

Mortgage Document Extraction – UiPath

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About Automation:

This automation is used to extract the required fields from Closing Disclosure document.

User Guide:

1. **INPUT:** Place the pdfs in the input folder of the automation.
2. **OUTPUT:** Trigger the job, output csv contains the extracted fields of all the input files.
3. Logs and errors can be observed form the orchestrator logs.

Version Control:

Github: <https://github.com/yashwant43/MortgageDocumentExtractRPA>

Logging:

Logs are saved for each run in logs folder.

Architecture:

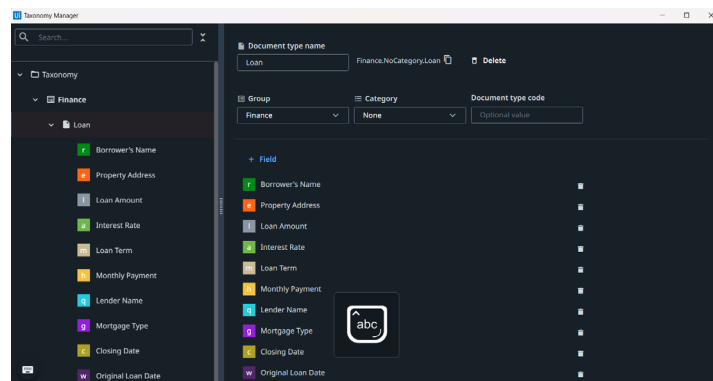
1. This automation uses UiPath Document Understanding.
2. Automation is a linear process where each input file is read, and fields are extracted to csv file.

Dependencies:

1. UiPath.DocumentUnderstanding.ML.Activities=1.17.0
2. UiPath.IntelligentOCR.Activities=6.5.0
3. UiPath.OmniPage.Activities=1.17.0

Automation Steps:

1. For each file in the input folder, bot iterates and stores the file path into str_InputFolder.
2. Taxonomy is created, fields and their respective data types are added.



3. Load Taxonomy activity is used to load the created taxonomy and the output is stored in Taxonomy variable.

4. Str_DocumentPath is assigned to the file path.
5. Digitize Document activity is used to digitize the pdf to text. The output is saved to str_DocumentText and meta data to DOM variable. OmniPage OCR is used.
6. Classify Document Scope is used to classify the type of document which is loan. Keyword based classifier is used and necessary keywords are added. Results are stored to classificationResults variable.
7. Data Extraction Scope activity is used to extract the fields. Extracted results are stored in extractionResults variable. Form Extractor is used extract the fields.

API value is retrieved from UiPath Admin->Licences.

Template Manager is used to annotate the fields. Each filed location is marked and saved.

The screenshot shows the UiPath Template Manager on the left and a Closing Disclosure form on the right. The Template Manager has a 'Document Type' dropdown set to 'Loan' and a 'Page 1 Matching Info' section. Below this, there are four fields with 'Custom Selection' buttons: 'Borrower's Name', 'Property Address', and 'Loan Amount'. The Closing Disclosure form is a 'Closing Disclosure' form with sections for 'Closing Information', 'Transaction Information', 'Loan Information', 'Loan Terms', 'Can this amount increase after closing?', 'Does the loan have these features?', and 'Projected Payments'.

Section	Field	Value
Closing Information	Date Issued	4/15/2013
	Closing Date	4/15/2013
	Disbursement Date	4/15/2013
	Settlement Agent	Epsilon Title Co.
	File #	12-3456
Transaction Information	Borrower	Michael Jones and Mary Stone
	Seller	Steve Cole and Amy Doe
Loan Information	Loan Term	30 years
	Product	Fixed Rate
Loan Terms	Loan Amount	\$162,000
	Interest Rate	3.875%
Can this amount increase after closing?	Monthly Principal & Interest	\$761.78
	Prepayment Penalty	YES
Does the loan have these features?	Balloon Payment	NO
	Projected Payments	Years 1-7: \$761.78, Years 8-30: \$761.78

8. Present Validation Station is used to validate the results.
9. Export Extraction Results activity is used to extract the results to dataset variable.
10. Output datable of extracted fields is present in dt_Output variable.
11. File Path and Timestamp columns are added and data is stored in output.csv.

Screenshots:

Input:

Closing Disclosure

This form is a statement of final loan terms and closing costs. Compare this document with your Loan Estimate.

Closing Information		Transaction Information		Loan Information	
Date Issued	4/15/2013	Borrower	Michael Jones and Mary Stone	Loan Term	30 years
Closing Date	4/15/2013		123 Anywhere Street	Purpose	Purchase
Disbursement Date	4/15/2013		Anytown, ST 12345	Product	Fixed Rate
Settlement Agent	Epsilon Title Co.	Seller	Steve Cole and Amy Doe	Loan Type	<input checked="" type="checkbox"/> Conventional <input type="checkbox"/> FHA
File #	12-3456		321 Somewhere Drive		<input type="checkbox"/> VA <input type="checkbox"/> Other
Property	456 Somewhere Ave		Anytown, ST 12345	Loan ID #	123456789
Sale Price	Anytown, ST 12345	Lender	Ficus Bank	MIC #	000654321
	\$180,000				

Loan Terms		Can this amount increase after closing?
Loan Amount	\$162,000	NO
Interest Rate	3.875%	NO
Monthly Principal & Interest <i>See Projected Payments below for your Estimated Total Monthly Payment</i>	\$761.78	NO
		Does the loan have these features?
Prepayment Penalty	YES	• As high as \$3,240 if you pay off the loan during the first 2 years
Balloon Payment		NO

Projected Payments		
Payment Calculation	Years 1-7	Years 8-30
Principal & Interest	\$761.78	\$761.78

Output: