



# Mortgage Statement Labeling Instructions

# Evaluation Set Requirements



In order to do fair and thorough evaluation of the model, the evaluation set should take the following dimensions into consideration

1. **Revisions:** Documents should be in English for all the variants.
2. **Size:** It is recommended to have 500+ documents for each evaluation set.
3. **Template Diversity:** The documents should be diverse, e.g. different templates of mortgage statements, issue year, different sources ... etc.
4. **Value Diversity:** Documents should capture all possible values.
5. **Handwritten:** It is preferred to separate handwritten documents from typed ones (i.e. have 2 separate evaluation sets) and report metrics for each.

# Processor Version

These instructions are specific for Mortgage Statement Processor version:  
“Google default(pretrained)”

The screenshot shows the 'EVALUATE' tab of a processor interface. The 'Version' dropdown menu is highlighted with a red box and an orange arrow pointing to it. The dropdown shows 'Google default'. Below the dropdown, there is a 'Filter' section and a table with columns 'Label' and 'F1 score'. To the right, there is a 'Maximize F1 score' toggle, a 'No labels evaluated' warning message, and a 'Test this version' section with an 'UPLOAD TEST DOCUMENT' button.

# Entity List

Field	Description	Occurrence type	Base Type
borrower_address	Address of the borrower	OPTIONAL_MULTIPLE	address
borrower_name	Name of the borrower	OPTIONAL_MULTIPLE	string
due_date	The next payment due date	OPTIONAL_ONCE	datetime
fees_due	Fees that are due, outstanding unpaid, returned item charges	OPTIONAL_MULTIPLE	money
frequency	monthly/yearly/quarterly	OPTIONAL_ONCE	string
insurance_escrow_due	Escrow due amount of the insurance	OPTIONAL_MULTIPLE	money
interest_due	Interest due amount	OPTIONAL_ONCE	money
interest_rate	Interest rate in percentage	OPTIONAL_ONCE	string
loan_number	Unique series of numbers that a bank assigns to loan account when the loan account is created.	OPTIONAL_ONCE	string
loan_type	Type of the loan sanctioned	OPTIONAL_ONCE	string
maturity_date	Date when the loan is matured	OPTIONAL_ONCE	datetime
others_due	Other due amounts that are included	OPTIONAL_MULTIPLE	money
past_due_amount	Amount that is past due	OPTIONAL_ONCE	money
principal_balance	Current principal balance	OPTIONAL_ONCE	money
principal_due	Principal due amount	OPTIONAL_ONCE	money
property_address	Address of the property	OPTIONAL_ONCE	address
regular_payment_amount	Regular total due amount	OPTIONAL_ONCE	money
servicer_address	Address of the mortgage servicer	OPTIONAL_MULTIPLE	address

# Entity List (Contd..)

Field	Description	Occurrence type	Base Type
servicer_name	Name of the mortgage servicer	OPTIONAL_MULTIPLE	string
statement_date	Date of the statement	OPTIONAL_ONCE	datetime
table_item/description	Description present in the table	OPTIONAL_MULTIPLE (At most once per table item)	string
table_item/effective_date	Effective date inside table	OPTIONAL_MULTIPLE (At most once per table item)	datetime
table_item/escrow_amount	Escrow amount inside the table	OPTIONAL_MULTIPLE	money
table_item/fees_amount	Fees amount (late charges)	OPTIONAL_MULTIPLE	money
table_item/interest_amount	Interest for the transaction activity	OPTIONAL_MULTIPLE (At most once per table item)	money
table_item/others_amount	Others amount (suspense, optional products)	OPTIONAL_MULTIPLE	money
table_item/principal_amount	Principal for the loan in transaction activity	OPTIONAL_MULTIPLE (At most once per table item)	money
table_item/total_amount	Total amount of the transaction activity	OPTIONAL_MULTIPLE (At most once per table item)	money
table_item/total_charged	Total charged in the transaction activity	OPTIONAL_MULTIPLE (At most once per table item)	money
table_item/total_paid	Total paid in transaction activity	OPTIONAL_MULTIPLE (At most once per table item)	money
table_item/transaction_date	Date when the transaction is posted	OPTIONAL_MULTIPLE (At most once per table item)	datetime
table_item/unapplied_amount	The amount that is overpaid / prepaid	OPTIONAL_MULTIPLE (At most once per table item)	money
tax_escrow_due	Total tax escrow due amount	OPTIONAL_MULTIPLE	money
total_due	Total due amount	OPTIONAL_ONCE	money
total_escrow_due	Total due amount for tax and insurance	OPTIONAL_ONCE	money



servicer\_name

Your monthly mortgage statement

To obtain information about your account:  
Visit: [www.MortgageQuestions.com](http://www.MortgageQuestions.com)  
Call toll free: 1-888-823-6474  
Email us: [CustomerCare@mortgagefamily.com](mailto:CustomerCare@mortgagefamily.com)  
Fax: 8-027-797-3087

borrower\_name

7109 SP 2017 RE NJ  
David Flores  
Sarah Nunez  
8 Kristen Fort Ln  
Indianapolis IN, 46201

borrower\_name

borrower\_address

statement\_date

property\_address

principal\_balance

interest\_rate

table\_item

table\_item/transaction\_date

table\_item/effective\_date

table\_item/description

table\_item/principal\_amount

table\_item/interest\_amount

loan\_number

borrower\_name

borrower\_name

servicer\_name

servicer\_address

Statement Date: 8/3/2020

Account Information

Property Address: 8 Kristen Fort Ln Indianapolis IN, 46201  
Outstanding Balance (not payoff amount): \$142,322.00  
Current Interest Rate: 3.00075%  
Prepayment Penalty: No  
Escrow Balance: \$2,377.13  
Suspense Balance: \$0.00

Past Payments Breakdown

	Paid Last Month	Paid Year to Date
Principal	\$1,509.22	\$11,045.00
Interest	\$360.77	\$2,990.83
Escrow (Taxes and/or Insurance)	\$935.32	\$7,458.36
Fees	\$0.00	\$0.00
Optional Products	\$0.00	\$0.00
Partial Payment (Unapplied)*	\$0.00	\$0.00
<b>Total</b>	<b>\$2,802.31</b>	<b>\$22,392.28</b>

Transaction Activity

Payment Date	Description	Principal (\$)	Interest (\$)	Escrow (\$)	Late Charges (\$)	Shortages & Other (\$)	Optional Products (\$)	Total (\$)
8/3/20	Payment	\$1,509.22	\$360.77	\$935.32	\$0.00	\$0.00	\$0.00	\$2,802.31

Important Information

If it's not possible to make the monthly payment due to impacts from COVID-19, please notify us right away. You can notify us by filling out the COVID-19 Hardship Notification Form that is available on our website listed above. Click the "Learn More" link within the red Coronavirus banner for details. If you have other questions regarding COVID-19, you may also email or call us - please see the top of the billing statement for contact information. We appreciate your support in using the self-serve options as our wait times may be extended due to anticipated volume related to COVID-19.

Loan number: 7113086456  
Payment Due Date: 8/17/2020  
**Amount Due: \$2,802.31**  
If payment is received after 8/16/2020, a \$93.33 late fee may be charged.

Explanation of Amount Due

Principal	\$1,509.08
Interest	\$357.01
Escrow (for Taxes and Insurance)	\$935.32
Optional Products/Other	\$0.00
<b>Regular Monthly Payment</b>	<b>\$2,802.31</b>
Total New Fees and Charges	\$0.00
Outstanding Unpaid Late Charges, Returned Item Charges, Shortages and Other Fees	\$0.00
Assessed Expenses (Part Due Payments)	\$0.00
<b>Total Amount Due</b>	<b>\$2,802.31</b>

Important Messages

You are currently due for the 8-1-2020 payment. Your last full payment was applied to the payment due 8-1-2020.  
\*Partial Payments: Any partial payments that you make are not applied to your mortgage, but instead are held in a separate suspense account. If you pay the balance of a partial payment, the funds will then be applied to your mortgage.  
Please note that this is not the payoff quote and any amount less than the payoff quote will be returned.  
Please contact us for payoff quote.

Payment Due Date: 8/17/2020  
Regular Monthly Payment: \$2,802.31  
Total New Fees and Charges: \$0.00  
Outstanding Unpaid Late Charges, Returned Item Charges, Shortages and Other Fees: \$0.00  
Assessed Expenses: \$0.00  
Past Due Payments: \$0.00  
**Total Amount Due: \$2,802.31**

If you're asking more than the amount due, please let us know you want us to apply the extra amount. If we do not receive your instructions, we'll apply the extra amount that is unpaid late charges and then to principal.  
Extra principal: \$  
Extra escrow: \$  
Unpaid late charges: \$  
Other (see #): \$  
**Total check enclosed: \$**

loan\_number

due\_date

total\_due

principal\_due

interest\_due

total\_escrow\_due

others\_due

regular\_payment\_amount

fees\_due

fees\_due

others\_due

past\_due\_amount

total\_due

table\_item/total\_amount

table\_item/others\_amount

table\_item/others\_amount

table\_item/fees\_amount

table\_item/escrow\_amount

due\_date

regular\_payment\_amount

fees\_due

fees\_due

others\_due

past\_due\_amount

total\_due

# Escrow



Loan Servicing solutions provided by Flagstar Bank.



Pay by mail:  
PO Box 660263  
Dallas, TX 75266-0263

» MORTGAGE STATEMENT

STATEMENT CREATION DATE: 07/28/20

Loan Number: 625784477  
Payment Due Date: 09/01/20  
**Amount Due \$1,151.03**  
\$33.33 late fee will be charged after 09/16/20

6-655-11292-0013040-003-000-011-000-000

Martha Alvarez  
3 Williams Overpass Dm.  
Indianapolis IN, 46201



Pay by website:  
[flagstar.com/MyLoans](http://flagstar.com/MyLoans)



Pay by phone:<sup>1</sup>  
(866) 837-4539



Customer service:  
(800) 968-7700  
Monday-Friday 7:30 a.m.-8 p.m., ET  
Saturday 7:30 a.m.-4 p.m., ET

## Important Account Messages

At Flagstar, the health and well-being of our customers, employees, and communities is a top priority. To learn more about how we are here to help, as well as information on temporary mortgage relief visit [flagstar.com/update](http://flagstar.com/update).

Wondering the safest way to manage your mortgage, right now? MyLoans is a secure, fast and easy way for you to manage your loans online. Set up paperless statements and electronic payments when you sign up for MyLoans at [flagstar.com/myloans](http://flagstar.com/myloans).

We appreciate the opportunity to service this loan. For more details on other services we provide or more information for this loan, visit the website referenced above.

## Review Home Loan Activity

### Account Information

Property Address 3 Williams Overpass Dm.  
Outstanding Principal<sup>2</sup> \$176,649.13  
Escrow Balance \$1,298.17  
Interest Rate 3.250000%  
Prepayment Penalty No

<sup>2</sup>The outstanding principal above is not the total amount required to pay the loan in full. For a payoff quote, please visit [flagstar.com/MyLoans](http://flagstar.com/MyLoans).

Payment Breakdown	Last Payment	Paid year to date
Principal	\$357.86	\$2,835.94
Interest	\$479.39	\$3,862.06
Escrow	\$317.75	\$2,542.00
<b>Total</b>	<b>\$1,155.00</b>	<b>\$9,240.00</b>
Taxes		\$326.12
Mortgage Insurance		\$867.02
<b>Total</b>		<b>\$1,193.14</b>



### Explanation of Amount Due

Principal	\$354.86
Interest	\$478.42
Escrow	
Taxes	\$105.12
Insurance	\$73.25
Mortgage Insurance	\$126.70
Shortage	\$12.68
Regular Monthly Payment	\$1,151.03
<b>Total</b>	<b>\$1,151.03</b>

tax\_escrow\_due

insurance\_escrow\_due

insurance\_escrow\_due

# Maturity, Loan Type, Frequency

11/30/2020

Loan Detail

Lindsey Ross

\*5895

54 Regina Brooks Av.  
Indianapolis IN, 46201

\$2,058.70 is due on 02/01/2021

## Loan Detail

State of California Fee Schedule

(<https://loanadministration.net/policies/California%20Borrower%20Fee%20List.pdf>)

General Loan Information

Payment Information

Tax and Interest

### Borrower

Lindsey Ross

Current Principal Balance

\$492,707.93

First Payment Due Date

10/01/2020

Maturity Date

09/2050

Effective Interest Rate

2.87500%

Loan Type

loan\_type

Conventional without PMI

Payment Method

frequency

Monthly Statement

Original Loan Amount

\$496,200.00

Loan Origination Date

08/05/2020

maturity\_date

## Scheduled Payment Breakdown

Next Payment Due

02/01/2021

If Next Payment Due date is in the past, additional payments, charges and/or fees may be required to bring your loan current.

Principal and Interest

\$2,058.70

Next Payment Amount

\$2,058.70

# Table item - Unapplied amount

## Transaction Activity (12/02/20 - 01/01/21)

Transaction Description	Date	Interest Paid To Date	Transaction Effective Date	Transaction Amount	Interest Paid	Principal Paid	Escrow Paid	Late Charges Paid	Fees Paid	Optional Insurance	Unapplied Funds
Tax Disbursement	12/16/20	12/01/20	12/16/20	\$1,409.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Payment	01/01/21	01/01/21	01/01/21	\$2,783.66	\$1,468.62	\$769.36	\$545.68	\$0.00	\$0.00	\$0.00	\$0.00

table\_item/unapplied\_amount



# Variation 5

## Page 1

### Transaction Activity (08/04/2020 to 09/01/2020)

Date	Effective Date	Description	Charges	Payments
08/12/20		MIP/PMI Disb	\$0.00	\$132.51
09/01/20	09/01/20	09/2020 PAYMT - THANK YOU	\$0.00	\$2,062.52
09/01/20	09/01/20	Addl Prin	\$0.00	\$20.81

table\_item/total\_charged.

table\_item/total\_paid



# General Labeling Instructions

# Occurrence Type



There are 4 occurrence types which restricts the number of annotations for each entity:

- **OPTIONAL\_ONCE**: Entity can be present zero or multiple times but should have one unique value.
- **OPTIONAL\_MULTIPLE**: Entity will appear zero or multiple times and with different values.
- **REQUIRED\_ONCE**: Entity can be present once or multiple times but should have one unique value.
- **REQUIRED\_MULTIPLE**: Entity will appear once or multiple times and with different values.

# Optical Character Recognition (OCR) Errors



Drawing bounding boxes around entities will automatically populate a text captured through OCR (Optical Character Recognition). In some cases, the captured text is not accurate and doesn't reflect what is on the page, especially for documents that are blurry or of low resolution. These values should be corrected manually through "Value" input text.

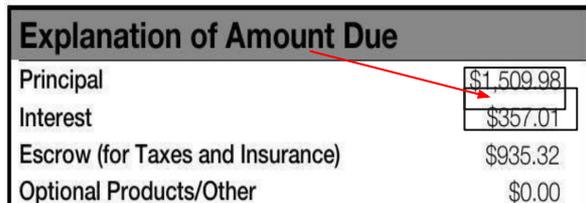
# Bounding Box Annotation

Bounding boxes should fit the correct text as much as possible:

- Avoid overlapping bounding boxes. This can be tricky when values are close to each other.
- Avoid oversized boxes which incorporates background artifacts such as table borders.

Example 1

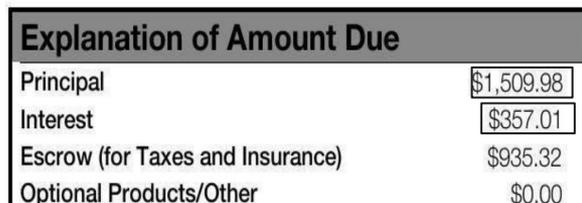
Explanation of Amount Due	
Principal	\$1,509.98
Interest	\$357.01
Escrow (for Taxes and Insurance)	\$935.32
Optional Products/Other	\$0.00



Incorrect Annotation:  
Bounding boxes are overlapping

Example 2

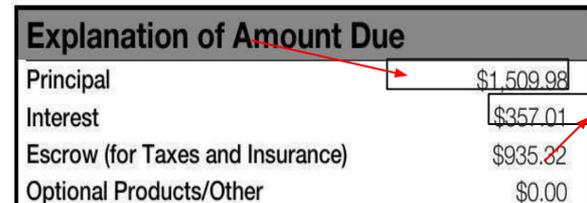
Explanation of Amount Due	
Principal	\$1,509.98
Interest	\$357.01
Escrow (for Taxes and Insurance)	\$935.32
Optional Products/Other	\$0.00



Correct Annotation

Example 3

Explanation of Amount Due	
Principal	\$1,509.98
Interest	\$357.01
Escrow (for Taxes and Insurance)	\$935.32
Optional Products/Other	\$0.00



Incorrect Annotation:  
Bounding boxes oversized

# Case Sensitivity



DocAI evaluation is case sensitive and can affect the final evaluation. While annotation please be aware to fix any casing issues generated by OCR.

Please note that ENUM values are also case sensitive and the values should be fixed.

Examples:

- “David Flores” != “David flores”
- “Yes” != “YES”

# Money

For money entries the annotation bounding box and value text should include the currency if present on the document.

If the document contains currency with no values, then annotations could be omitted, as shown in the example on the bottom right.

## Contract Summary

	This Quarter	Year To Date	Since Issue Date <sup>1</sup>
Beginning Value on 09/28/2018	\$201,931.64		
Total Premium	\$0.00	\$4,000.00	\$146,388.89
Total Withdrawals	\$0.00	\$0.00	\$0.00
Total Tax Withheld	\$0.00	\$0.00	
Net Change	(\$23,104.00)	(\$15,683.48)	
Ending Value <sup>2</sup> on 12/31/2018	\$178,827.64		

FATCA filing requirement <input type="checkbox"/>	12 State tax withheld \$	13 State/Payer's state no. 000	14 State distribution \$
Date of Payment	15 Local tax withheld \$	16 Name of locality	17 Local distribution \$

www.irs.gov/form 1099r Department of the Treasury - Internal Revenue Service

# Empty Values

In general, if the value does not exist in the form then there is no need to label it. In the example below `principal_due` should not be annotated since there is no value present in the designated field.

It is also possible to annotate empty entities (with empty values) but that will not affect the final metrics.

 C/O PHH Mortgage Services  
P.O. Box 5452  
Mt. Laurel, NJ 08054-5452

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**Your monthly mortgage statement**

To obtain information about your account:  
Visit: [www.MortgageQuestions.com](http://www.MortgageQuestions.com)  
Call toll free: 1-888-820-6474  
Email us: [CustomerCare@mortgagefamily.com](mailto:CustomerCare@mortgagefamily.com)  
Fax: 8-027-797-3087

77058 SP 3337 RE NZ1  
David Flores  
Sarah Nunez  
6 Kristen Fort Ln.  
Indianapolis IN, 46201

Loan number: 7113086456  
Payment Due Date: 9/1/2020  
**Amount Due: \$2,802.31**  
If payment is received after 9/16/2020, a \$93.33 late fee may be charged.

Statement Date: 8/3/2020

Account Information	
Property Address	6 Kristen Fort Ln. Indianapolis IN, 46201
Outstanding Balance (not payoff amount)	\$142,802.62
Current Interest Rate	3.0000%
Prepayment Penalty	No
Escrow Balance	\$2,377.13
Suspense Balance	\$0.00

Explanation of Amount Due	
Principal	\$1,509.98
Interest	\$935.32
Escrow (for Taxes and Insurance)	\$0.00
Optional Products/Other	\$0.00
<b>Regular Monthly Payment</b>	<b>\$2,802.31</b>
Total New Fees and Charges	\$0.00
Outstanding Unpaid Late Charges, Returned Item Charges, Shortages and Other Fees	\$0.00
Assessed Expenses	\$0.00
Past Due Payment(s)	\$0.00
<b>Total Amount Due</b>	<b>\$2,802.31</b>

Past Payments Breakdown	
Paid Last Month	Paid Year To Date

`principal_due`