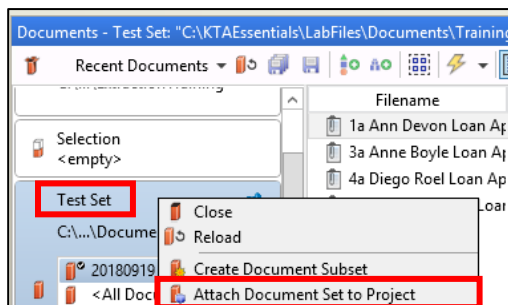
Set Default Recognition Engine

You will use the RecoStar recognition engine to perform zonal OCR. You will set this engine as the default engine for the project.
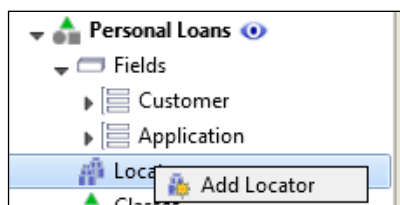
5. On the **Project** tab click **Project Settings**, and select the **Recognition** tab.

6. Select **RS_HandAlphanum** (Zone OCR) and click the **As Default** button. Click **OK**.
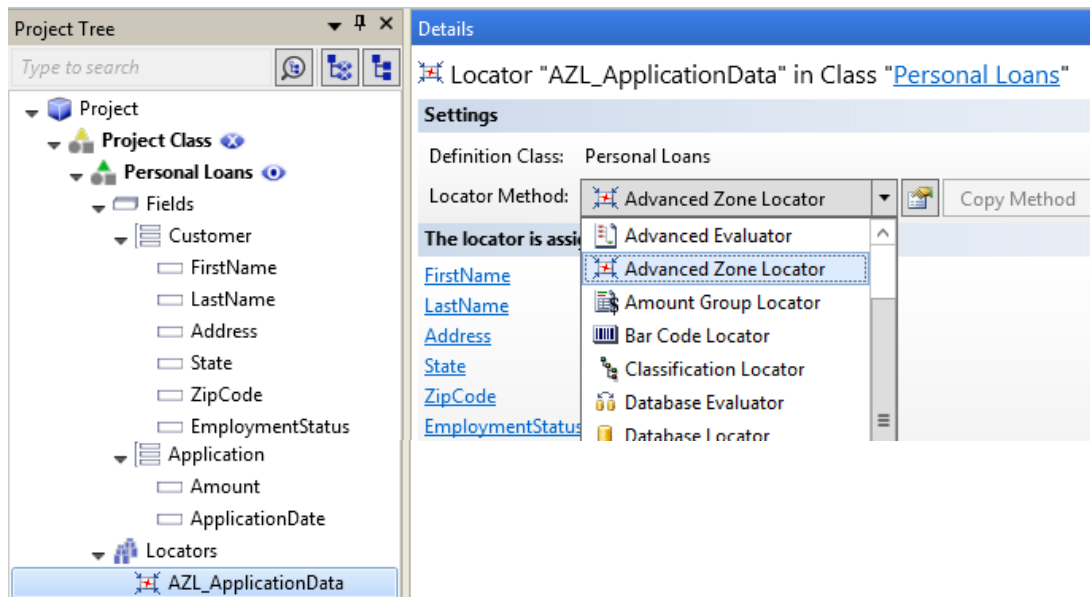
Add an Advanced Zone Locator

7. Click the **X** symbol next to the **Personal Loans** Class (document type) in the **Project Tree** to display the **Fields**, **Locators** and **Classes**.
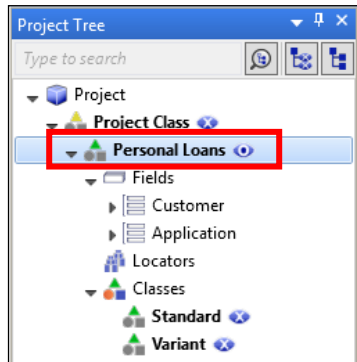
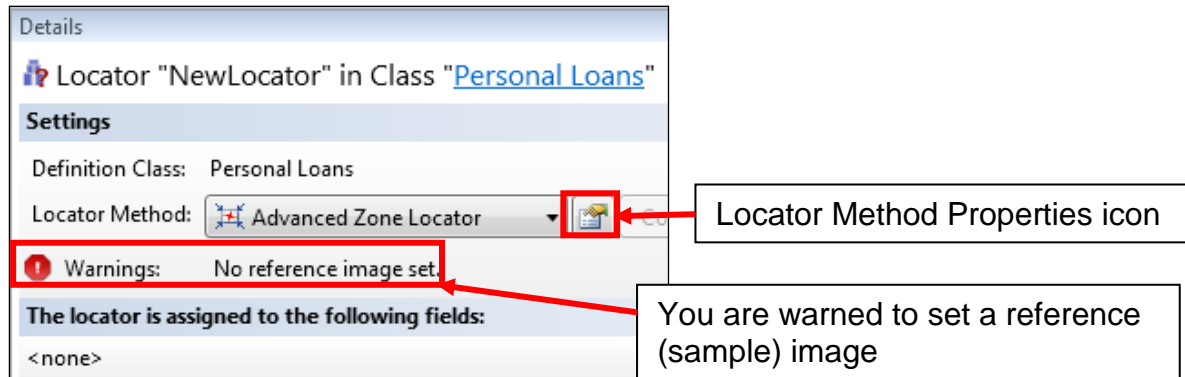8. Right click over **Locators** and select **Add Locator**.

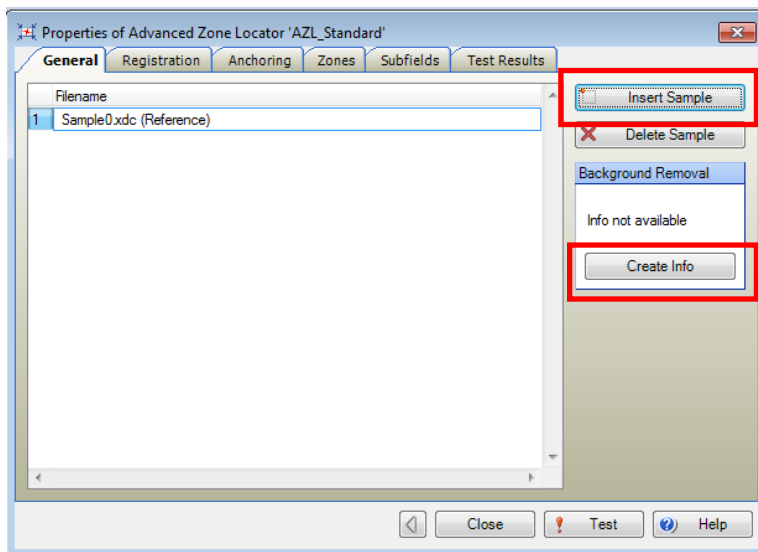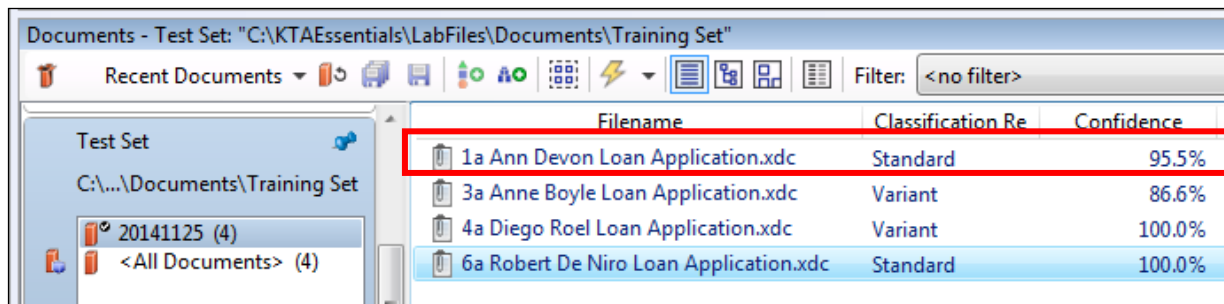9. Call the new locator **AZL_ApplicationData** and set the **Locator Method** to **Advanced Zone Locator.**

10. Click the **Locator Method Properties** icon.

Details

Locator "NewLocator" in Class "Personal Loans"

Settings

Definition Class: Personal Loans

Locator Method: Advanced Zone Locator

> Locator Method Properties icon

⚠ Warnings: No reference image set.

> You are warned to set a reference (sample) image

The locator is assigned to the following fields:

<none>

11. Select the file named **Robert De Niro Loan Application** from the test set and click the **Insert Sample** button.

Documents - Test Set: "C:\KTAEssentials\LabFiles\Documents\Training Set"

Recent Documents ▾ | Filter: <no filter>

Test Set

C:\...\Documents\Training Set

📁 20141125 (4)

📁 <All Documents> (4)

Filename	Classification Re	Confidence
1a Ann Devon Loan Application.xdc	Standard	95.5%
3a Anne Boyle Loan Application.xdc	Variant	86.6%
4a Diego Roel Loan Application.xdc	Variant	100.0%
6a Robert De Niro Loan Application.xdc	Standard	100.0%

Properties of Advanced Zone Locator 'AZL_Standard'

General | Registration | Anchoring | Zones | Subfields | Test Results

Filename
1 Sample0.xdc (Reference)

Insert Sample

❌ Delete Sample

Background Removal

Info not available

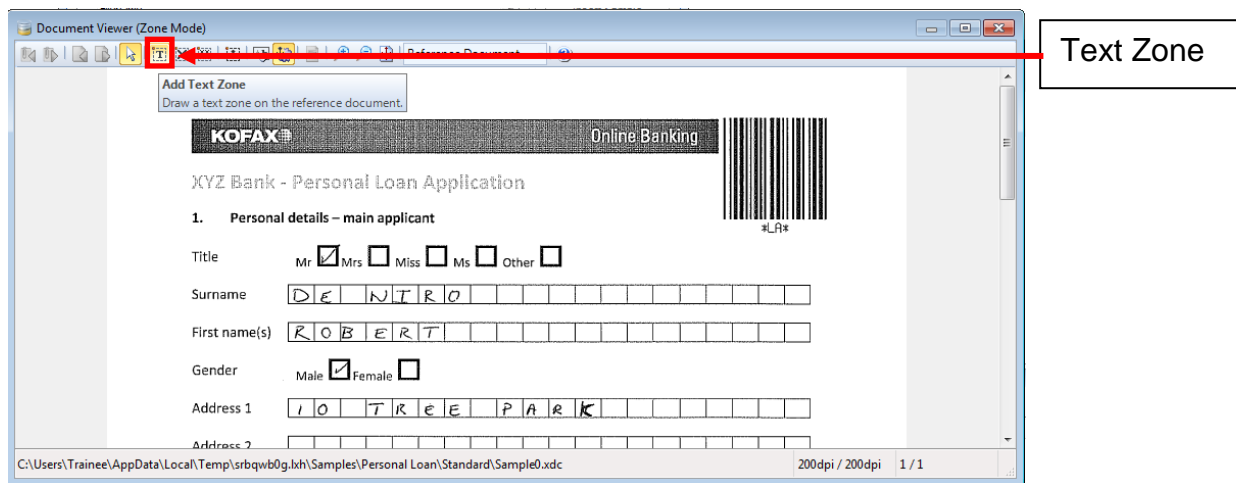Create Info

◁ | Close | ❗ Test | ❓ Help

12. Notice that the new sample is called "Sample0.xdc".

13. **Double click** the **Sample0.xdc (Reference)** image to bring up the document viewer and click the **Add Text Zone** icon to start drawing zones:
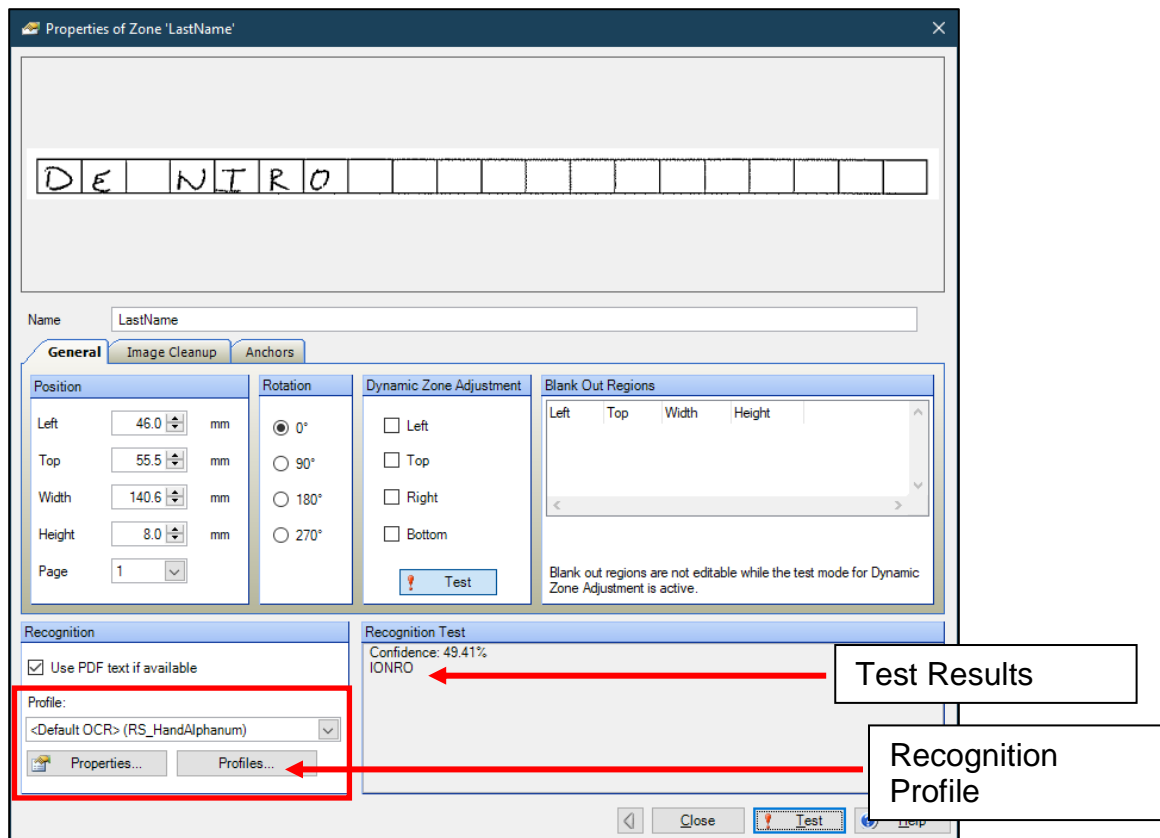
Text Zone

14. The first zone to draw is for **LastName**. Zoom in if needed (using the scroll wheel of your mouse or the **Zoom In** icon), draw the rectangle and name your zone **LastName**.

Draw AZL Zone
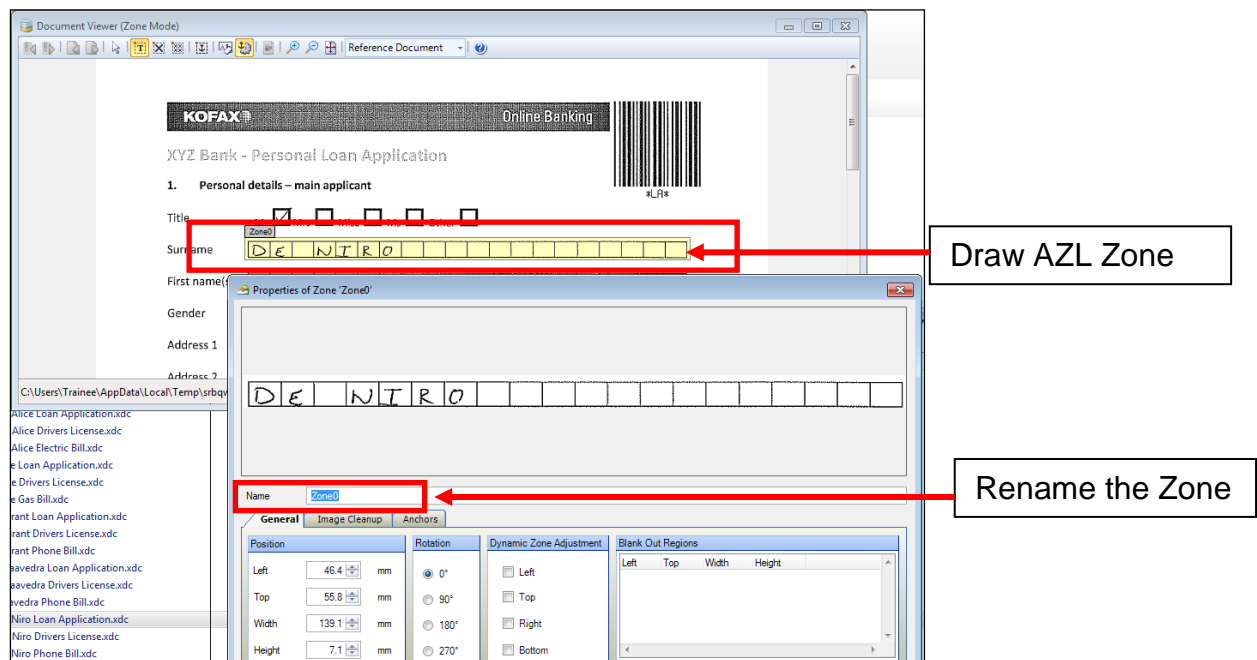
Rename the Zone

15. Enter **LastName** as the zone name.

16. Notice that the **Recognition Profile** that performs **OCR** is set to the Project Default (**RS_HandAlphanum 7.8**).

17. Click **Test** to see your recognition result (in this case it reads "IONRO" with a 49.41% confidence). We will improve this result in a later part.

18. Click **Close**. We now need to draw the zones for the other fields.

19. Draw **Text Zones** for the remaining fields (excluding Employment Status), setting the appropriate recognition engine for each field where appropriate.

Zone Name	Recognition Engine
FirstName	<Default OCR> (RS_HandAlphanumeric)
LastName (already completed)	<Default OCR> (RS_HandAlphanumeric)
Address	<Default OCR> (RS_HandAlphanumeric)
ZipCode	RS_HandNum (RecoStar 7.8)
State	<Default OCR> (RS_HandAlphanumeric)
Employment Status	Do not draw a zone. Configured in a later lab
Amount	RS_HandNum (RecoStar 7.8)

20. **Close** the **Document Viewer** (leave the Advanced Zone Locator properties window open for the next part).
Note: You can also Dock the Document Viewer e.g. at the right hand side of the window if you wish to leave the viewer open at all times.

Test Advanced Zone Locator Results

In this part, you will turn off Registration and test the results of the locator.

Note: Registration automatically compensates for shifted, stretched, and skewed documents on a global basis. In a later lab you will use Anchors to correct skew.

21. Select the **Registration** tab in the zone locator properties window.

22. Select **None** as the registration type.
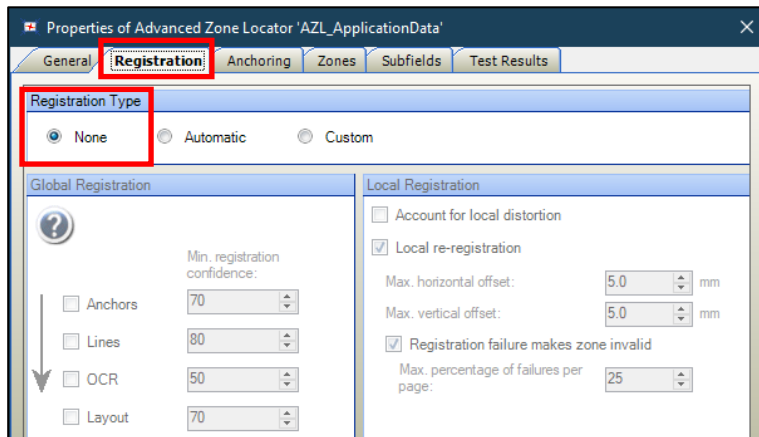
23. Click the **Test** button.
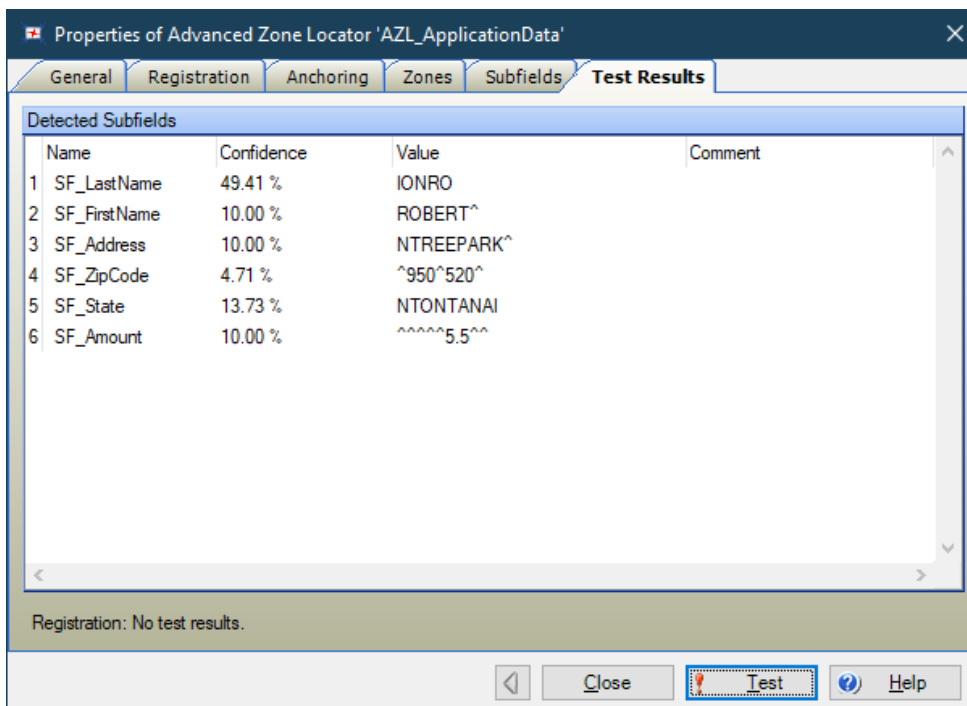
24. Notice that when you test the extraction the **Test Results** tab displays confidence that is very low and the extraction results are incorrect. The recognition profile is recognizing the box lines as characters.
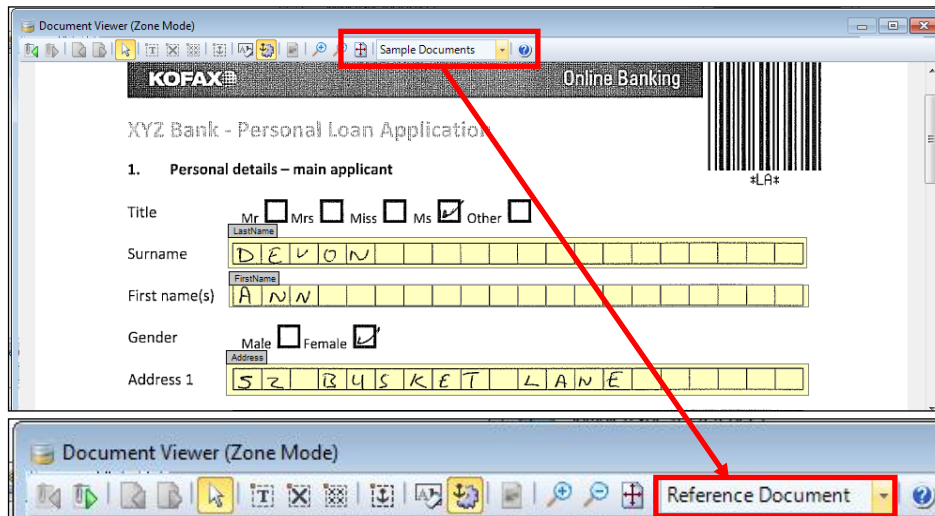   **Notes**:
    (i) In the next part we will set an **Image Cleanup Profile** to help the extraction engine.

(ii) Where extraction results are low or incorrect, this will be presented during the **Validation** manual activity, the validation operator may need to key in this value manually.

25. If you need to resize or move zones, navigate back to the **Reference Document**.


26. **Close** Advanced Zone Locator Properties.

Link Locator Results to Class Fields

In this part, we will link the results that are returned by the locator to the Fields of the Personal Loans class (Document Type).

27. In the **Project Tree** view select **Fields** under the **Personal Loans** class. In the **Details** pane click **Show Fields in Multi-Selection** button.
    Note: You can also double-click the word **Fields** under the **Personal Loans** class to open the Multiple Selection window.
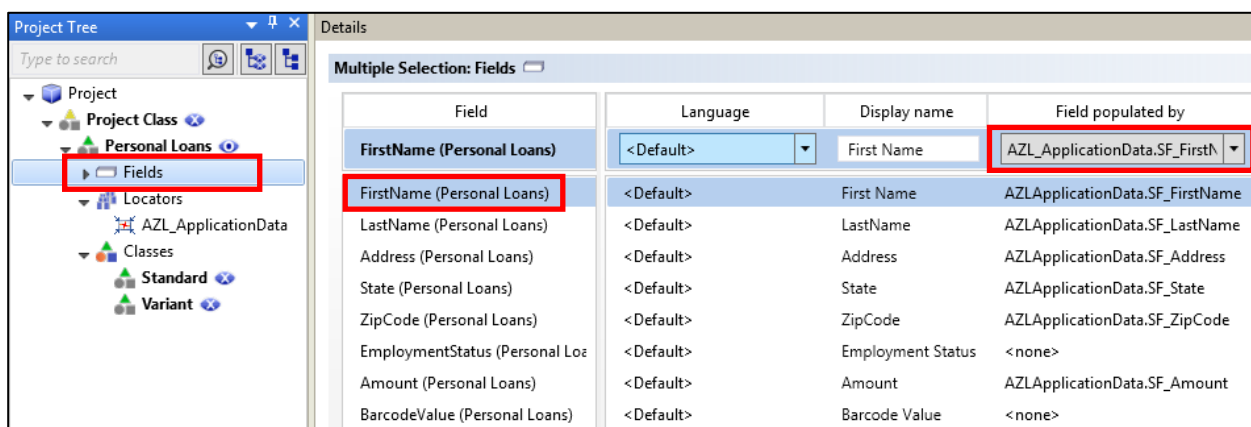
28. Select the **FIRSTNAME** field and set **Field populated by** column to **AZL_ApplicationData.SF_FirstName**.
    Note: You can also **double click** a cell in the **Field populated by column** and pick the locator from a dropdown.

29. Repeat this for the remaining fields (you can ignore EmploymentStatus and BarcodeValue).

Lab 09-2
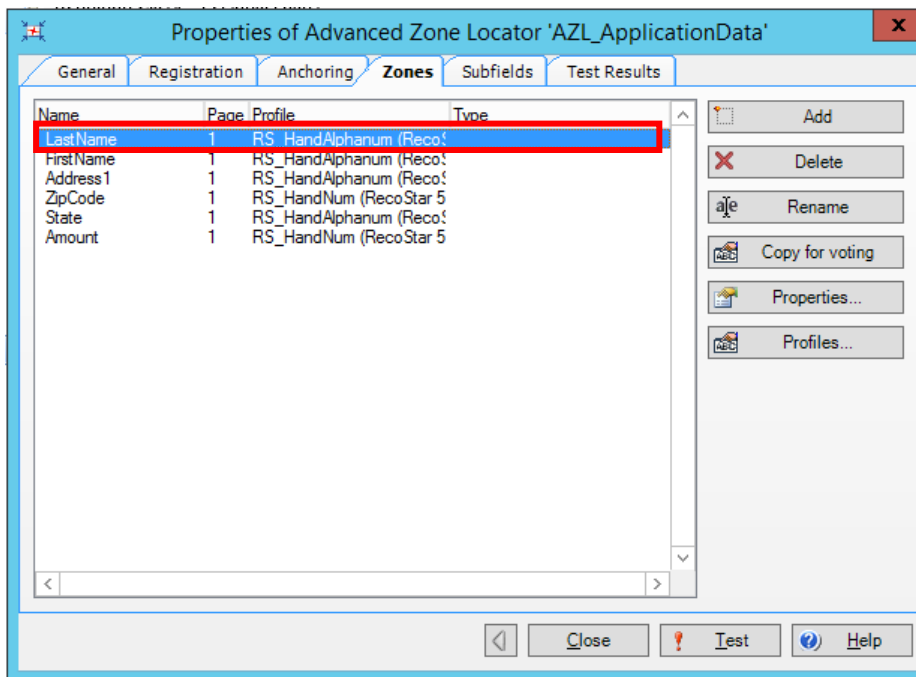
Image Cleanup Profiles

Improve Extraction Results using Image Clean-up Profiles

In this part, you will fine-tune the Advanced Zone Locator to use a cleanup profile so that the extraction results are improved.

1. In the **Project Tree**, select the **AZL_ApplicationData** Locator (you can also double click).

2. In the **Details** pane click the **Locator Method Properties** icon.
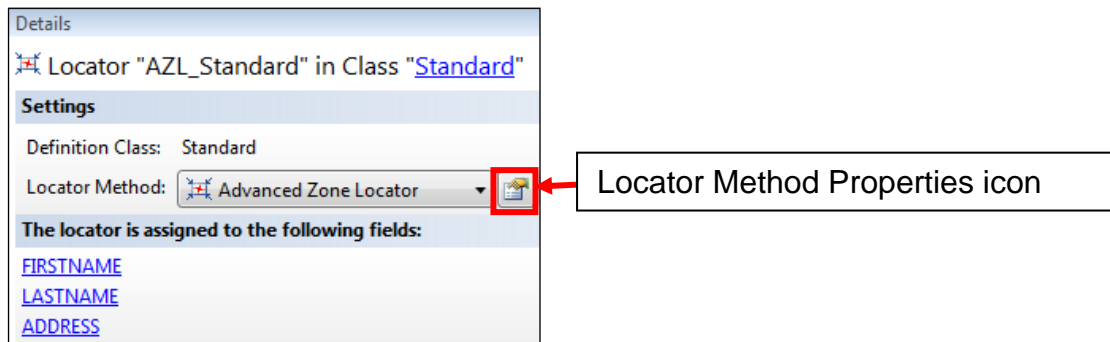
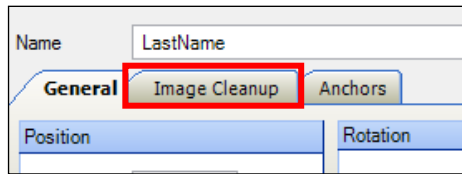3. Open the **Zones** tab and double-click the **LastName** zone. This will open the locator properties.

4. Click **Test** to see the Results.

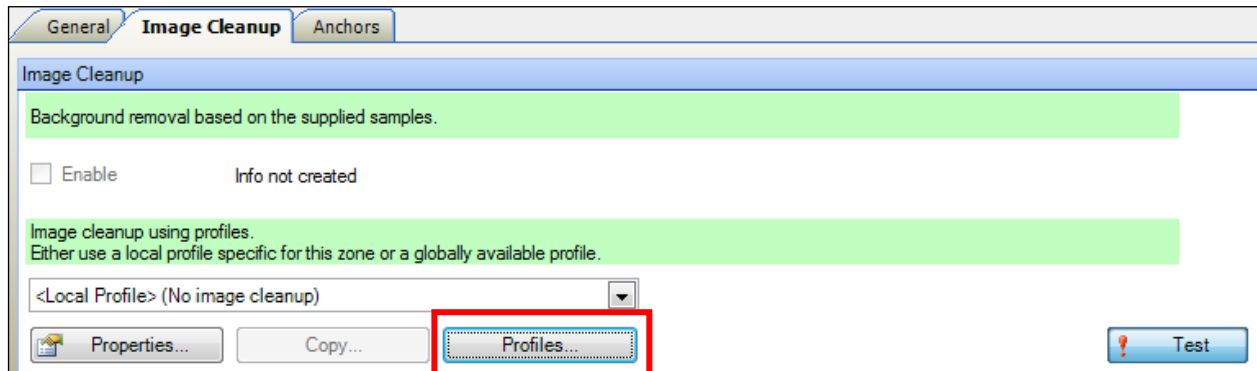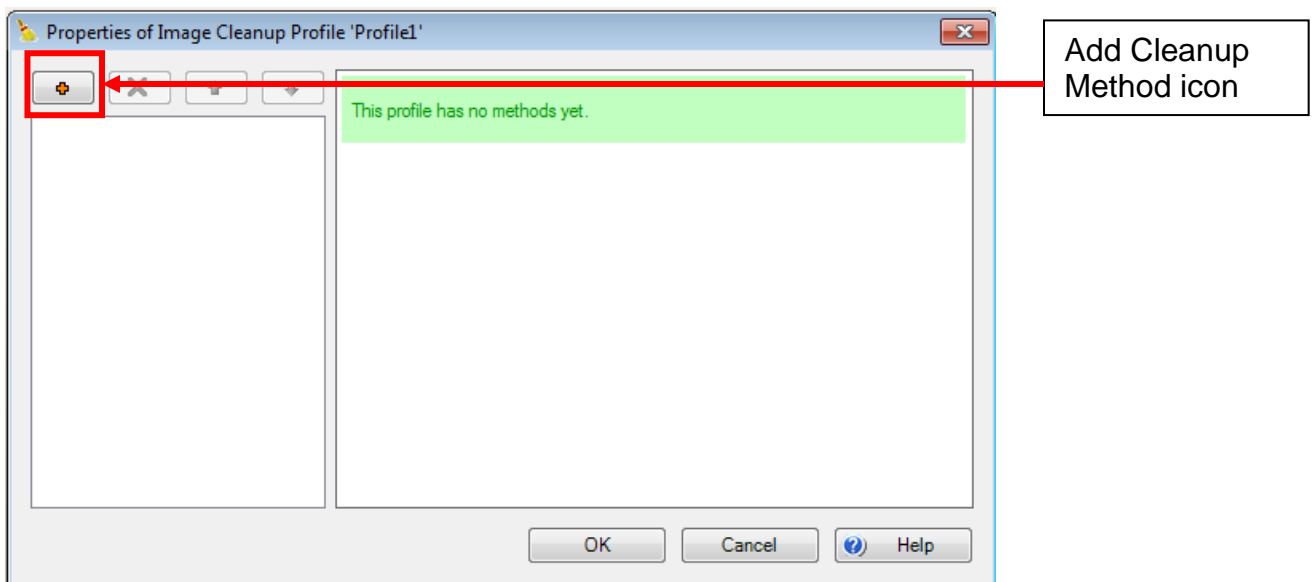5. The locator is 49.41% confident returning IONRO. We will now improve this.

6. Select the **Image Cleanup** tab.

7. Click the **Profiles…** button in the **Image Cleanup** panel. This opens Project Settings where all current cleanup profiles are listed.
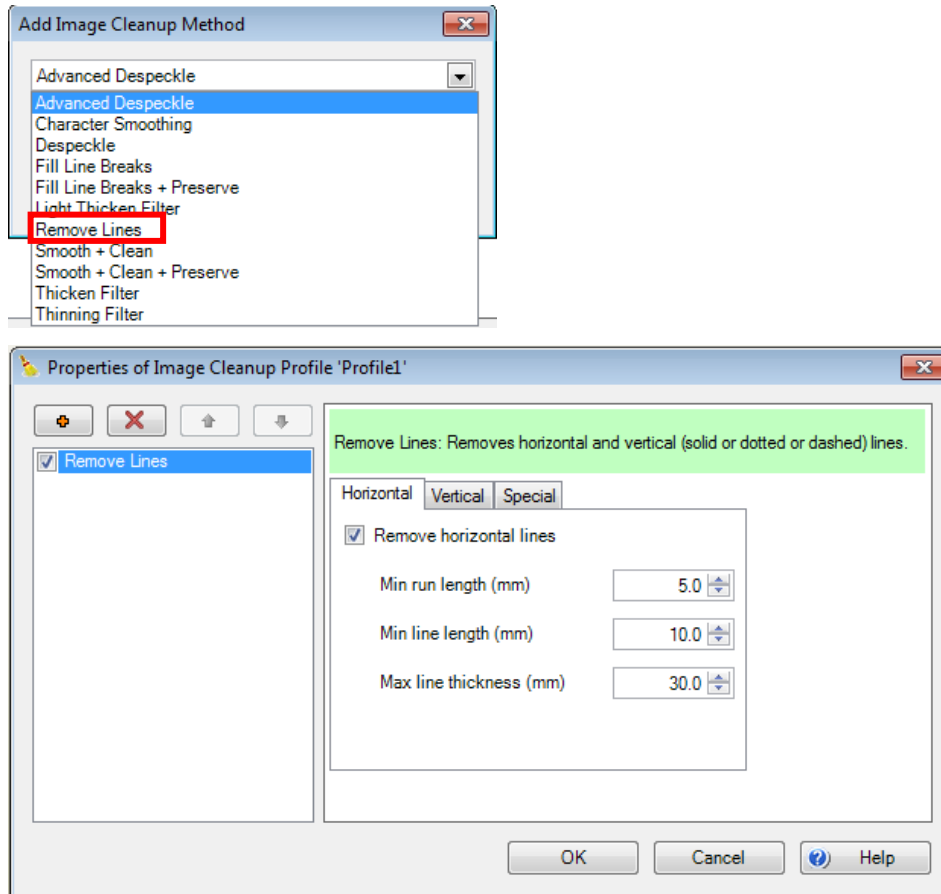

8. Click **Add…** to create a new Cleanup Profile.

9. Click the **Add** icon to add a new **Cleanup Method** to the Profile.
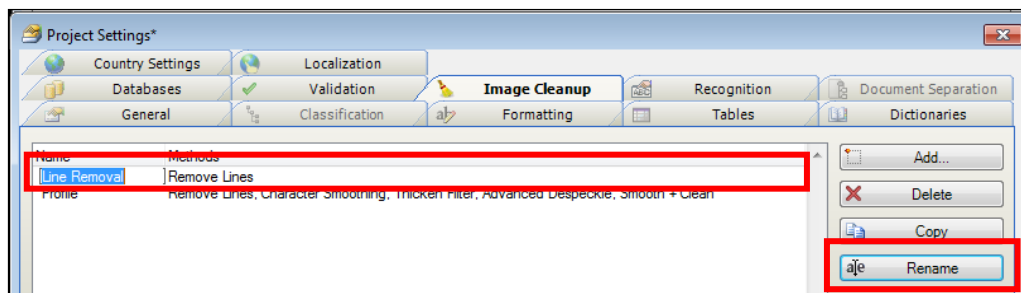

Add Cleanup Method icon

10. From the drop-down select **Remove Lines** and click **OK**.

Note: You can add additional cleanup methods to the profile e.g. character smoothing.
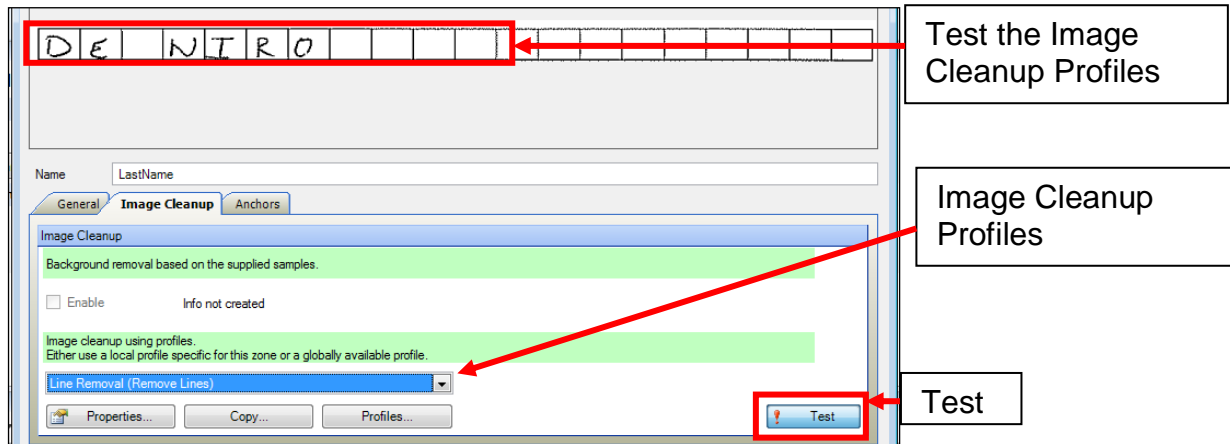
11. Click **OK**.

12. With the new profile selected click **Rename** and set the profile name to **Line Removal**.


13. Click **OK**.

14. From the **Image Cleanup Profile** dropdown, select the new **Line Removal** profile.

Test the Image
Cleanup Profiles

Image Cleanup
Profiles

Test

15. Click **Test** to see the results. Results are initially poor, that's because the vertical lines have not been removed and the recognition engine is now seeing these lines as characters.

Vertical Lines not
removed

Results are poor!
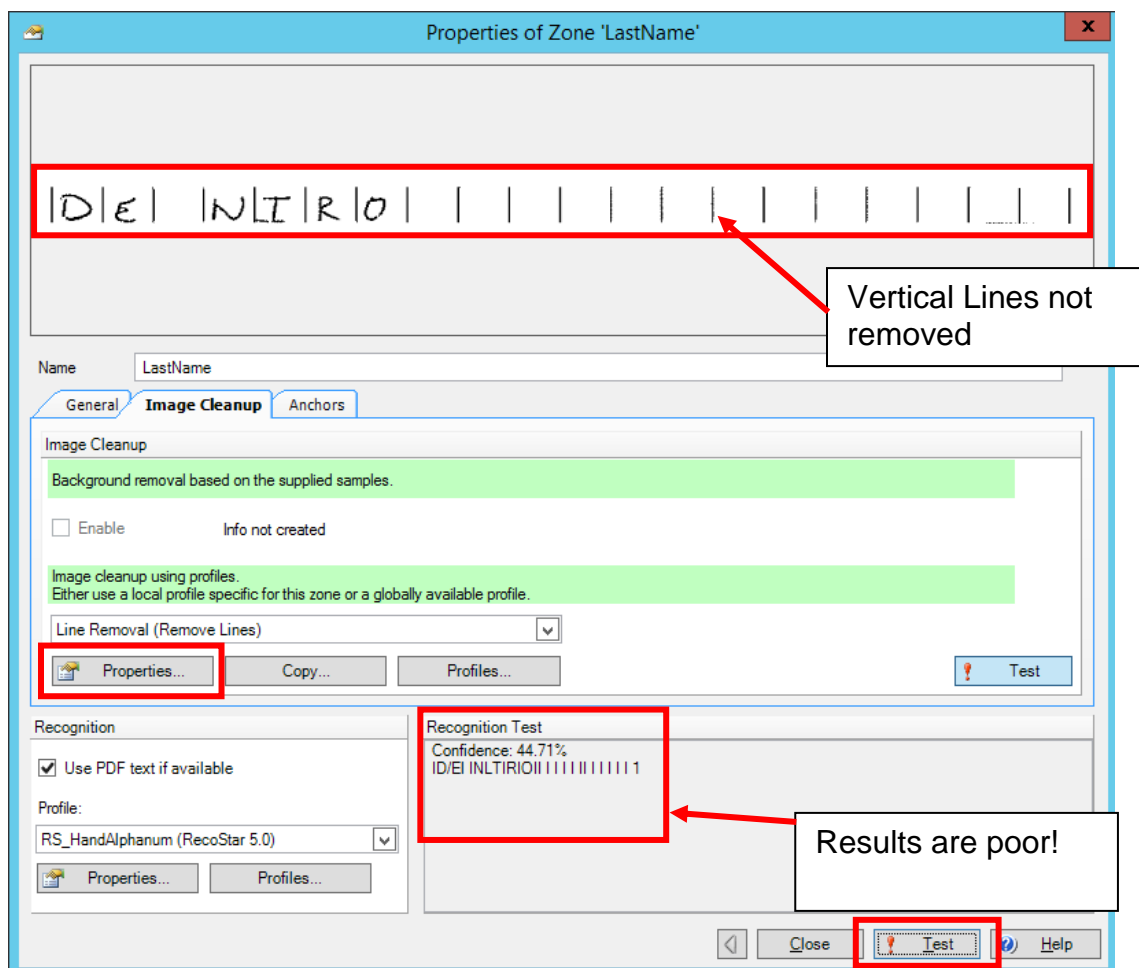
16. Click the **Properties…** button under **Image Cleanup** to change the Line Removal profile settings.

17. Open the **Vertical** tab and reduce **Min line length** (mm) until the **After running cleanup** zone shows the lines removed (approx. 5mm).
    Note: As you change the line length you can watch the results by watching the **After**
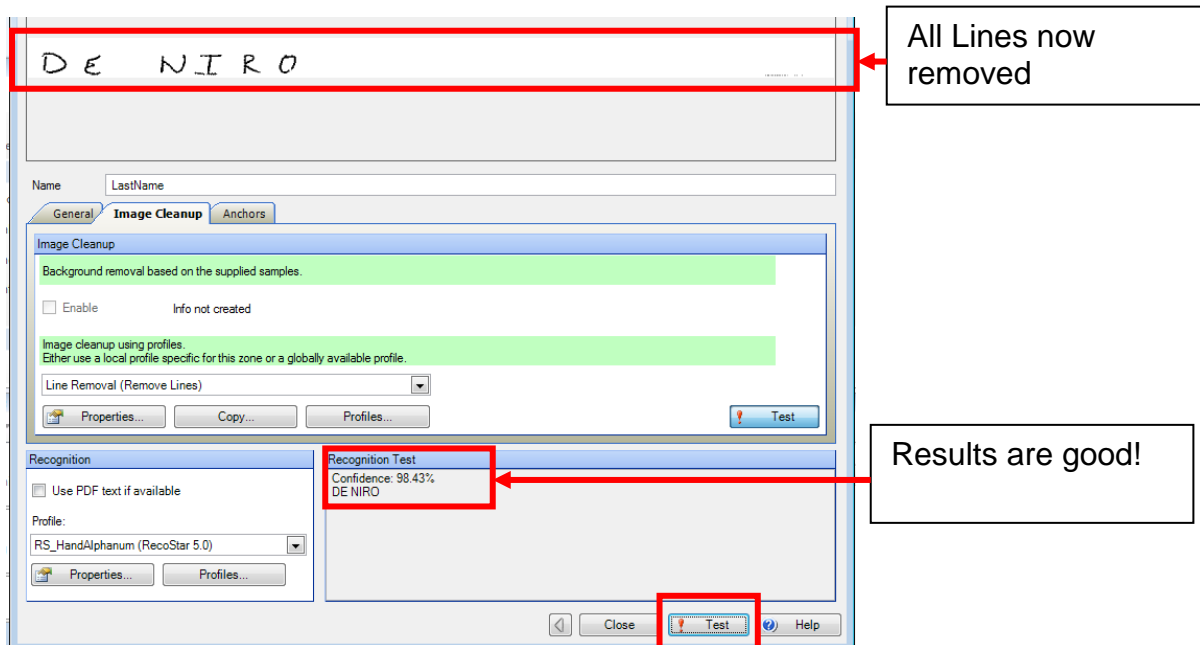
running cleanup preview panel.
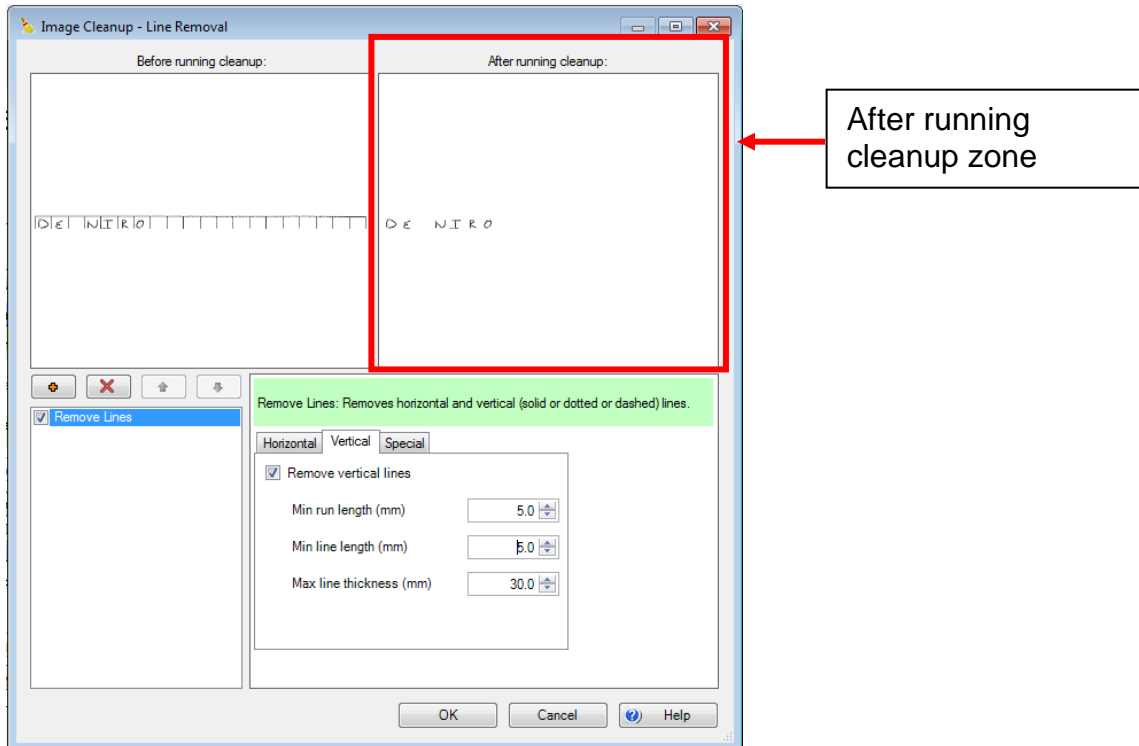
Note: Click the Help button for definitions of line length, run length, and line thickness.

18. Click **OK** and re-test the Image Cleanup and Recognition. Results are great!

19. Click **Close**.

20. **Repeat** the **Image Cleanup** for the remaining zones. You will be able to reuse the Image Cleanup Profile as it was created at the Project Level.
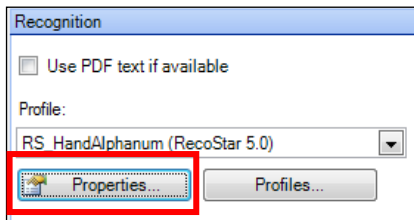
21. Select all the remaining zones by dragging across them in the **Zones** tab. Select the **Properties…** button, and from the **Image Cleanup** tab, and assign the **Line Removal** image cleanup profile to all fields, and click **Close**.

22. **Test** the new settings on other images.
    Note: The variant documents will give very poor results as the location of the fields on this document type is different than the standard. We will fix this in a later lab.

23. Leave the **Advanced Zone Locator** properties dialog open for the next lab.

Other Settings for Improving Recognition Results

(i) **Hand Pitch Print** can be used to remove white space between characters during recognition.
(ii) Defining a **Character Set** and the range of characters the zone can contain helps the recognition results.
(iii) We will turn off **Image Preprocessing** on the Recognition profile as we have already configured image cleanup via Cleanup Profiles.

24. Select the **General** tab and select **Sample0.xdc (Reference)**.

25. Click **Test**. The **FirstName** result has an extra white space.

|	Name	Confidence	Value
1	SF_LastName	98.43 %	DE NIRO
2	SF_FirstName	100.00 %	ROB ERT

26. Select the **Zones** tab and double-click the **FirstName** Zone.

27. In the **Recognition** area, select the **Properties…** button.

> Recognition
> ☐ Use PDF text if available
> Profile:
> RS_HandAlphanum (RecoStar 5.0) ▼
> [Properties...] [Profiles...]

28. From the **Image Preprocessing** drop-down select <**No image preprocessing**>.

29. In the **Lines and pitch** area, set **Hand print pitch** to **Manual** and set distance to 610 (6.1mm) i.e. there is more white space between the hand printed characters.
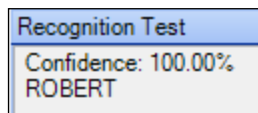   **Note**: The value is specified in 1/100mm so a value of 500 is 5mm.

30. In the Content area, select **Alphanumeric** and set the **Character set** to be **[A-Za-z0-9].**

Image Preprocessing

Character set.

Lines and pitch settings.
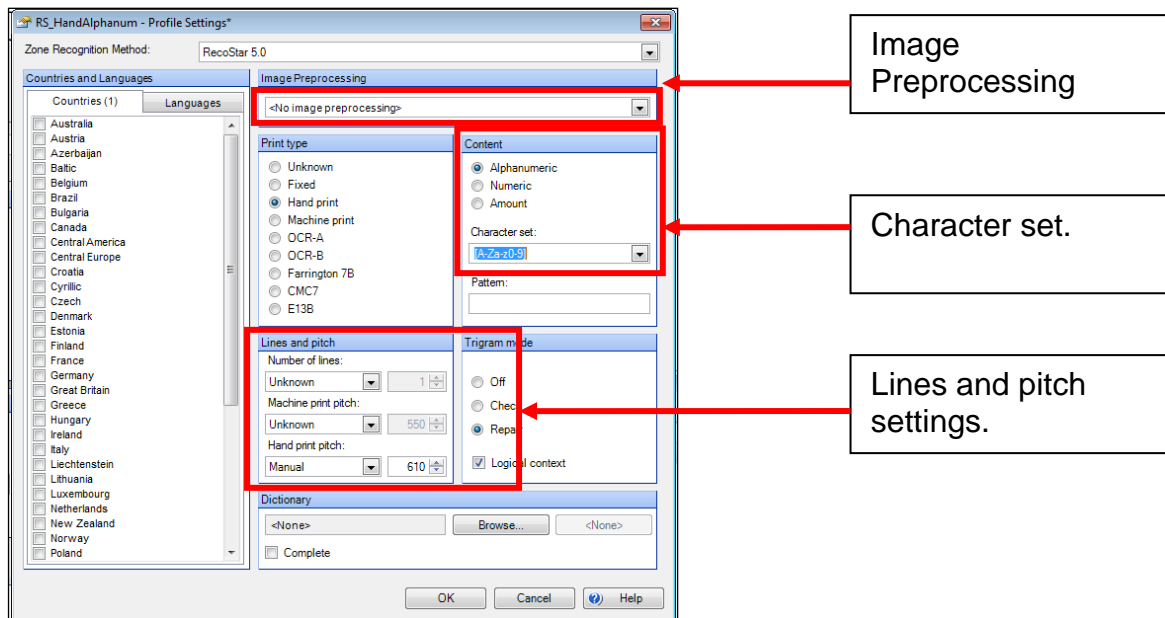
31. Click **OK**.

32. **Test** the results (e.g. the extra space should be removed).

Recognition Test
Confidence: 100.00%
ROBERT

33. Click **Close**, and click **Test**. Examine the **Zip Code** and **Amount** field results. Both fields have additional spaces in the results.

34. Select the **Zones** tab and double click the **Amount** zone.

35. In the **Recognition** area, click the **Properties…** button for the **RS_HandNum**, and in the **Content** area, select **Amount**, click **OK**, and test the results.

36. **Close** the **Amount** zone properties.

37. Double click the **ZipCode** zone.

38. In the **Recognition** area, select **Profiles**…
    Note: You will create a copy of the RS_HandNum recognition engine.

39. Select the **RS_HandNum** engine and click the **Copy…** button.

40. From the **Image Preprocessing** dropdown, select **<No image preprocessing>**.

41. Configure **Hand Print Pitch** to **Manual** (610).

42. Set **Content** to **Numeric**, and click **OK**.

43. Click **Rename** and enter **RS_HandNumZipCodes** as the profile name. Click **OK**.

44. **Test** the results.

45. **Close** the **Zone** properties window**.**

46. **Close** the **Advanced Zone Locator** properties window.

47. Select the **Standard Class** in the **Project Tree**.

48. In the **Documents** panel, select **All** the **Standard** applications (Ann and Robert) in the **Training Set** Test Set.

49. Select the **Process** tab and click **Extract** in the **Test** group area (you can also right click). **Note:** The Extract dropdown list allows you run extraction with or without Validation. In this example you will run extraction with Validation (the default option if you click the icon). Validation is covered in the MCC course.

50. Select the **View** tab and select **Extraction Results** icon.
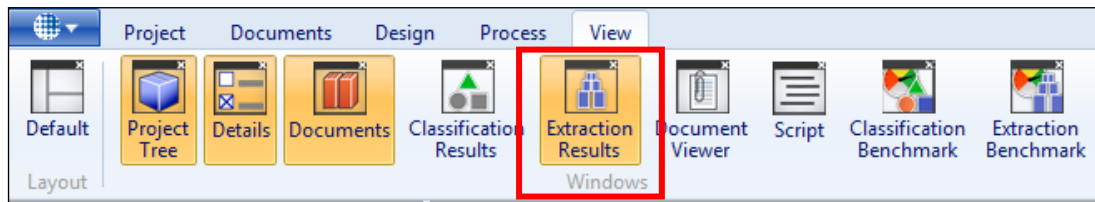
51. Click on each standard document in the Test Set (Documents panel) and review the extraction results in the **Extraction Results** window.
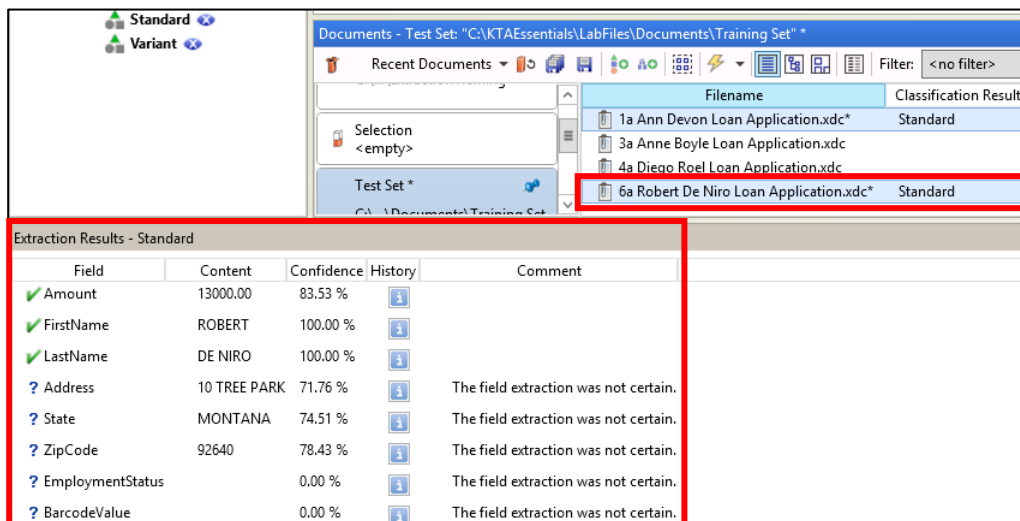
52. Click the **Save All Documents** icon in the **Document** panel to save the results of the extraction (the results are saved in the xdoc).
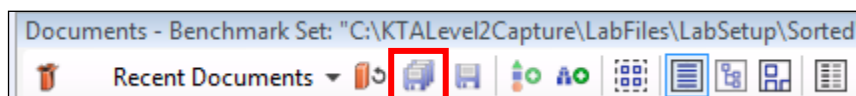
53. **Save** the project (leave the project open for the next part).

Lab 09-3

## Adding OMR and OMR Group Zones

Extract OMR Data (Optical Mark Recognition) using OMR and OMR Group Zones

In this part, we will determine the applicants Employment Status by determining which check box has been checked using OMR Single and OMR Group zones.

1. In the **Personal Loans** Class (document type), double click the **AZL_ApplicationData** locator.

2. Double click the **Sample0.xdc (Reference)** image to bring up the **Document Viewer** and click the **Add OMR Zone** icon to start drawing zones.
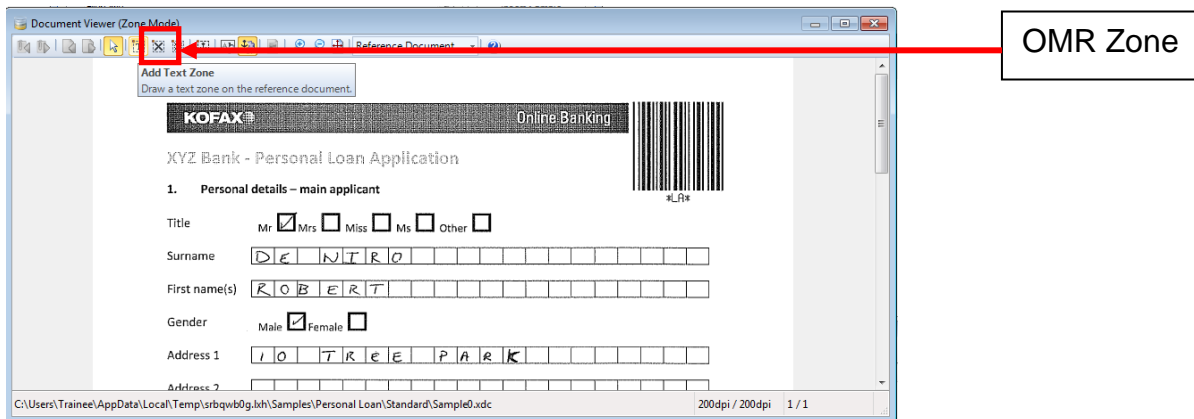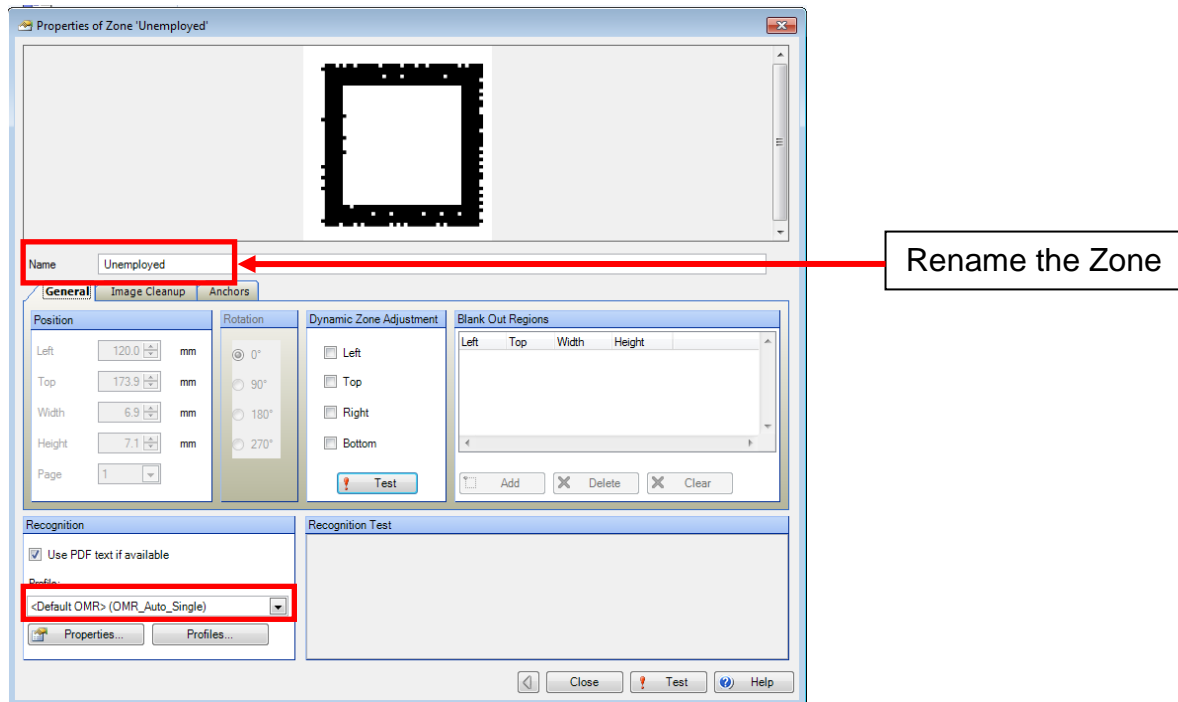

3. The first zone to draw is for the **Unemployed** checkbox (unmarked). Zoom in if needed (using the scroll wheel of your mouse or the **Zoom In** icon), draw the rectangle around the checkbox, and name your zone **Unemployed**.
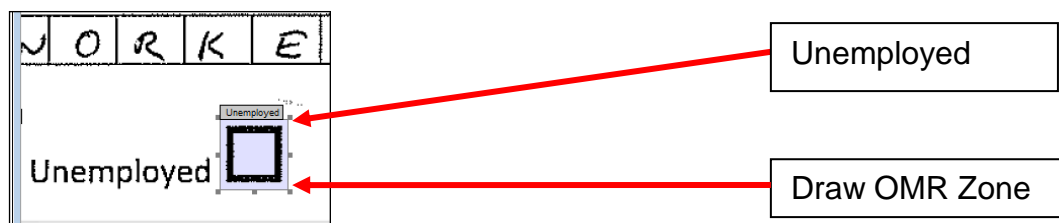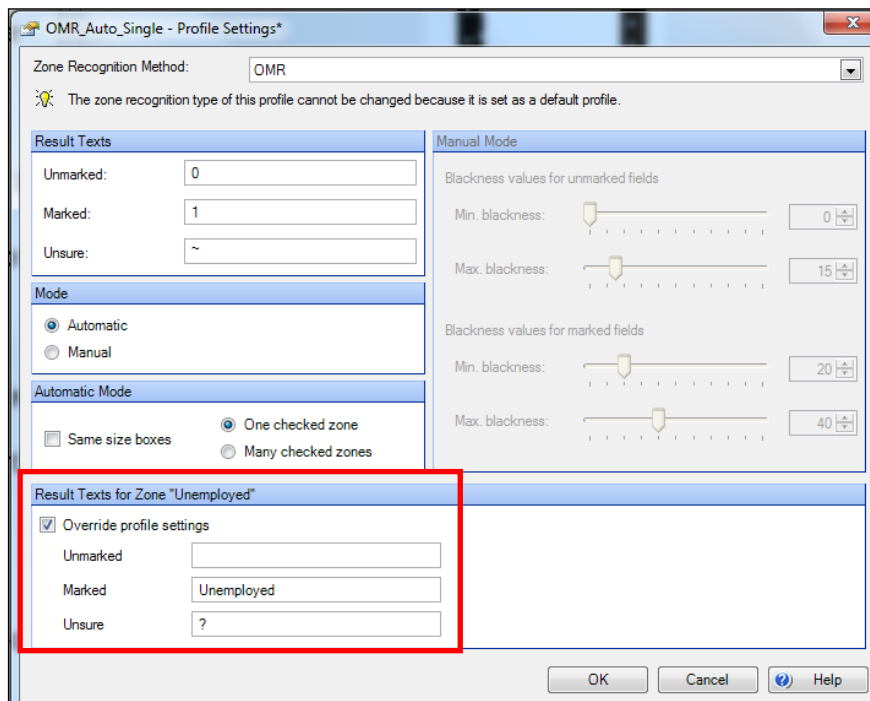
4. The Default OMR (**OMR_Auto_Single**) is already selected.

Rename the Zone

5. In the **Recognition** area, click the **Properties…** button and configure the following settings:

6. Click **OK**.

7. Click **Close**. We now need to configure zones for the **Self Employed** and **Employed** fields.

8. Select the **Unemployed** OMR Zone. **Press CTRL + C** to copy the zone.

9. Press **CTRL +V** twice to **paste** two new zones.

10. **Move** the zones over **Employed** and **Self Employed** checkboxes.
    Notes: (i) The **Top** property of each new zone should be set to **174mm**.
    (ii) You can nudge the zones using the arrow keys on the keyboard.

11. **Double click** the **Self Employed** OMR Zone.

12. Name the new field **Self Employed**.

13. In the **Recognition** area, click the **Properties…** button and set the following:
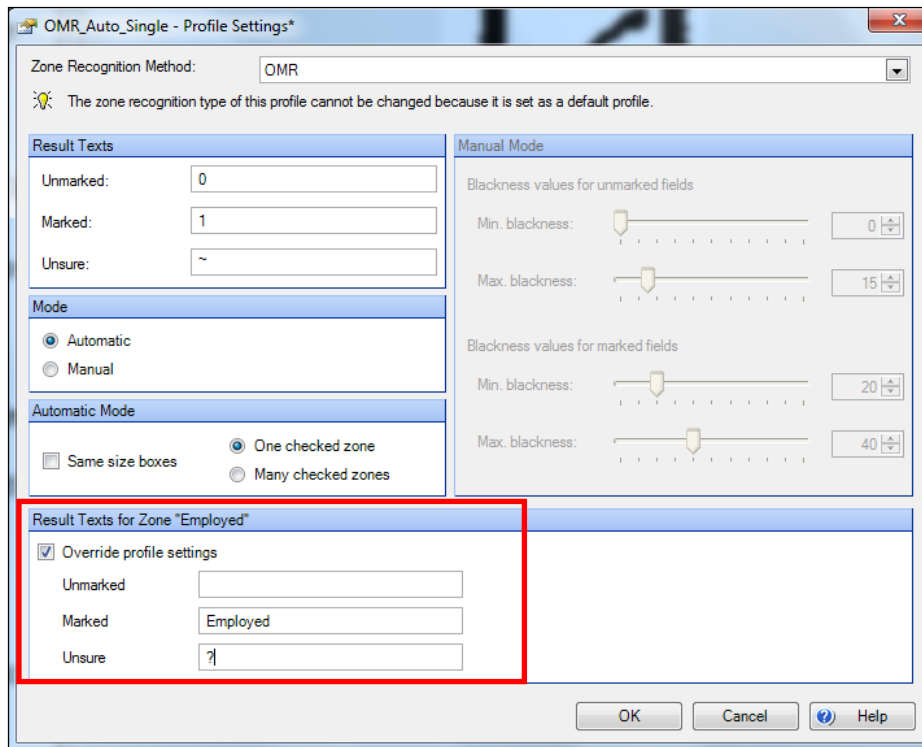

14. Click **OK**.

15. Repeat the above steps for the third OMR Zone. Name the zone **Employed** and set the following **Properties**:

16. We now need to tie the three OMR zones together, and store the result in the Employment Status field.

17. Draw an **OMR Group Zone** over the 3 zones already created for **Employed**, **Self Employed,** and **Unemployed**. Ensure you also lasso around the Employed word, this will help the Validation operator at run time determine what the value is.
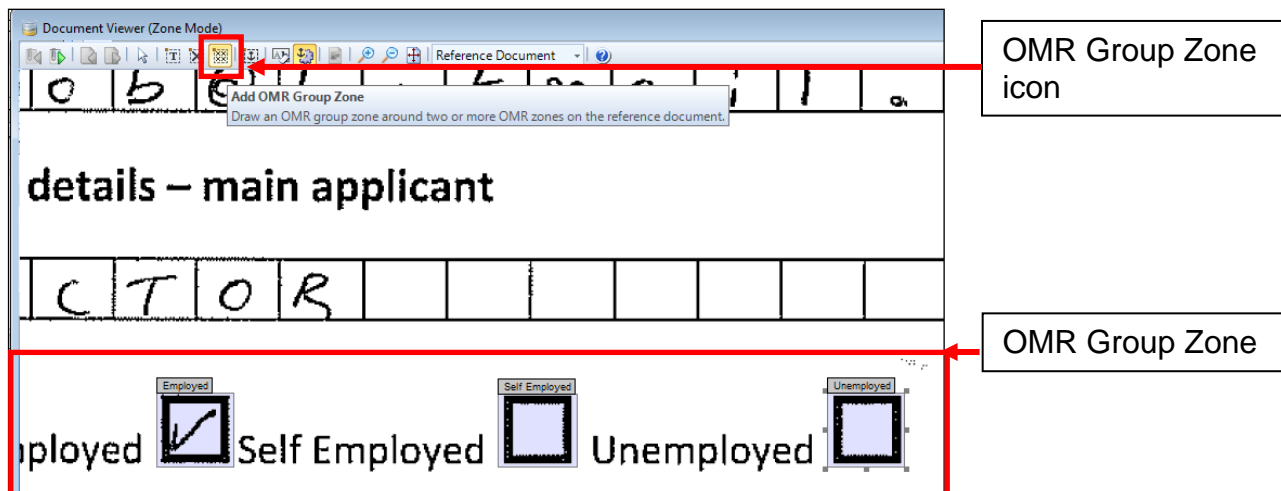
18. Name the field **Employment Status**, and in the **Recognition** area, click the **Properties…** button, and set the following:
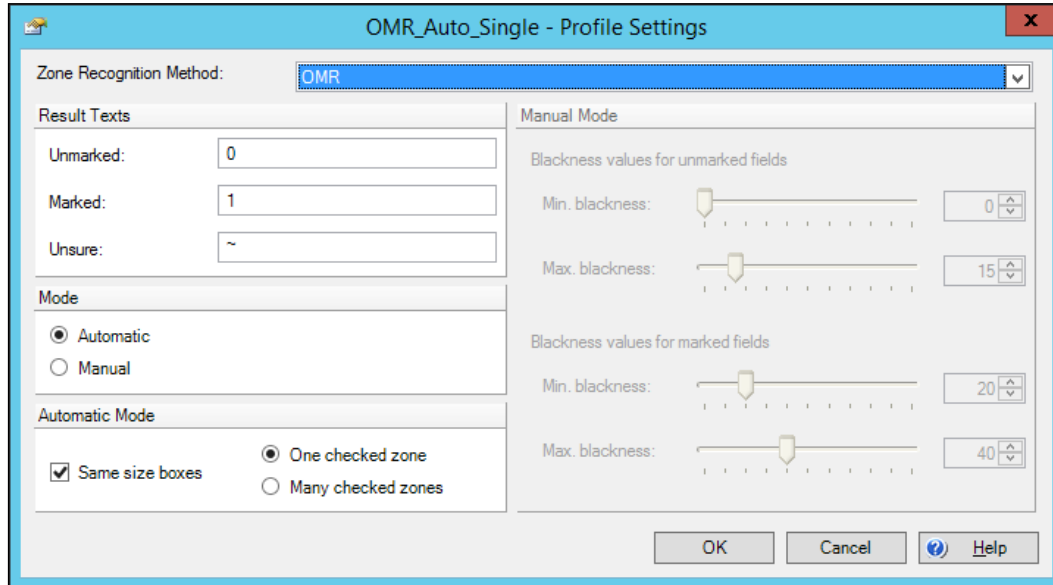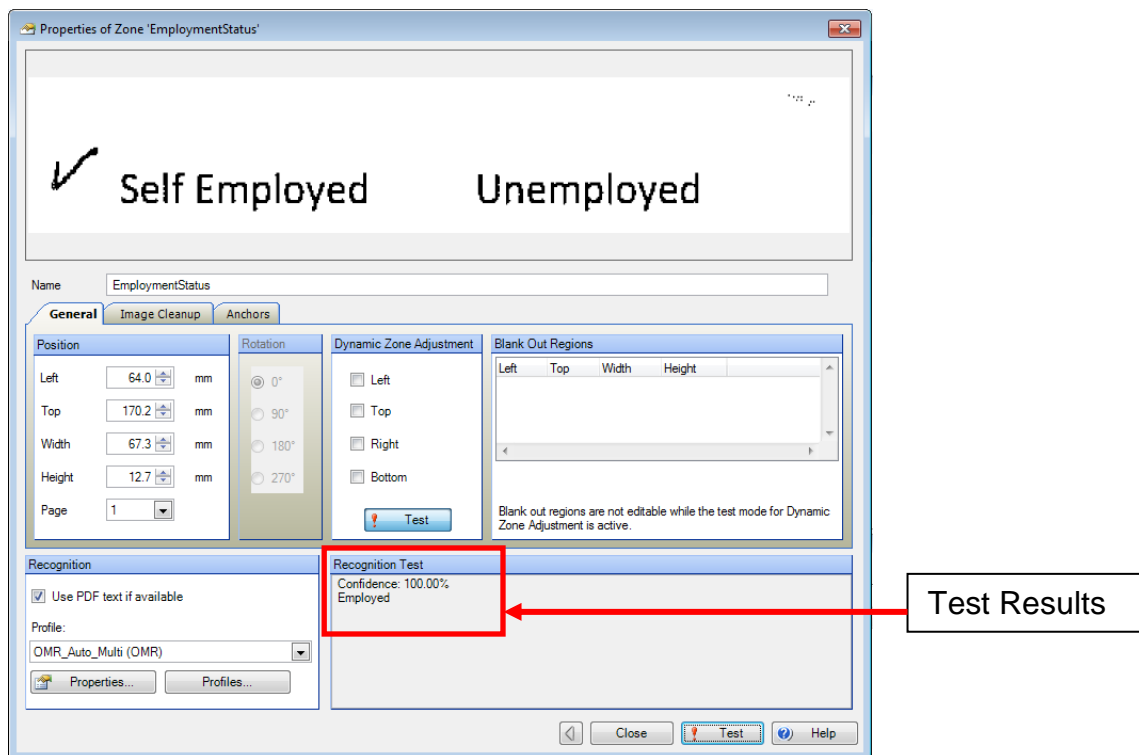
> **Note:** In this example it is assumed that there will be only one checked zone in the group.

19. Click **OK**.

20. Click **Test**.

Test Results

21. The group zone should return **Employed**.

22. **Close** the **Properties** window, **Document Viewer** and **Advanced Zone Locator** Properties.
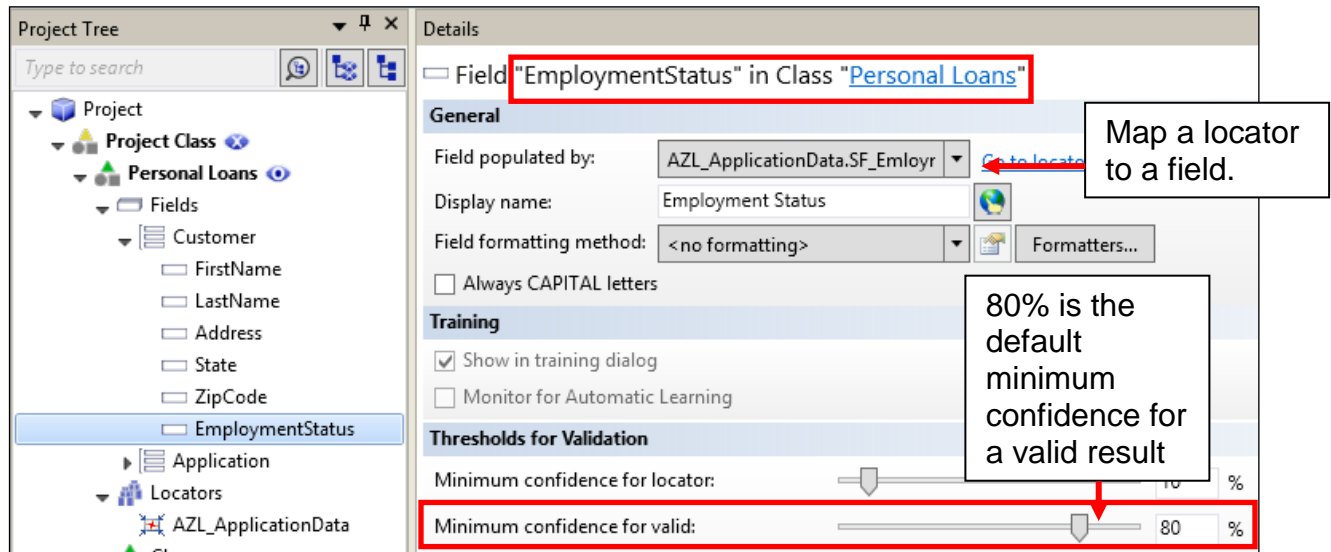
Link OMR Result to an Extraction Field

In this part, you will store the result of the OMR Group in the Employment Status extraction field.

23. In the **Project Tree** pane, click the **EmploymentStatus** field in the **Personal Loans** class.

24. In the **Details** pane from the **Field populated by** drop-down select **AZL_ApplicationData.SF_Employment Status** locator.

Note: If the extracted value falls below the minimum confidence of 80% the field will appear as uncertain during validation.

25. On the **Project** tab, click **Save Project**.

Lab 09-4

Add a Barcode Locator

Add a Barcode Locator

In this part, you will add a barcode locator to obtain the value of the barcode from the Loan Application form. The barcode on the form is of type Barcode 39.

1. In the **Project** tree, right click over **Locators**, and click **Add Locator**.

2. Name the barcode locator as **BL_LoanApplication**.

3. Select **Bar Code Locator** as the **Locator Method**.
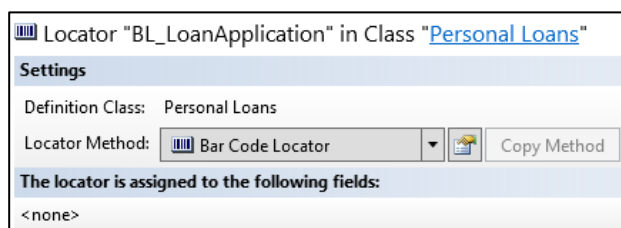
4. Click the **Locator Properties** icon.

5. Select the **FineReader Settings** tab and de-select **Auto detect** and select **Code 39**.
   **Note:** The locator will also work with Auto detect turned on.
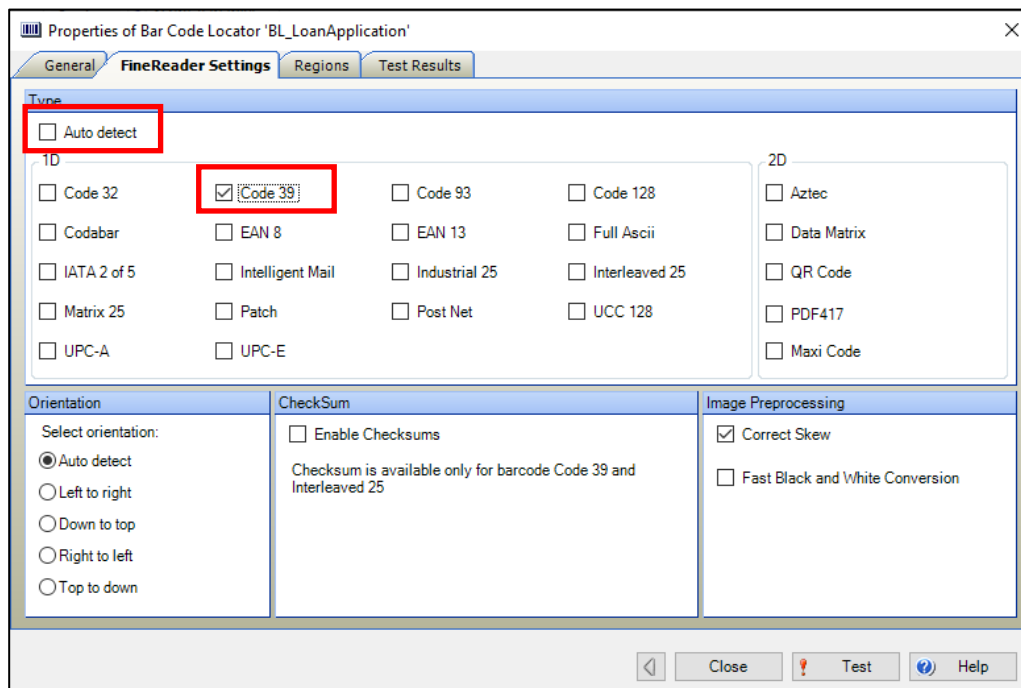
6. Select the **Regions** tab.

7. De-select **All Pages** and select **First Page**.
    Note: We will only search the first page of each document for a barcode.

8. In the **Access** area, select the **Inside the regions** radio button.

9. In the **Test Set** double click **Robert De Niro's** loan application.

10. In the **Document Viewer** draw a large rectangle around the top right barcode (the region co-ordinates are captured automatically).
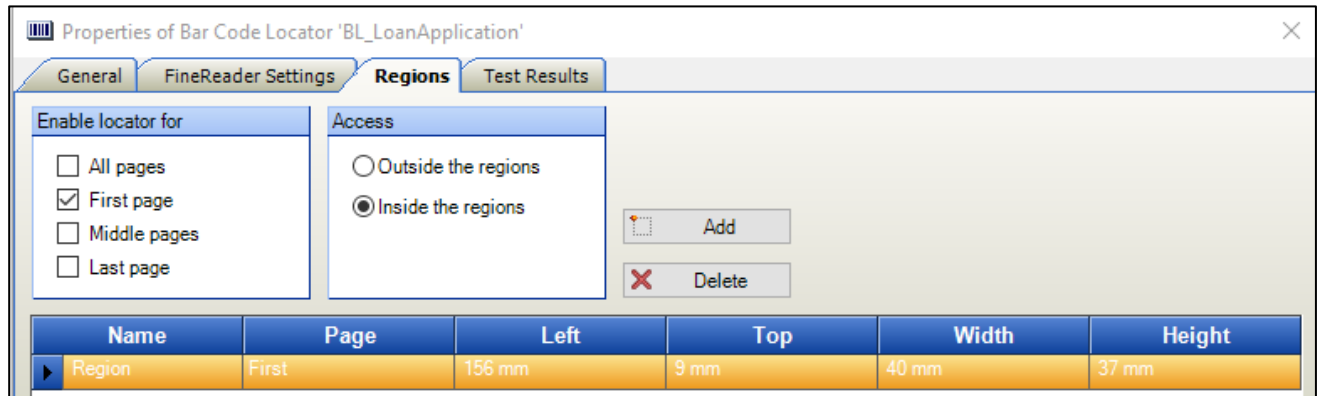
11. Click **Test**.
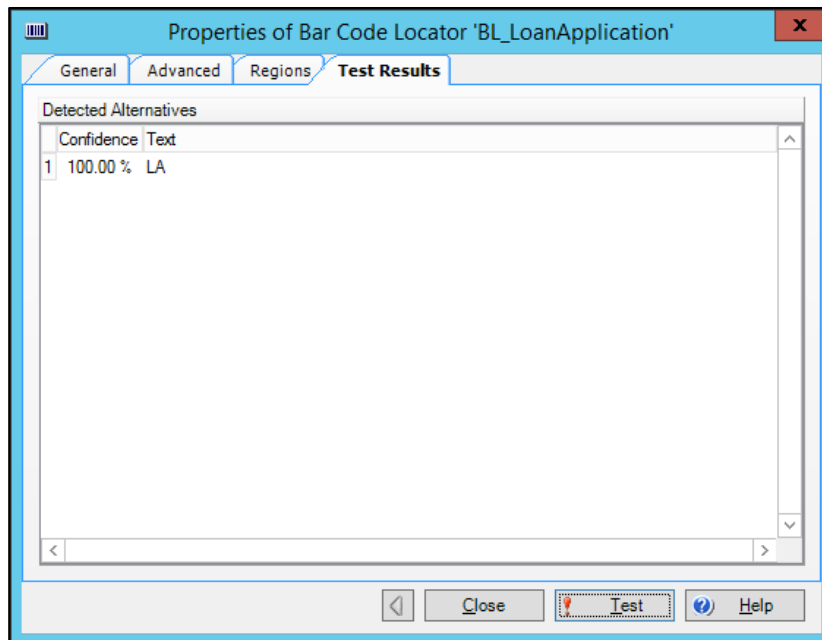
Note: The barcode value is extracted from the Bar 39 barcode.

12. Click **Close**.

13. In the **Project Tree**, expand the **Application** data grouping, and select the **BarcodeValue** field.

14. Select **BL_LoanApplication** from the **Field populated by** dropdown.

15. On the **Project** tab, click **Save Project**.

Lab 09-5

Test Extraction Results

Test Extraction Results

In this part, you will test all the locators.

1. In the **Documents** pane, select the **Standard** loan application (Ann and Robert) documents in the Training Set.

2. Select the **Process** tab, and click **Extract** or right click over a document and click **Extract > Extract Selected Documents**.

3. The **Extraction Results** are displayed in the **Extraction Results** window (bottom left).

Field	Content	Confidence	History	Comment
✔ FirstName	ANN	100.00 %	ℹ	
? LastName	DEVON	78.82 %	ℹ	The field extraction was not certain.
? Address	52 BUSKET LANE	23.14 %	ℹ	The field extraction was not certain.
✔ State	TEXAS	100.00 %	ℹ	
✔ ZipCode	92604	97.65 %	ℹ	
✔ EmploymentStatus	Employed	100.00 %	ℹ	
✔ Amount	2000.00	100.00 %	ℹ	
✔ BarcodeValue	LA	100.00 %	ℹ	

Extraction Results - Personal Loans

Notes: (i) Locators run in the order they are defined in the project from top to bottom.
(ii) You can re-order locators by right clicking over a locator and moving it up/down.

4. Click the **Save All Documents** icon in the **Documents** panel.
Note: The extraction results are saved (leave the project open for the next lab).
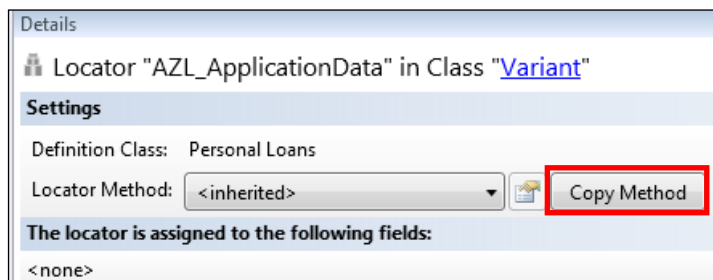
Lab 09-6

Configure the Variant Advanced Zone Locator

Configure the Variant Advanced Zone Locator

In this part, you will copy the existing inherited AZL method and modify it for the variant document type.

1. Expand the **Variant** class in the **Project Tree**.

2. Expand **Locators** and select the **AZL_ApplicationData** locator.

3. Click the **Copy Method** button.

4. Click the locator method **Properties** icon to access the AZL Properties window (leave this open).

5. Select the **Training Set** document Test Set in the **Documents** panel.

6. Select **Diego Roel's Loan Application** and click **Insert Sample**.

7. Double click the **Sample0.xdc (Reference)** sample.

8. Move the zones into the appropriate part of the document.

9. Click **Test** to observe the results.

10. Close the Locator **Properties** window.

11. Select the **Variant** class in the Project Tree.

12. In the **Documents** panel, in the **Training Set**, select **Anne Boyle's** loan application, right click, and select **Extract > Extract Selected Documents**.
    Note: You may notice that although the Amount field has a question mark even though it was was confidently extracted. Earlier in the course you set the amount to be formatted with the out of box amount field formatter. This requires numbers with decimal places. You can fix this by modifying the Default Amount Formatter to accept numbers that do not have decimal places.

13. Navigate to the **Designer**.

14. From the **Main** menu navigate to **Capture > Field formatters** and from the **Category** dropdown select **Default Category**.

15. Click the **Default Amount Formatter**, uncheck **Require decimal points**, and click **Save**.

16. Navigate to the **Transfomation Designer** and re-run extraction. You will immediately see to see the results of changing the formatter.

17. Select the **Project** tab and click **Release Project**.

18. **Close** the project.

Re-Release Classification Group(s)

When you e.g. add a locator or new field to an existing extraction group, you must re-release the Classification group either in the Kofax Transformation Designer or the Kofax TotalAgility Designer. In this part you will re-release the classification group in the Transformation Designer.

19. Open the **Classification** project in the **Transformation Designer** (Recent Projects).

20. Click **Release Project**.

21. **Close** the Project.

Lab 09-7

Test Extraction Results by Creating a Job

Test Extraction Results at Run Time

In this part, you will create an instance of the Capture Applications process and examine extraction results at run time in the Validation activity.
**Note:** You may wish to run Job Clear Down in System > System settings menu before testing.

1. Open the **Browser** and open the **xyzbank** Workspace (a shortcut exists).

2. Logon as **pblack** (user name is not case sensitive).

3. Select **Scan Applications > New**.
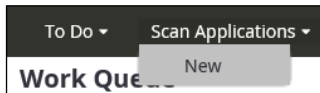
4. Select the **File Import** Icon.
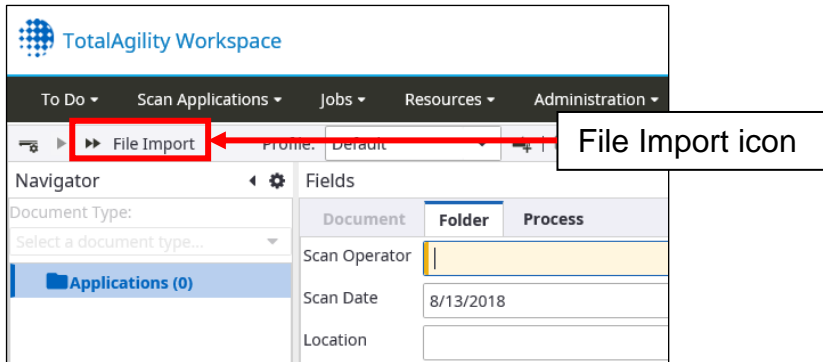
5. **Browse** to C:\KTAEssentials\LabFiles\Documents\Test Set. Select the first 3 documents and click **Open.** The files will be imported.

6. Click the **Create Job** icon.
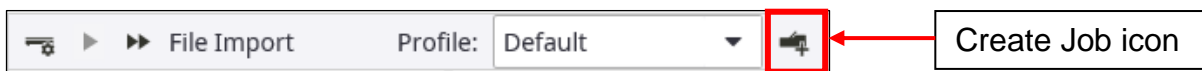
7. Select **To Do** > **Work Queue**.

8. Click the **Refresh** icon in the work queue until the **Document Review** activity becomes pending.

9. **Take** and **Complete** the **Document Review** activity (click on the activity name).
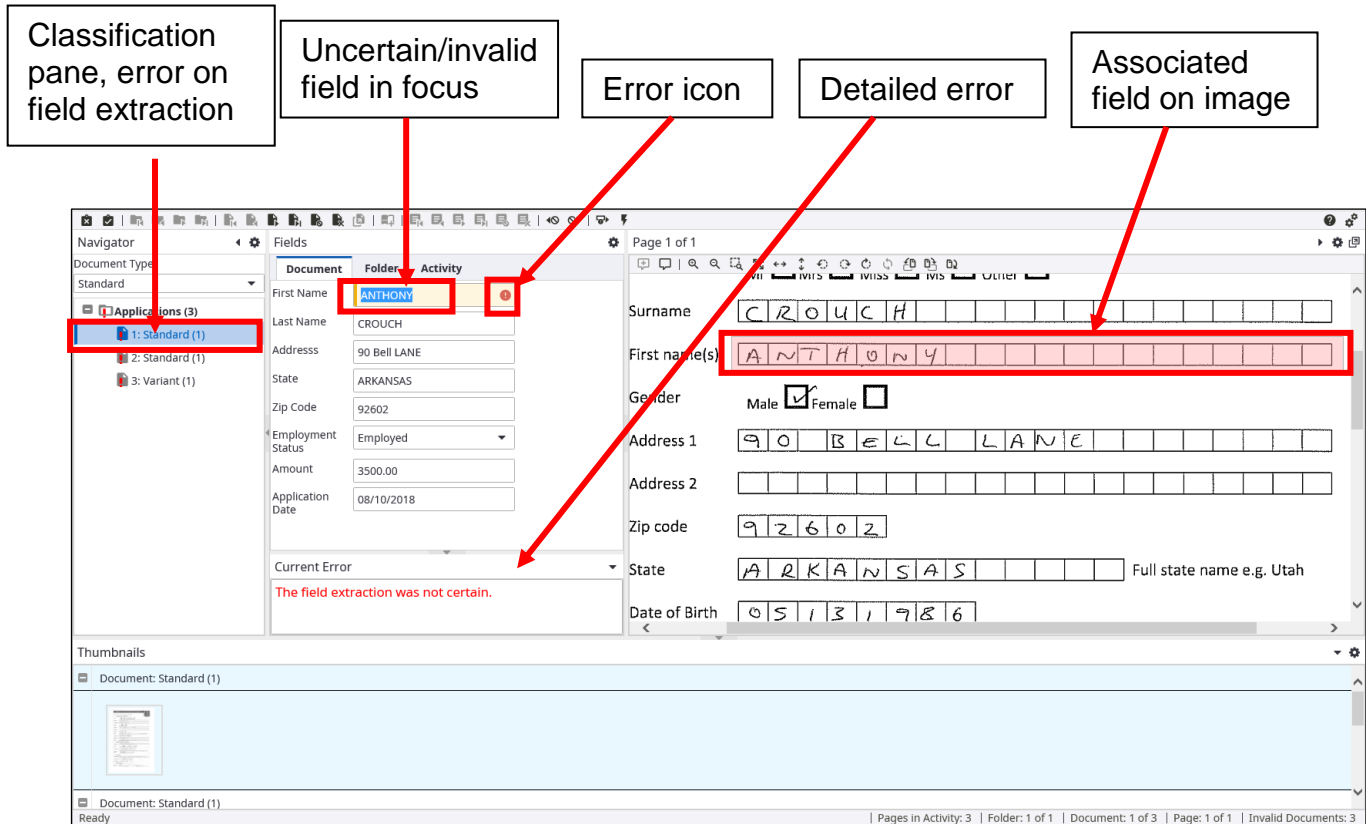
10. Click the **Refresh** icon in the work queue until the **Validation** activity becomes pending.

Refresh Work queue
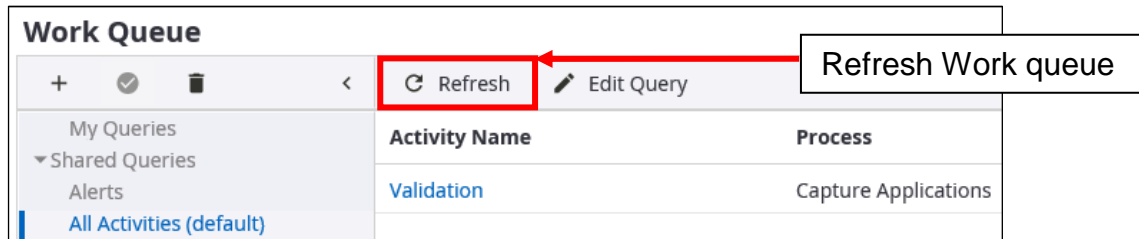
11. Take the **Validation** activity.

12. As you can see, extraction has been significantly improved, and where some of the extraction results are not certain, the classification pane has error icons on each folder and document.

Classification pane, error on field extraction

Uncertain/invalid field in focus

Error icon

Detailed error

Associated field on image

13. With the cursor focused on any incorrect data, (or if already correct), press **Enter**. This will validate the field, run any formatters, and move the cursor to the next Uncertain/Invalid field. **Note**: If a field is blank and has a **Machine Print Recognition Profile** assigned to it in the Extraction group, you can also lasso (click and drag your mouse) around a particular field on the document to extract data automatically. This will reduce the amount of manual entry.

14. On the menu bar you can also Force Valid, Reject a Document, Delete a Document, Delete a Page (if a multipage document) etc.
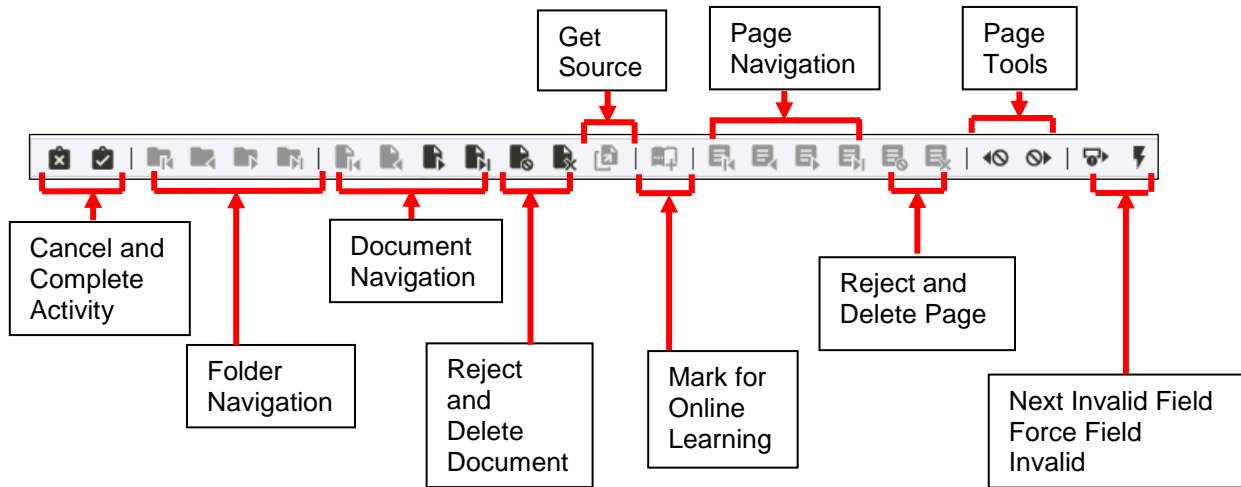
15. When all fields are valid, click **Complete Activity**.

Lab 09-8 - Self Learning (Do not complete in class)

Anchors

Improve Extraction Results using Anchors

In this part, you will add a Text Anchor so that after scan TotalAgility can re-align the image (to remove any skew effect etc.) and ensure the AZL is re-aligned meaning better extraction results.

It is recommended to add a minimum of 4 anchors per page. At runtime TotalAgility uses at least 3 anchor points to re-triangulate and adjust the image accordingly.
Note: In this lab you will only add one anchor as an example. As all the files are pre-scanned (and de-skewed), you will not notice any impact to extraction result, by adding an anchor.

1. In the **Transformation Designer**, open the **Loan Applications Extraction** group.

2. In the **Personal Loans** class expand **Locators** double click the **AZL_ApplicationData** Locator.

3. **Double click** the **Sample0.xdc (Reference)** image to bring up the document viewer and click the **Add Anchor** icon to start drawing:

4. Click (keeping the left mouse button pressed) and draw a large rectangle around the word **Personal**. Release the mouse to access the anchor **Properties**.
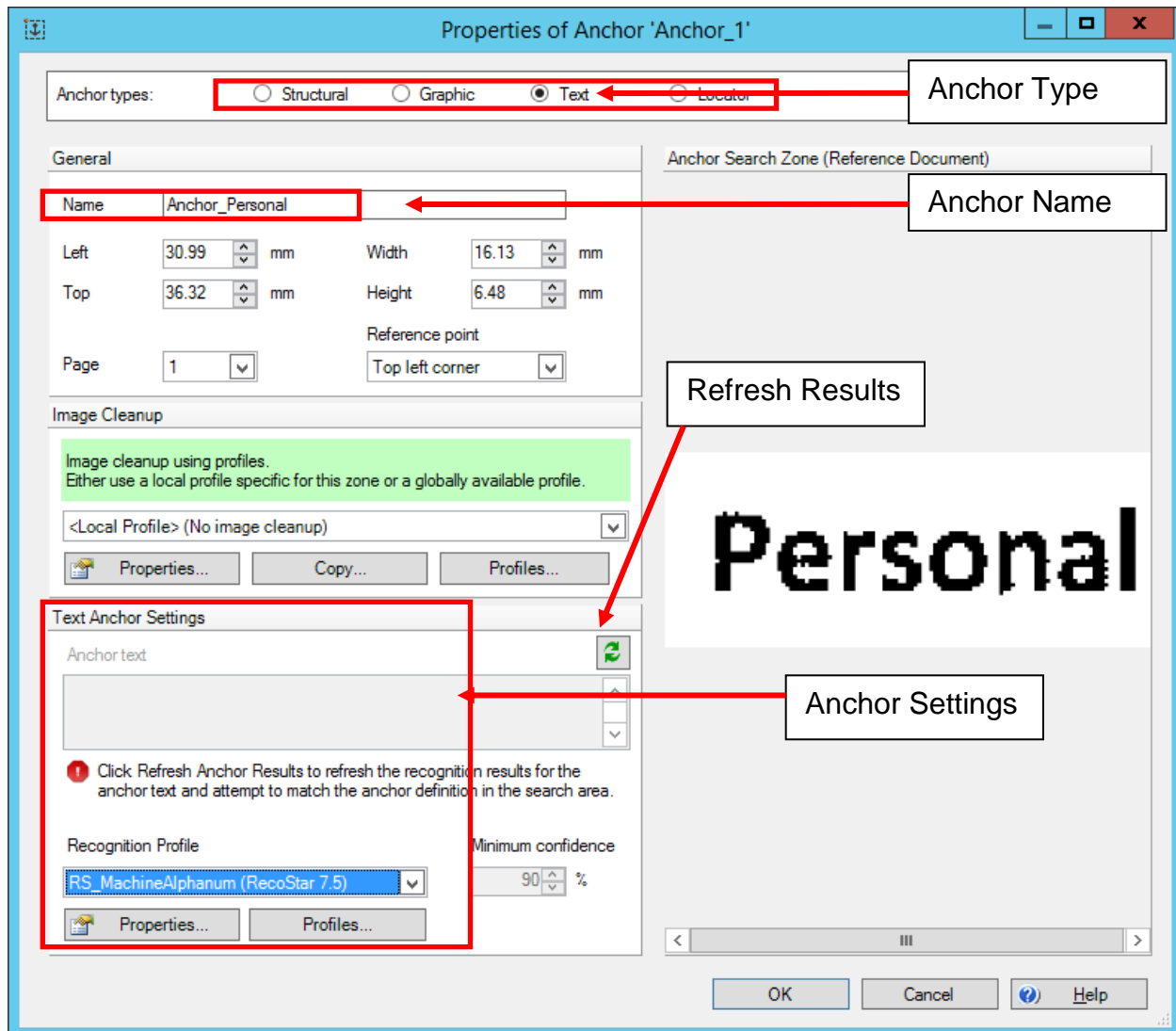
5. Rename the Anchor **Anchor_Personal**. Set the **Anchor type** to **Text**.

6. Set the **Recognition profile** to **RS_MachineAlphanumeric (RecoStar 7.8)** and click the **Refresh Anchor Results** button.
   Note: The text is machine printed, not handwritten.

7. Type the word **Personal** in the Anchor text box. The **Anchor text** should display the word Personal (with a yellow rectangle) and the confidence should be 100%.
   Note: If you change recognition engine you can use the Refresh button to show the new recognition results.

8. Click **OK**.

9. The new Anchor shows as a **Yellow** box on the **Reference Document**.

10. Double click the **LastName (Surname)** zone on the reference document.

11. Click the **Anchors** tab, and from the Available list select **Anchor_Personal** and move it to the **Selected Anchors** list.
    Note: You can also go to the **Zones** tab in the properties of the locator, select all zones, and apply the same anchor to all zones using the **Properties** button.
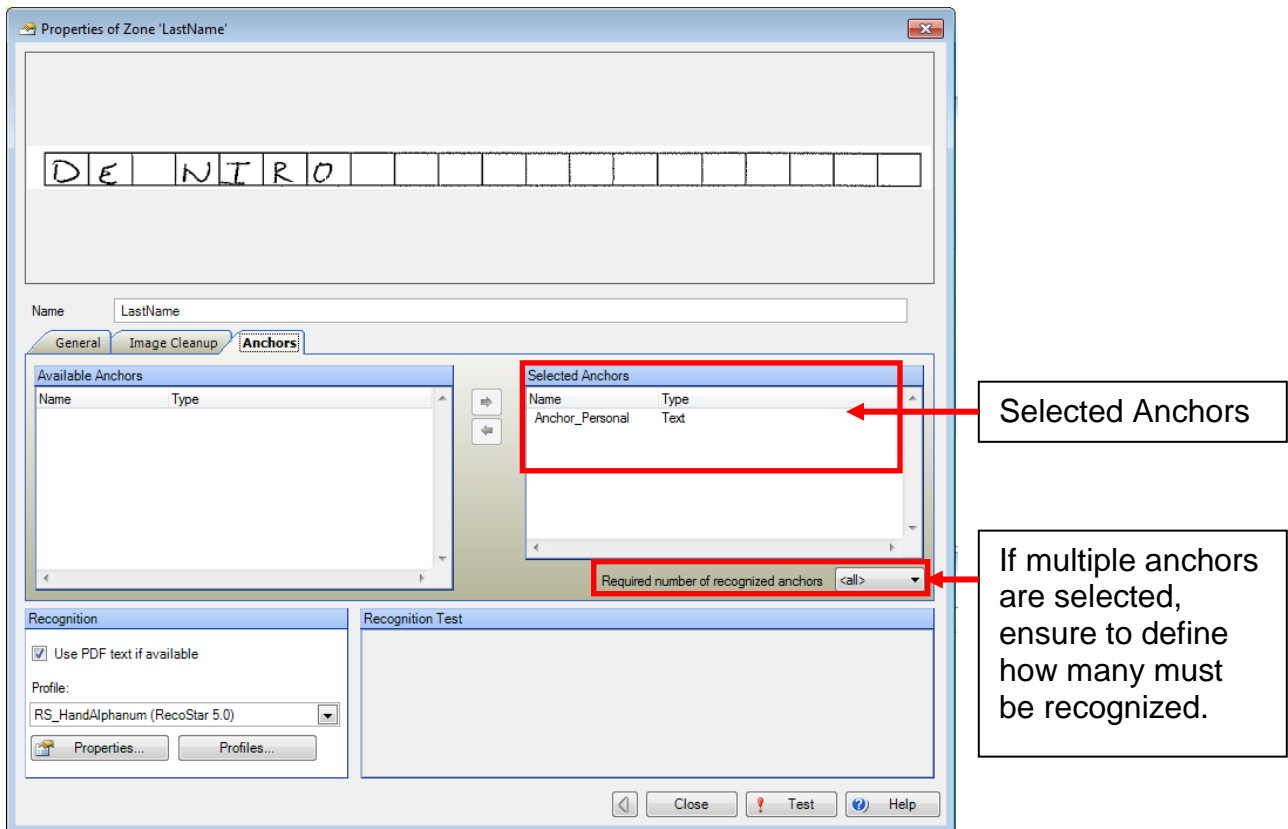
12. Select the **Required number of anchors** (if you are using multiple anchors).

13. Click **Close**.
    Notes: (i) Anchors are only available within the Locator from which they have been created.
   (ii) Create anchors at the top and bottom of the page around keywords. A document my get
    a stamp on it at a particular anchor, or be skewed as it was scanned from top to bottom, so
    having multiple anchors, can help extraction. You can set the required number of
    recognised anchors e.g. you may have 4 anchors but only require that 3 are found.
    (iii) You would need to add the anchors to each field in the locator.

14. Open the **Reference** document and use the **Next/Previous** document icons to see
    document skew and whether the anchor was found on each sample document.
    Note: You can add additional samples by selecting a document in the test set and clicking
    the **Insert Sample** button in the **General** tab of the **Locator Properties** window.
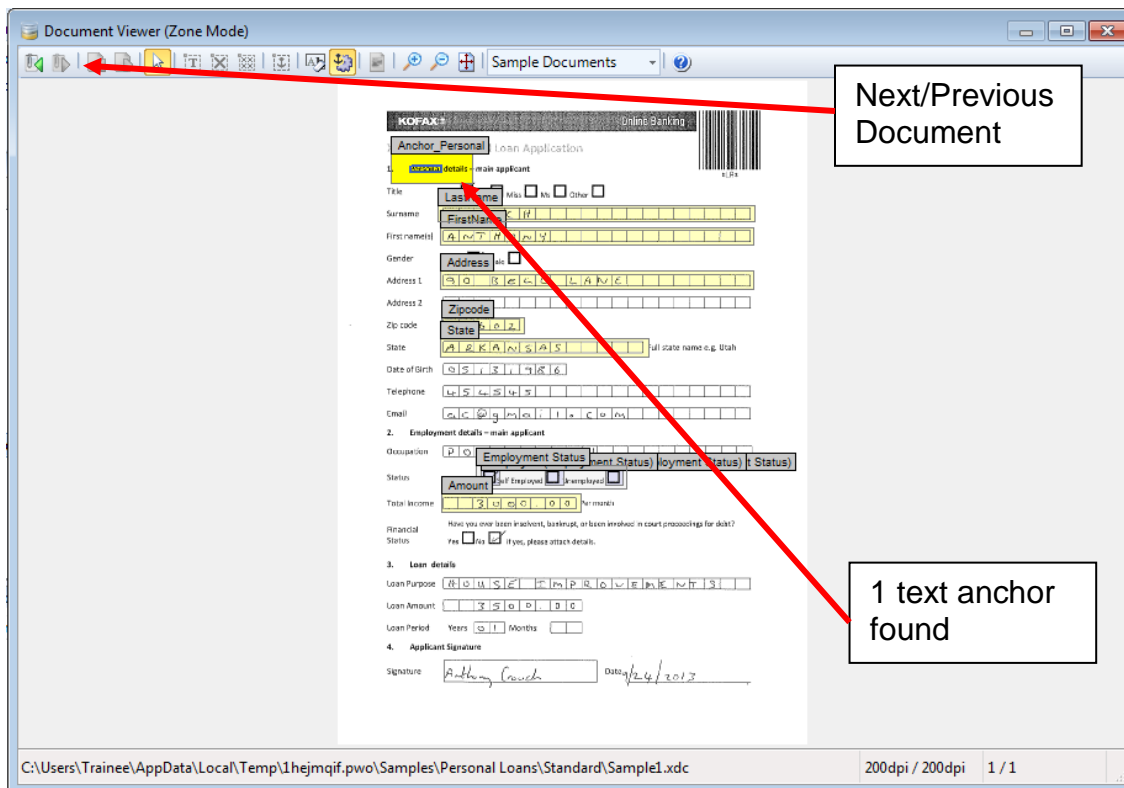
15. **Close** the **Document Viewer** and the **Advanced Zone Locator** properties.
Note: The anchor will not be created for the Variant document type as it no longer inherits from the parent document type.

Lab Notes

Advanced Zone Locator Background Removal

1. You would need 4 additional samples before the **Create Info** button for **Background Removal** becomes effective in the Advanced Zone Locator properties.
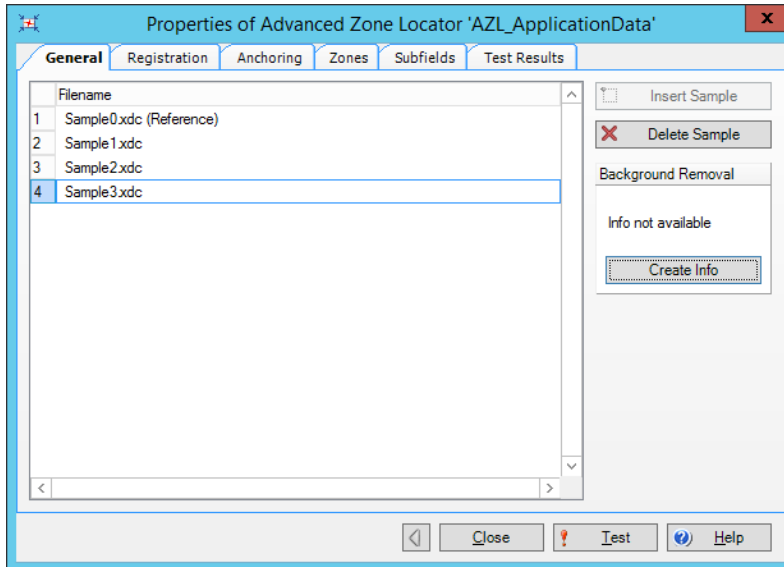
Note: Background removal is an optional feature that can be used to remove consistent backgrounds from documents. Use of this feature requires at least five unique documents that are ideal representations of the class you are configuring, to be selected as samples, including the reference document. Each of the sample documents is compared for common black lines and ink blotches that are irrelevant for extraction. When background removal is enabled, these lines and marks are removed, improving the overall appearance of the scanned document. You should include an application that is not filled in, in this set. In the lab example we did not use background removal and instead used an image cleanup profile.

Revision Questions

1. Does an Advanced Zone Locator require full page OCR?
_____

2. When would you typically use an Advanced Zone Locator?
_____

3. Why would you need an image cleanup profile?
_____
_____

4. In the context of configuring an Advanced Zone Locator, can you use a different recognition engine for each field defined in a document type?
_____

5. What is the purpose of a reference document in an Advanced Zone Locator?
_____
_____

6. What is hand print pitch?
_____
_____

7. You need to extract which value has been set in a group of related checkboxes on a form. What technique would you use to do this?
_____
_____

8. Can you have more than one locator in an extraction project?
_____

9. Can you change the order in which locators run?
_____

10. You need to extract a QR code from a document. Which locator would you use to achieve this?
_____

11. An Advanced Zone Locator has been defined in a parent class. Is this locator automatically inherited by child classes?
_____

12. Is it possible to copy a locator method and turn off inheritance for a child class?
_____

13. To see the results of a locator, you should link the field to the appropriate locator?
_____

14. Does a field have to be populated by a locator?
_____

15. At runtime, how do you validate the results of extraction?
_____

16. At design time, what is the easiest technique to view the results of extraction for a specific locator?
_____

17. At design time, where can you see the results of all locators when extraction is performed on a document in a test set?
_____

18. What is the purpose of an anchor?
_____
_____

19. A new field is added to an extraction group. The field is populated using an existing locator, and the extraction project is released. What additional steps would be required at design time in order to see the new field and its extraction result at runtime?
_____
_____

20. What is the purpose of a field group in an extraction group?
_____
_____