

TECHNICAL TRAINING LAB INSTRUCTIONS

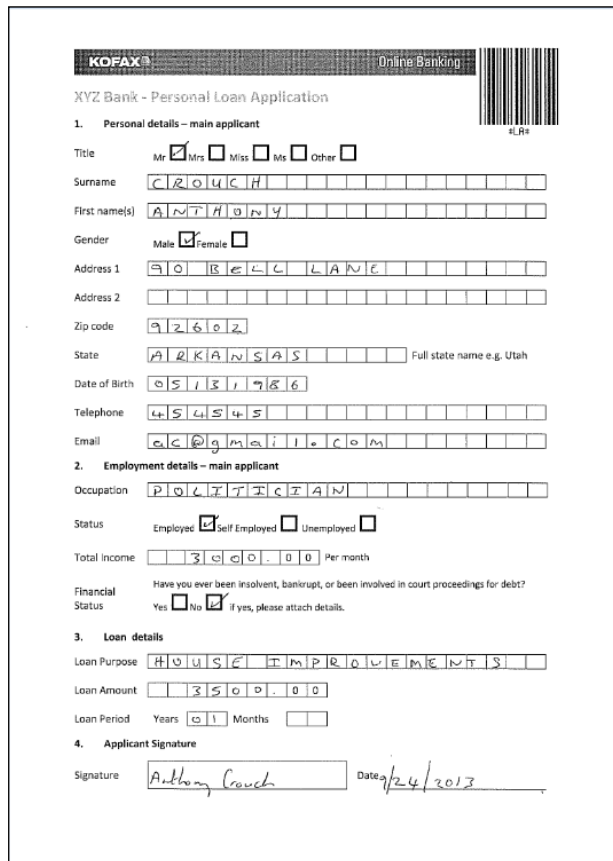
In this lab you will open the Transformation Designer, learn how to open projects, configure layout classification, configure documents for testing, and learn about classification online learning.

Lab 08-1 Transformation Designer

In this lab, you will create your first Kofax Transformation Designer project. You will open the Classification group you created in the TotalAgility Designer inside the Transformation Designer. You will then train the project to recognize both Standard and Variant applications forms.

To date we have created an extraction group for the loan application form types.

Standard



KOFAX Online Banking

XYZ Bank - Personal Loan Application

1. Personal details - main applicant

Title: Mr ☒ Mrs ☐ Miss ☐ Ms ☐ Other ☐

Surname: CROUCH

First name(s): ANTHONY

Gender: Male ☒ Female ☐

Address 1: 90 BELLEVILLE

Address 2:

Zip code: 92602

State: ARIZONA Full state name e.g. Utah

Date of Birth: 05/18/1986

Telephone: 454545

Email: CROUCHM@COM

2. Employment details - main applicant

Occupation: POLITICIAN

Status: Employee ☒ Self Employed ☐ Unemployed ☐

Total Income: 3000.00 Per month

Financial Status: Have you ever been insolvent, bankrupt, or been involved in court proceedings for debt? Yes ☐ No ☒ If yes, please attach details.

3. Loan details

Loan Purpose: PURCHASE IMPROVEMENTS

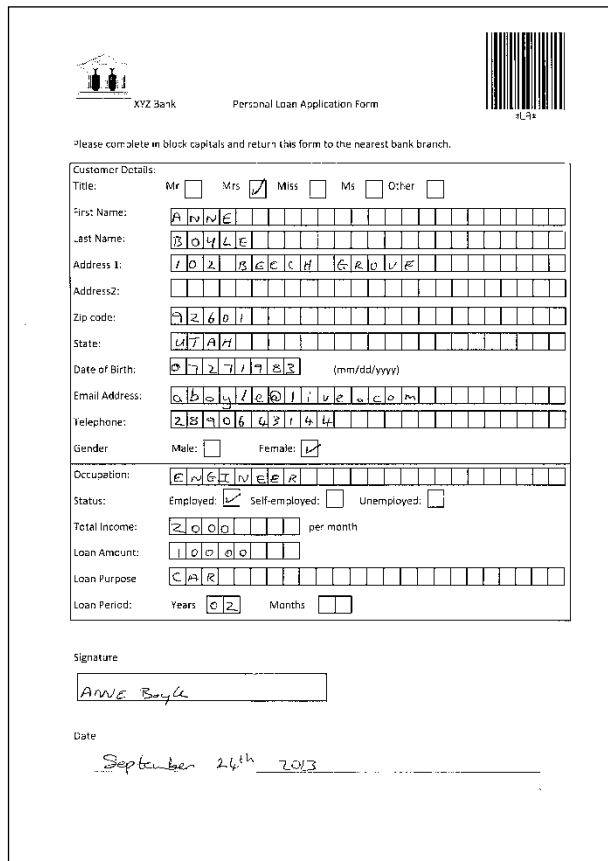
Loan Amount: 3500.00

Loan Period: Years 01 Months

4. Applicant Signature

Signature: Anthony Crouch Date: 9/24/2013

Variant



XYZ Bank Personal Loan Application Form

Please complete in block capitals and return this form to the nearest bank branch.

Customer Details:

Title: Mr ☐ Mrs ☒ Miss ☐ Ms ☐ Other ☐

First Name: ANNE

Last Name: BOYLE

Address 1: 102 BELLEVILLE

Address 2:

Zip code: 92601

State: UTAH

Date of Birth: 07/21/1983 (mm/dd/yyyy)

Email Address: ANNEBOYLE@COM

Telephone: 2890642144

Gender: Male ☐ Female ☒

Occupation: ENGINEER

Status: Employed ☒ Self-employed ☐ Unemployed ☐

Total Income: 2000.00 per month

Loan Amount: 10000

Loan Purpose: CAR

Loan Period: Years 02 Months

Signature: ANNE BOYLE

Date: September 24th 2013

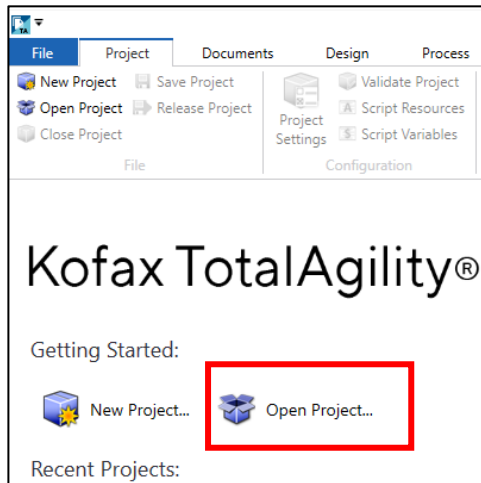
Note: The application forms have *hand print*.

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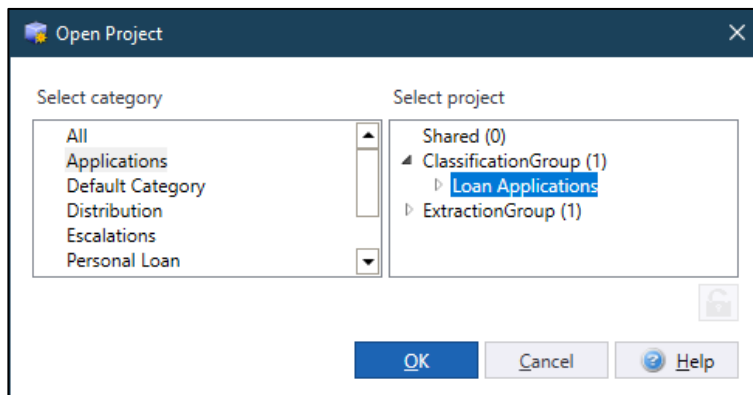
Configuring a Classification Project

In this part, you will open the classification project you created in the Designer inside the Transformation Designer. You will teach TotalAgility how to recognize and classify the different documents that will be scanned. You will provide training samples (sets) to help classify scanned documents.

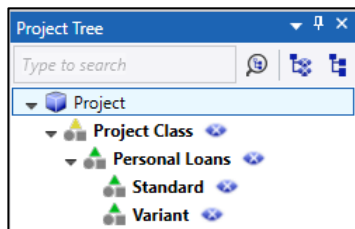
1. From the **Start Menu** select **Transformation Designer**.
2. Under **Getting Started** click **Open Project...**



3. Expand the **ClassificationGroup** folder, select **Loan Applications**, and click **OK**.

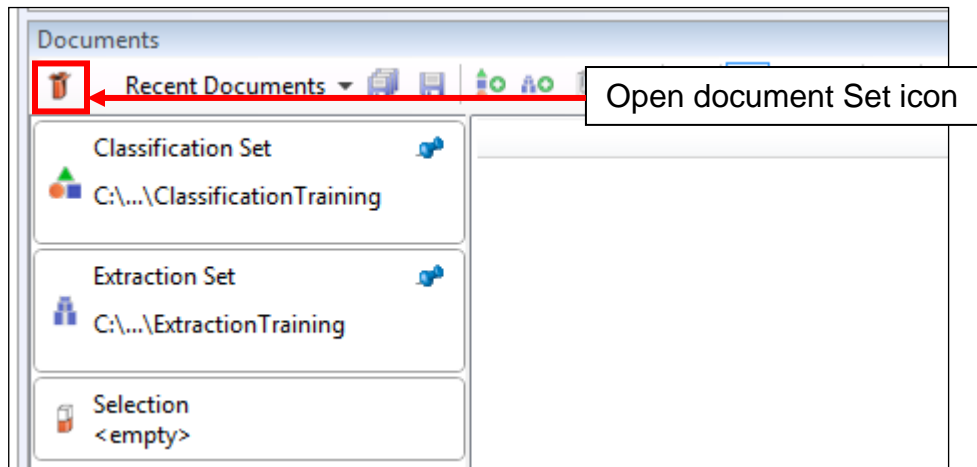


Note: The latest version of the Loan Applications classification group is opened, and you can see the main class - Personal Loans.

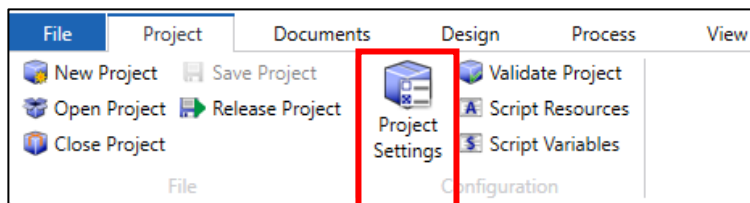


4. To add documents for testing click the **Open Document Set** icon (in the Documents pane at the bottom of the screen).

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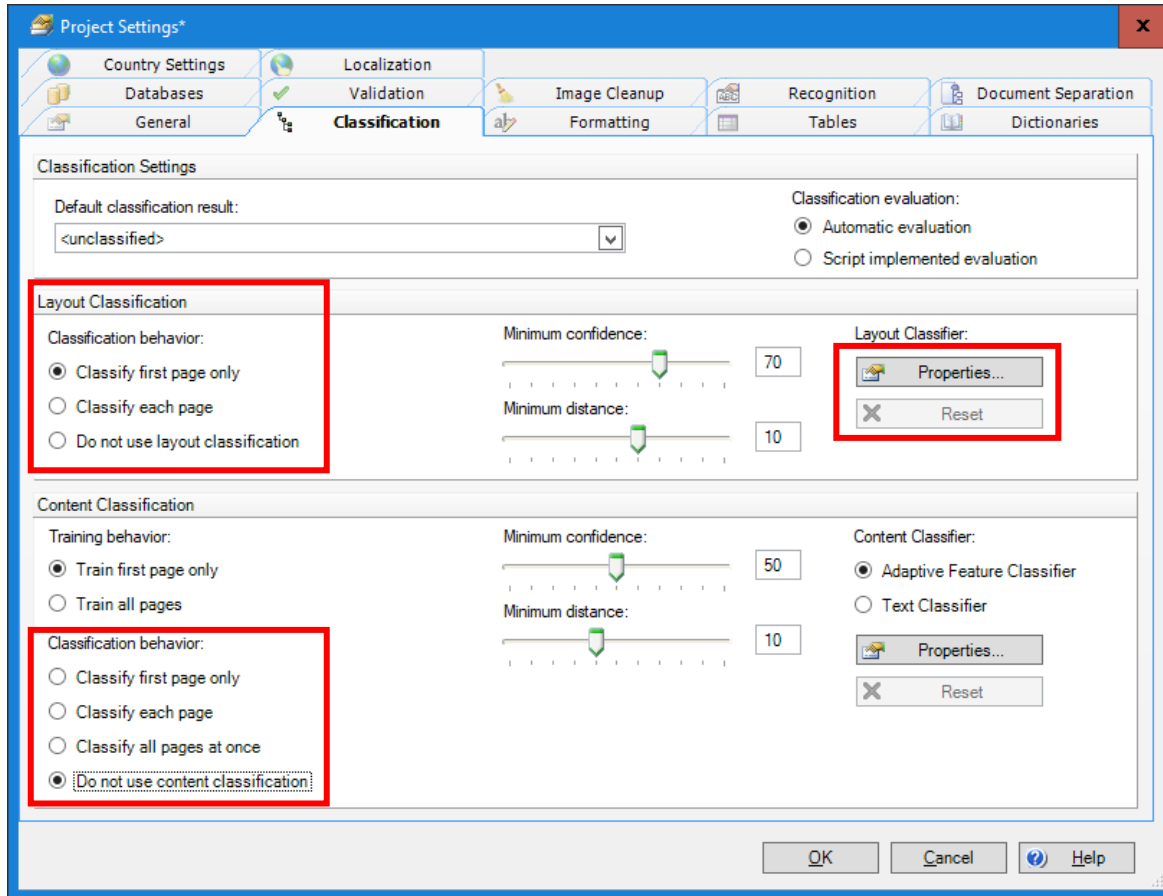


5. **Browse** to C:\KTAEssentials\LabFiles\Documents\Training Set, click **Select Folder**, and click **OK**.
Note: To prepare for layout classification we need to add representative documents. After opening the documents, an **XDoc** (.xdc) is created. This is a binary file format that cannot be directly accessed. You can view the contents of the XDoc by right clicking over a file and selecting **Open in XDoc Browser**.
6. Firstly, for the overall project, we need to set **Classification Properties**. On the **Project** menu click **Project Settings**.



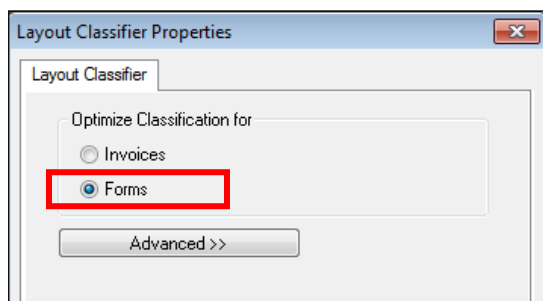
7. Select the **Classification** tab, and for **Layout Classification**, select **Classify first page only**.
8. Set **Content Classification** to **Do not use content classification**.

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Note: Turning off content classification at the project level disables content classification for all classes.

9. Click the **Layout Classifier Properties** button and set **Layout Classifier** to optimize for **Forms**.



Note: If this option is selected, the classifier uses the entire region of the image. This can be used for forms and other types of documents that have a fixed layout over the entire region of the image.

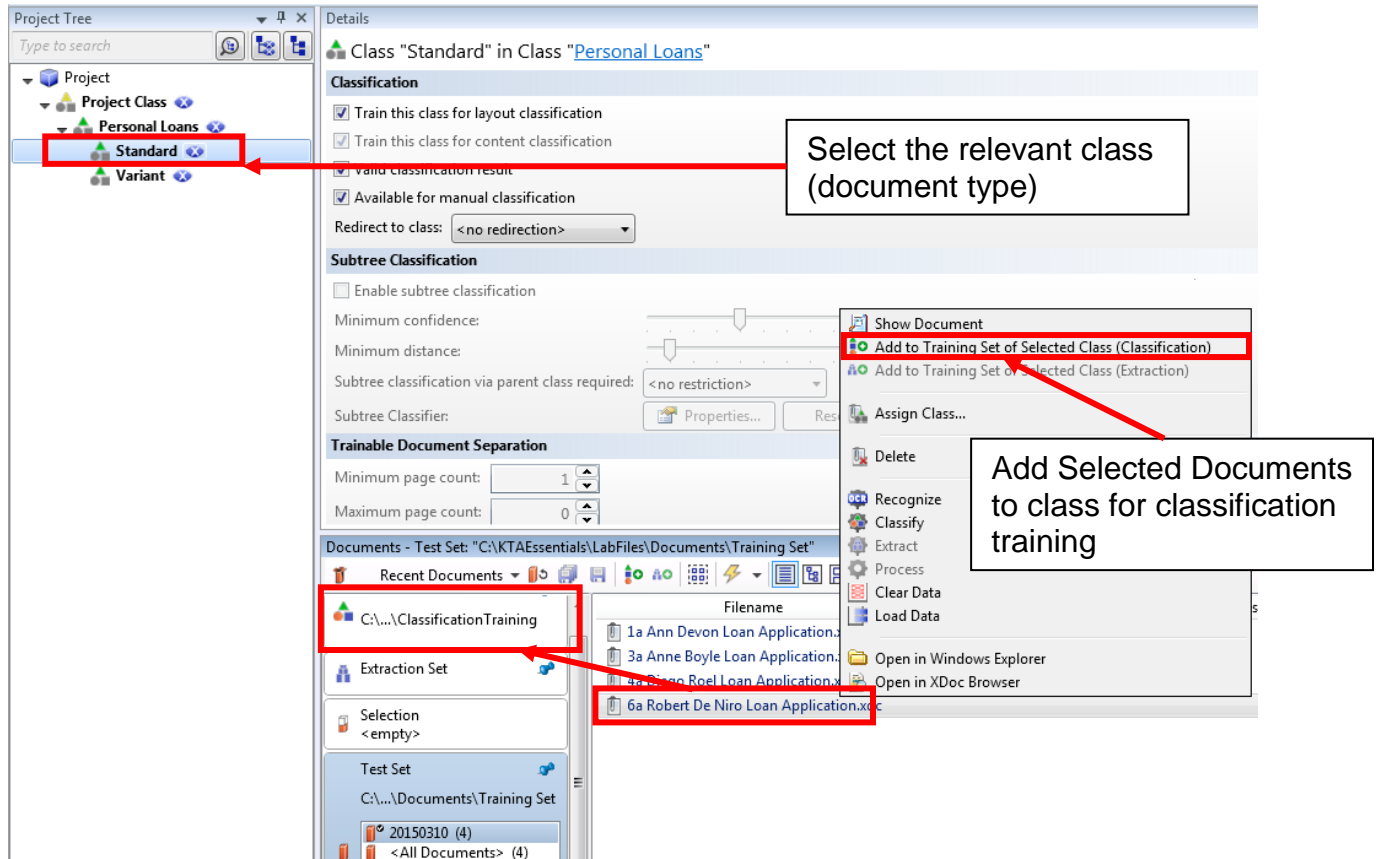
10. Click **OK** twice.

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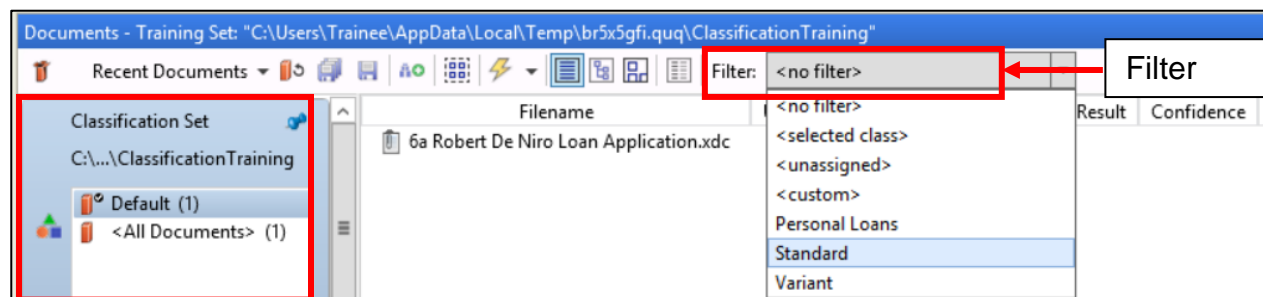
Add Sample Documents for Training

In this part, you will add a sample Standard loan application document.

11. In the **Project Tree** click on the **Standard** class (document type).
12. In the **Test Set** area select **Robert De Niro's Loan Application** (we will use just one sample for layout classification for the **Standard** Loan application).
Note: You can double-click the filename to verify it is the correct type.
13. Right-click and select **Add to Training Set of Selected Class (Classification)**.



14. Ensure the sample has been added by clicking **Classification Set**. You can set the Filter to <no filter> or you can filter by the selected class.



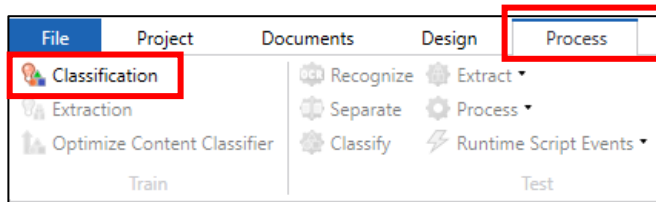
Note: You can add more than one sample to a Classification Set.

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Training for Classification

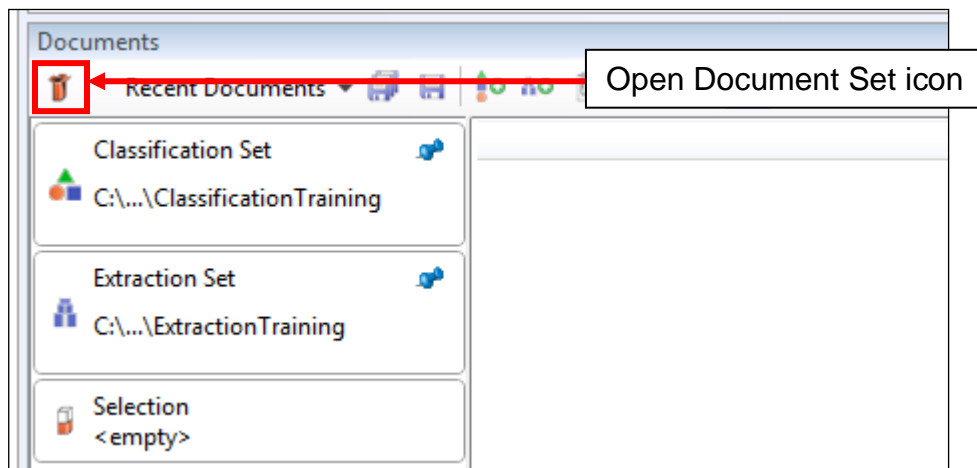
In this part, you will train the project using the new sample you have added. Once a project has been trained, each e.g. scanned document can be recognized, and a confidence percentage determined.

15. Select the **Process** tab, and in the **Train** group area, click **Classification**.

*Test Classification*

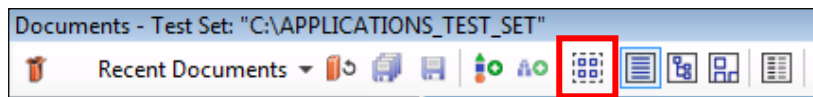
In this part, you will test that classification is working by opening a test set of documents, and performing classification.

16. Click the **Open Document Set** icon (in the Documents pane at the bottom of the screen).

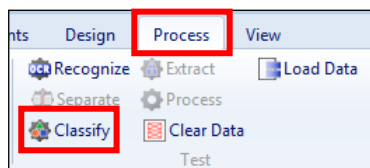


17. **Browse** to C:\KTAEssentials\LabFiles\Documents\Test Set, click **Select Folder**, and click **OK**.

18. In the **Documents Area** (Test Set), click the **Select All** icon.



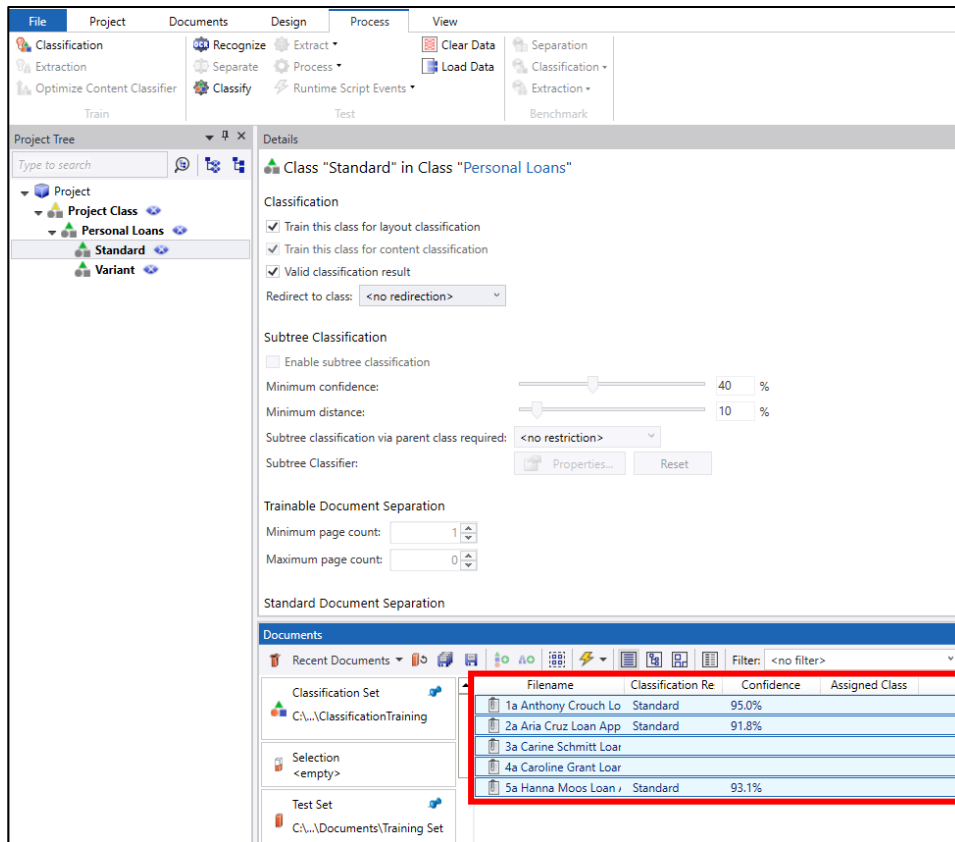
19. Select the **Process** tab, and click **Classify** in the **Test** group area.



Note: You can also **right click** over the selected documents and click **Classify**.

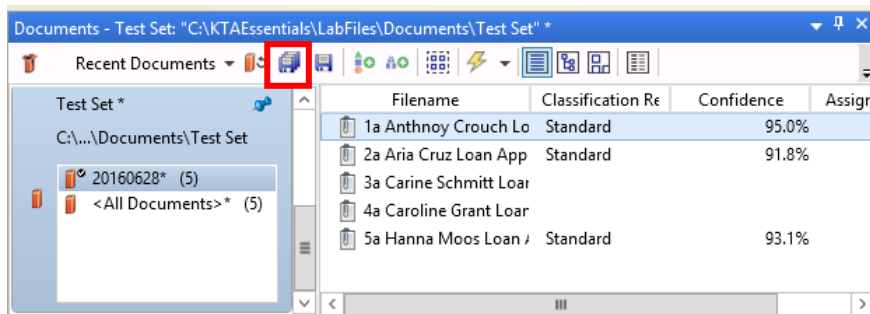
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20. Verify the classification results by double-clicking a few documents and reviewing the classification result. Also note the **Confidence** for each classification result.



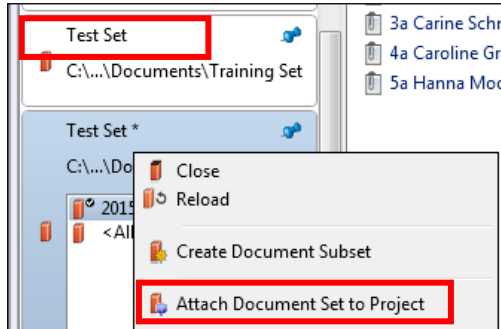
Note: Only the Standard applications will be classified confidently. In a later part of the lab you will use online learning to classify Variant applications.

21. Save the **Classification Result** and **Confidence** by clicking the **Save All Documents** icon in the Documents panel (this will save the classification result in the Extraction Class property in the xdc file).



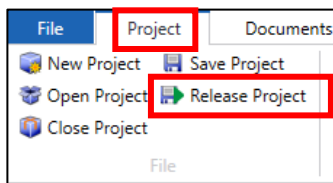
22. Right click over the words **Test Set** and select **Attach Document Set to Project**.

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Note: The next time you open the project the test set will also appear. If you do not attach the test set, you will have to browse to it.

23. Select the **Project** tab, and click **Release Project**.



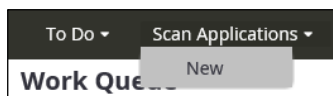
Lab 08-2

Test Classification by Creating a Job

Create a Job

A job is an instance of a process. You can create jobs using the TotalAgility Workspace or through API calls. When you import files, scan documents, monitor a mailbox or folder, you can create a job to process the files or scanned documents.

1. Open the **Browser** and open the **xyzbank** Workspace (a shortcut exists).
2. **Logon** as **pblack**.
3. Select the **Scan Applications** menu, and click **New**.

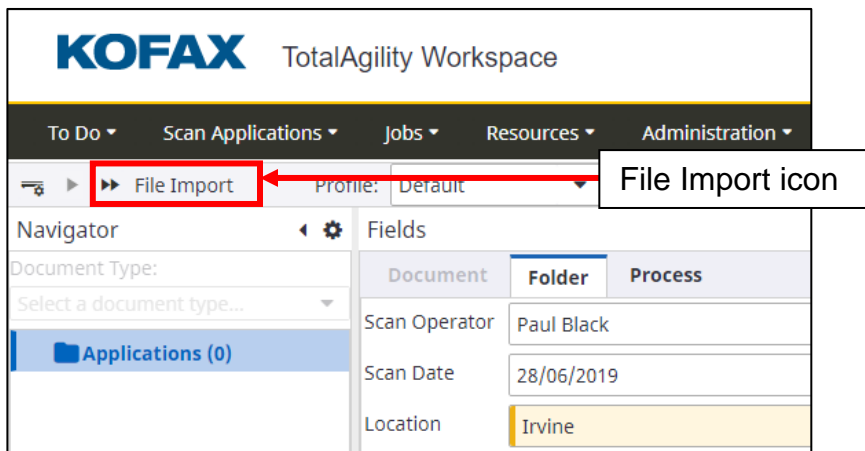


4. The **Capture Applications Scan** page is loaded.
5. In the **Folder** tab, enter *Paul Black* as the **Scan Operator**.
6. Enter *your location* as the **Location**.

Fields		
Document	Folder	Process
Scan Operator	Paul Black	
Scan Date	8/13/2018	
Location	Irvine	

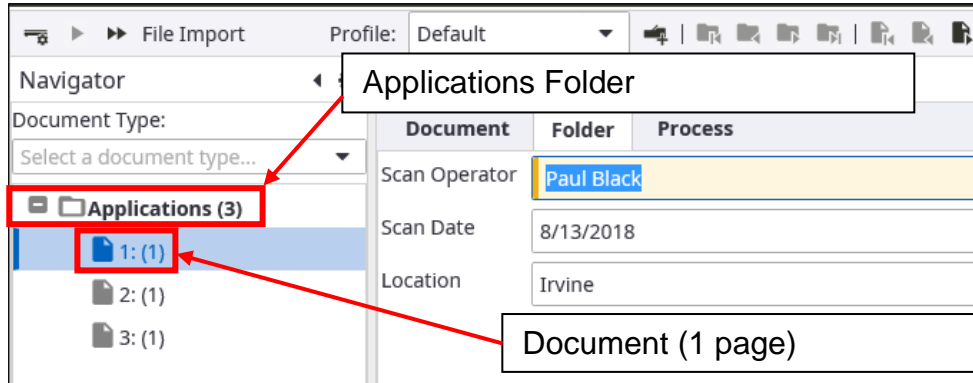
7. Select the **File Import** icon.

Note: If the File Import option is disabled, click the icon to the left of this to access the Scan Settings. Select **File Import** under Select a Scanner and click **OK**.

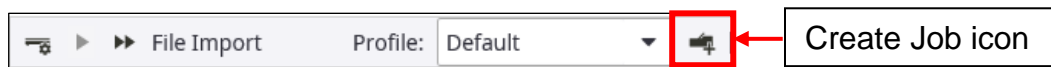


8. **Browse** to C:\KTAEssentials\LabFiles\Documents\Test Set and select the first 3 documents and click **Open**. The files will be imported.

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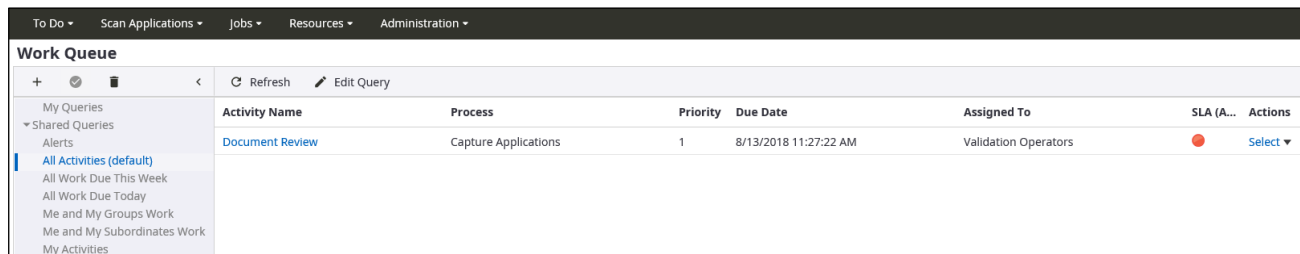
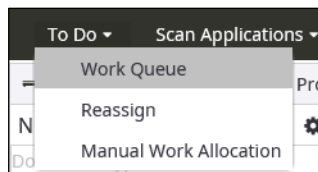


9. Click the **Create Job** icon in the capture toolbar.



10. In the **xyzbank** Workspace menu select **To Do > Work Queue**.

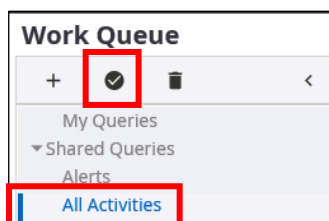
Note: The job is going through automatic classification, before allocating the Document Review manual activity to the Validation Operators group.



11. Select **All Activities** in the **Queries** panel.

Note: The default work queue setting is to see only activities individually assigned to you.

12. Click the **Set As Default** icon.



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13. Take the activity called **Document Review** by clicking the activity name.

Work Queue		
<div> + ✓ 🗑️ < ↻ Refresh ✎ Edit Query </div>		
My Queries	Activity Name	
▼ Shared Queries	Process	
Alerts	Document Review	Capture Applications
All Activities (default)		

14. The Classification results should be visible (along with confidence).

Navigator		
Name	Type	Confidence
Applications (3)		
1: Standard (1)	Standard	95.0%
2: Standard (1)	Standard	91.8%
3: (1)		0.0%
Current Problem		
Every document must have a type		

Note: The last document is a Variant application and will not be classified. You will fix this in a later lab.

15. **Cancel** the activity by clicking the **Cancel** icon, and clicking **Yes**.

<div> 🗑️ ✓ 🗑️ < ↻ Refresh ✎ Edit Query </div>		
Navigator		
Name	Type	Confidence
Applications (3)		
1: Standard (1)	Standard	95.0%
2: Standard (1)	Standard	91.8%
3: (1)		0.0%
Current Problem		
Every document must have a type		

Lab 08-3

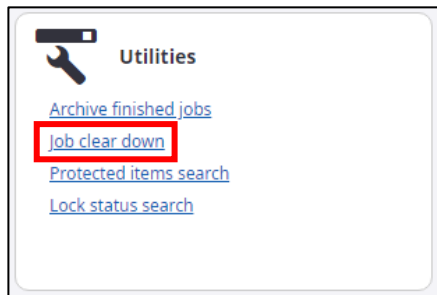
Clear Down Jobs

Clear Down Jobs

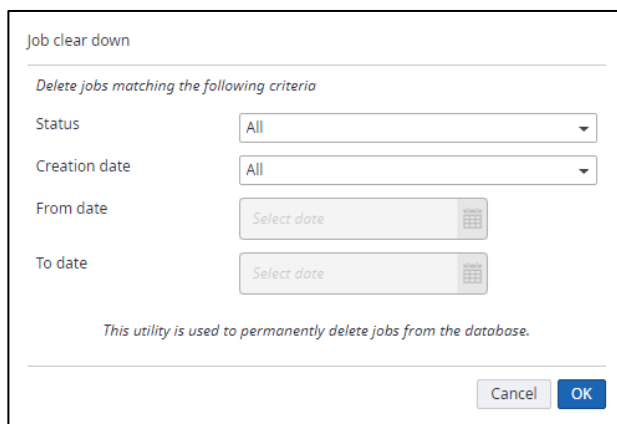
When you are testing processes, it is useful to clear down (delete) old jobs to avoid confusion. A utility called Job clear down can be used to delete all old jobs or jobs within a certain status/time frame. You can set permissions on who can access this feature in System > System settings. Throughout this course, we would recommend you clear down old jobs before you are asked to create a new job.

Note: The Job clear down feature can only be run by members of the **Administrators** group. The Trainee account (the installer account) is automatically added to the Administrators, Designers, and Device Users groups on a new installation.

1. From the **Main** menu navigate to **System > System settings**, and from the **Utilities** card, click **Job clear down**.



2. Leave the default settings and click **OK**, and click **Yes**.

A screenshot of the 'Job clear down' dialog box. The dialog has a title bar 'Job clear down' and a subtitle 'Delete jobs matching the following criteria'. It contains four fields: 'Status' with a dropdown menu set to 'All', 'Creation date' with a dropdown menu set to 'All', 'From date' with a text field 'Select date' and a calendar icon, and 'To date' with a text field 'Select date' and a calendar icon. At the bottom, there is a note: 'This utility is used to permanently delete jobs from the database.' and two buttons: 'Cancel' and 'OK'.

3. You may wish to leave the **System settings** screen open so you can easily clear down old jobs when testing.

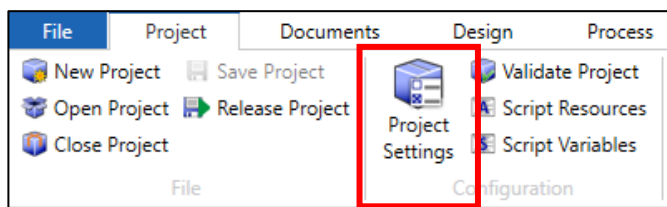
Lab 08-4

Classification Online Learning

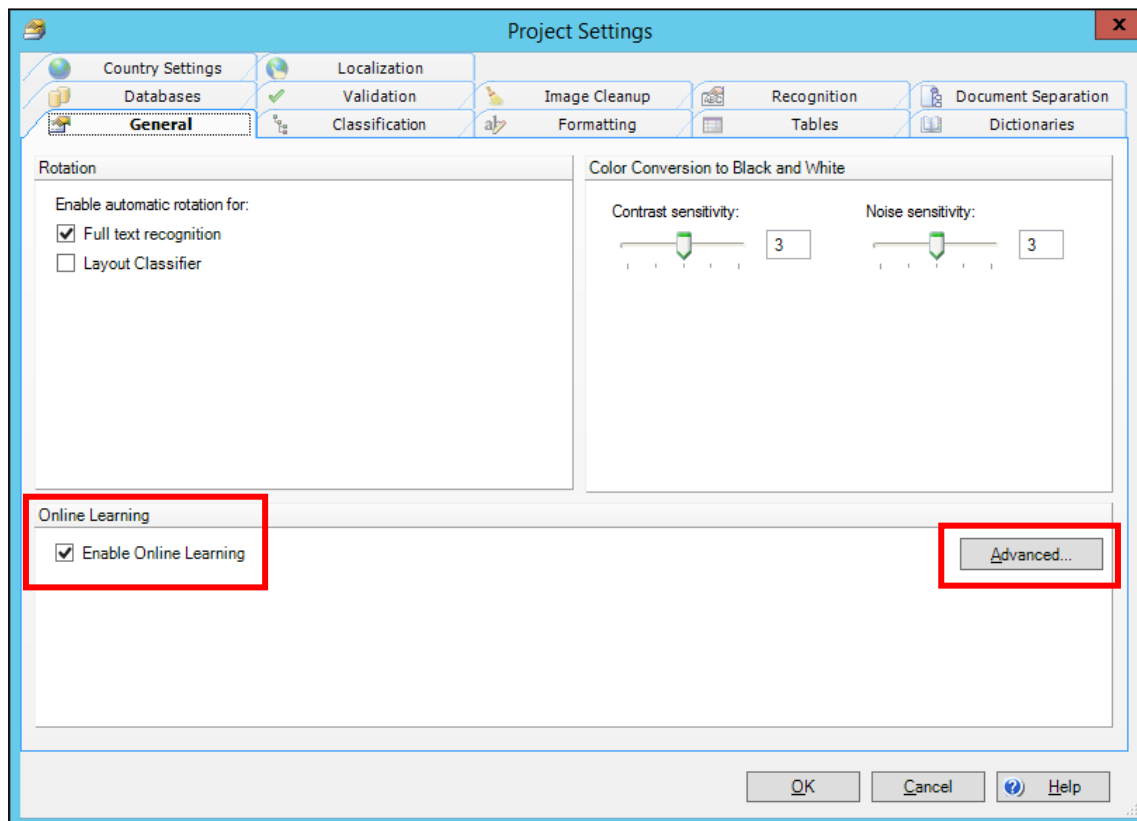
Configure Classification Online Learning

In this part, you will configure TotalAgility to dynamically classify the Variant application using classification online learning. In this example you will enable online learning in the classification project, and you will monitor the variant document type in the extraction project.

1. Navigate to the **Transformation Designer** and ensure the **Loan Applications** classification group is open.
2. On the **Project** tab, click **Project Settings**.

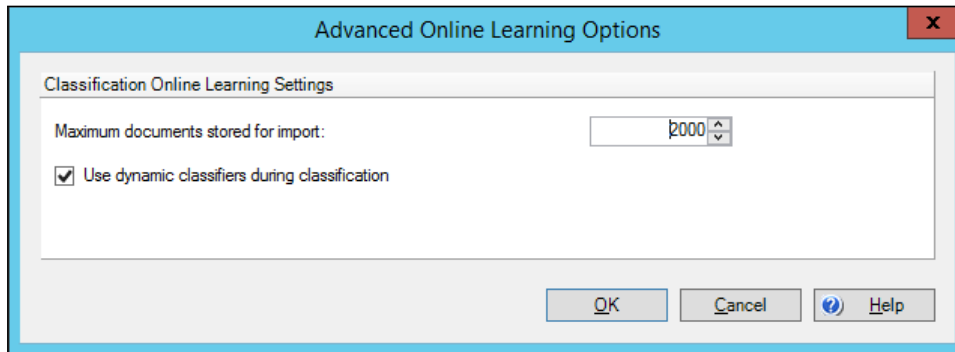


3. Select the **General** tab, and check the **Enable Online Learning** checkbox:

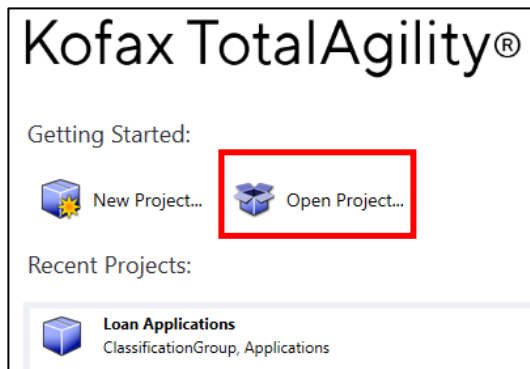


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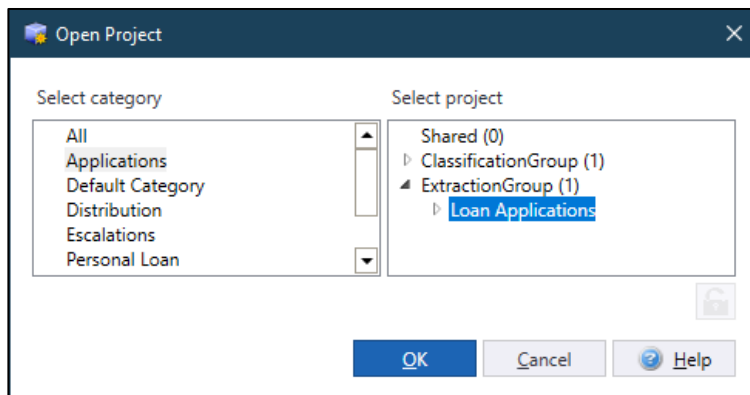
- Click the **Advanced...** button.



- Leave the default settings and click **OK** twice.
- Save** and **close** the **Loan Applications** Classification project.
- Under **Getting Started** click **Open Project...**



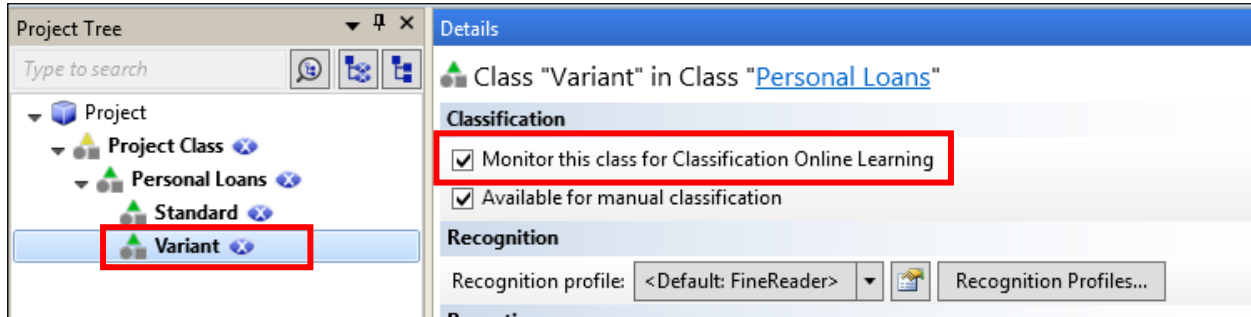
- Expand the **ExtractionGroup** folder, select **Loan Applications**, and click **OK**.



Note: The latest version of the Loan Applications extraction group is opened.

- Select the **Variant** document type (class) in the **Project Tree**.
- Check the **Monitor this class for Classification Online Learning** checkbox:

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11. **Release** and close the **Loan Applications Extraction** project.
12. From the **Recent Projects** list, open the **Loan Applications Classification** Group.
13. **Release** and **close** the **Loan Applications** classification group.

Configure Online Learning Interval

In this part, you will configure the online learning interval to be 1 minute rather than the default setting. Note that if you are using a Kofax VM, you will not need to set the interval.

14. Open the **Kofax TotalAgility Designer** (if it is not already open).
15. From the **Main** menu navigate to **System > System settings**, and from the **System** card, click **System tasks**.
16. Click **Online Learning** and set the **Interval** to 1 minute.
17. Check **Use start time**, and set a start time 1 or 2 minutes from the current time.
18. Click **Save** and note the **Due DateTime** before the System Task is next executed.

Edit system task *			
Name	Online Learning		
Active	<input checked="" type="checkbox"/>		
Interval	0 Days	0 Hrs	1 Mins
Use start time	<input checked="" type="checkbox"/>	04/04/2019 09:45	

Online Learning	✓	0 Days 0 Hours 1 Minutes	04/04/2019 09:51:20
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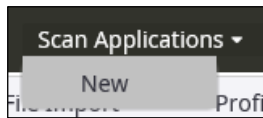
Lab 08-5

Test Classification by Creating a Job

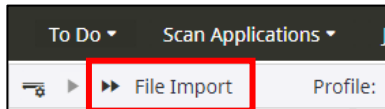
Create a Job

In this part, you will create a new job which contains standard and variant applications. You will manually classify the variant document to the variant document type and complete the Document Review activity.

1. Open the **Browser** and open the **xyzbank** Workspace (a shortcut exists).
2. **Logon** as **pblack** (if you are not already logged in).
3. Select the **Scan Applications** menu, and click **New**.



4. The **Capture Applications Scan** page is loaded.
Note: For training purposes, it is *not* mandatory to enter the Scan Operator and Location.
5. Select the **File Import** icon.



6. **Browse** to C:\KTAEssentials\LabFiles\Documents\Test Set and select the first 3 documents and click **Open**. The files will be imported.
7. Click the **Create Job** icon (or press CTRL, SHIFT + C).



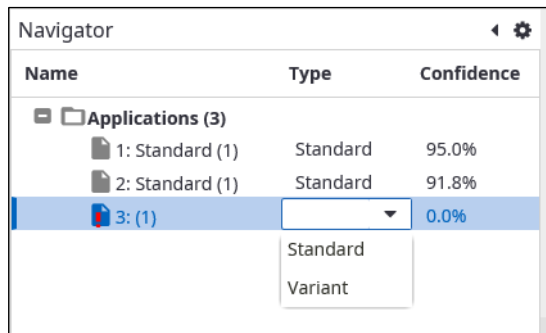
8. In the **xyzbank** Workspace menu select **To Do > Work Queue**.
9. Take the activity called **Document Review** by clicking the activity name (Refresh).

Work Queue					
<div> + ✓ 🗑️ < Refresh Edit Query </div> <div> My Queries ▼ Shared Queries Alerts All Activities (default) </div>	<table> <thead> <tr> <th>Activity Name</th><th>Process</th></tr> </thead> <tbody> <tr> <td>Document Review</td><td>Capture Applications</td></tr> </tbody> </table>	Activity Name	Process	Document Review	Capture Applications
Activity Name	Process				
Document Review	Capture Applications				

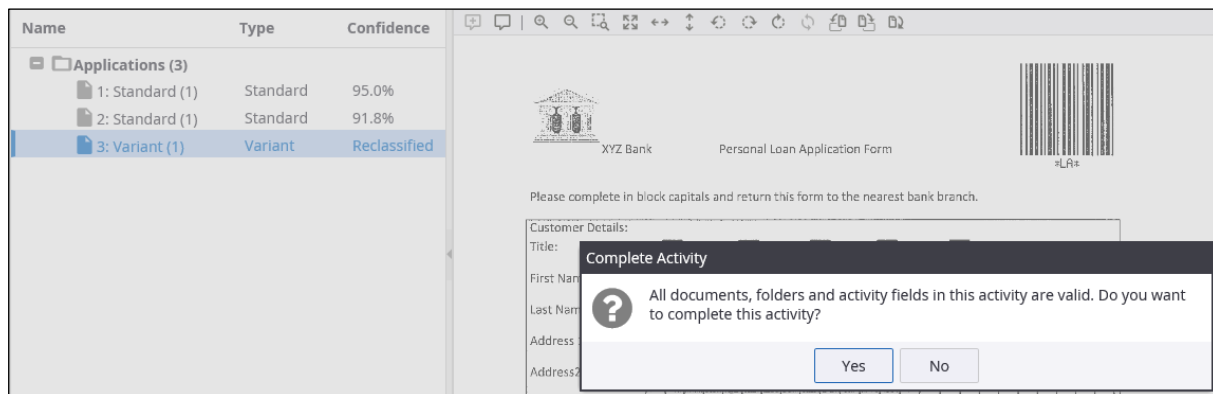
10. The Classification results should be visible (along with confidence).
11. Click into the **Type** column cell in for the last document and manually select (reclassify) the document as a **Variant** document type:

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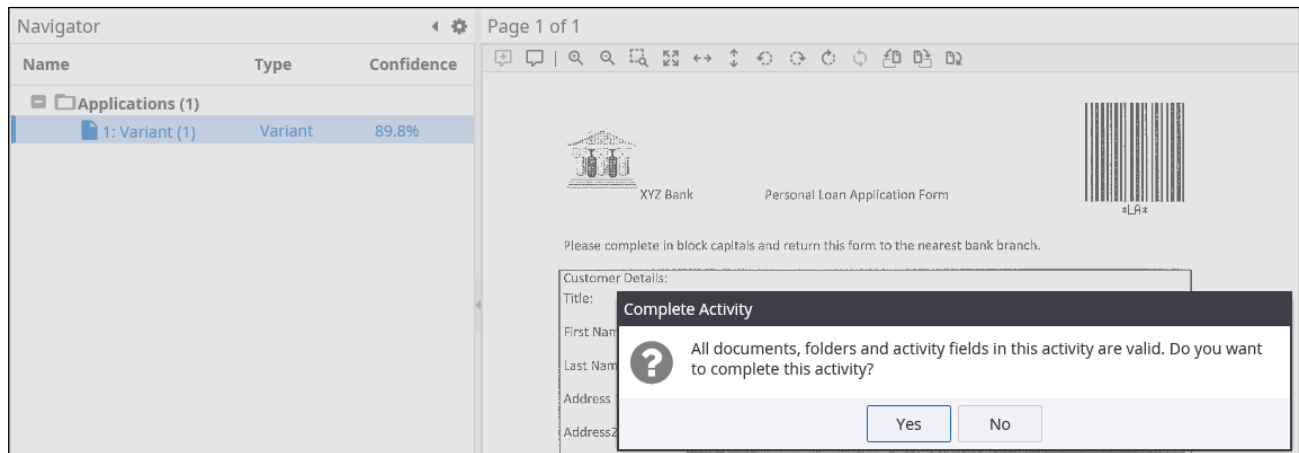
12. Click **Yes** to complete the activity.



Note: As the document was reclassified and we are monitoring this document type, TotalAgility will automatically classify a document of the variant type, the next time it is ingested into the system.

13. You will have to wait until the **Due DateTime** of the **Online Learning System Task** has elapsed before performing the next step. View the due date and wait.
14. Select the **Scan Applications** menu, and click **New**.
15. Click the **File Import** icon on the toolbar, **Browse** to C:\KTAEssentials\LabFiles\Documents\Test Set, and select **4a Caroline Grant Loan Application.tif** (variant application) and click **Open**.
16. Click the **Create Job** icon.
17. Select **To Do > Work Queue**.
18. Take the **Document Review** activity and notice that the document has been correctly classified.

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19. Click **Yes**.

Lab Notes

Image Files

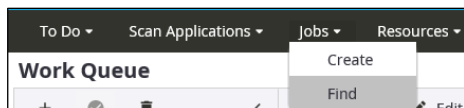
1. The size of an image must be between the ISO A6 and A2 paper sizes. This means that images must be at least 105 mm x 148 mm (4.1 x 5.8 inches) and at most 420 mm x 594 mm (16.5 x 23.4 inches).
2. The minimum supported resolution for scanned images is 96 DPI. However, the recommended resolution is between 200 and 300 DPI, when possible.
3. For images, the resolution for scanning and importing should be the same as the resolution for the sample images that were used to train layout classification, trainable group and table locators, or to set up zonal recognition in Transformation Designer. Faxes are usually scanned by the sender at 200 DPI resolution, whereas for invoices, forms, and mailroom documents, 300 DPI resolution provides the best image quality.
4. The following image file formats are supported in Transformation Designer:
TIFF (*.tif)
JPEG (*.jpg)
PNG (*.png)

Download Training Samples

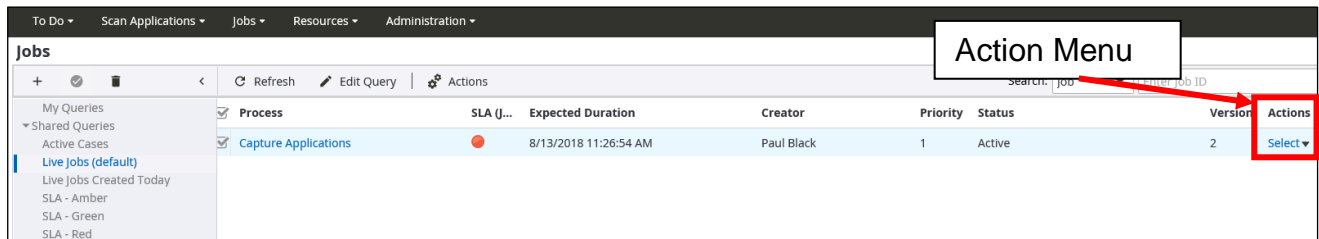
5. (You can also download the new samples to the Transformation Designer for review (using Documents > Download New Samples).
6. Online learning for extraction is covered in the MCC class.

Finding a Job in the System

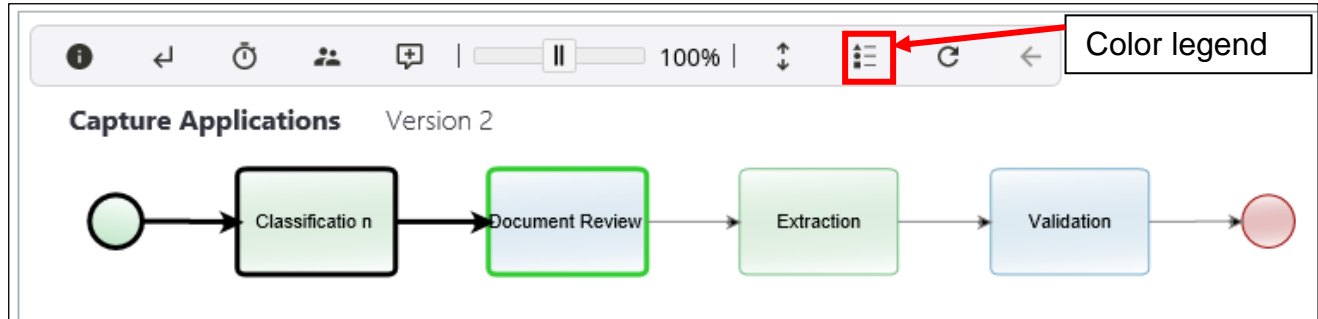
7. You can see how a job is progressing by selecting the **Jobs** menu and clicking **Find**.



8. Locate the relevant job, and from the **Action** column click **Select**, and click **View Job**.



TECHNICAL TRAINING LAB INSTRUCTIONS



- Notes:** (i) You can use the colour legend to determine the job and activity status (in this case Document Review is pending).
(ii) You can click on an activity to see further details.
(iii) You can refresh the job viewer using the **Refresh** button.

Revision Questions

1. What is an xdoc file?

2. Are Test Sets automatically attached to a project when they are opened?

3. What is the minimum number of samples required for each document type to train a project for layout classification?

4. When should you use layout classification?

5. Does layout classification require full page OCR?

6. A designer is testing layout classification on a single document type on a test set that contains document of this type in the Transformation Designer. A sample has been added to the classification set. The test results are returning 0% confidence. What is the most likely cause of these results?

7. What is a classification set?

8. Can you open multiple test sets in a classification project?

9. The % Confidence of classification results can be seen at runtime when a user takes which activity?

10. What is classification online learning?

11. Is it possible to use classification online learning without dynamically classifying documents?

12. A designer has turned on Online learning for a classification project and released the project. The classification group contains one extraction group with one document type. What additional steps will be required to monitor the document type so that online learning can occur?

