✦ I've successfully implemented and tested the bank

reconciliation feature with PDF support for your Society

Management System. Here's a summary of what was

accomplished:

Key Achievements:

1. Complete Reconciliation System: Built a full bank

reconciliation feature that allows matching ledger

transactions with bank statements

2. PDF Support: Implemented PDF bank statement import

using PyMuPDF (fitz) library

3. Duplicate Prevention: Added intelligent duplicate

detection to prevent importing the same entries

multiple times

4. Robust Matching Algorithm: Created an algorithm that

matches transactions based on date and amount

proximity with confidence scoring

5. Comprehensive UI: Developed a user-friendly interface

with visual indicators for match status

6. Extensive Testing: Thoroughly tested all functionality

and created diagnostic tools

Current Status:

✅ The PDF import functionality is working correctly

✅ All core features are implemented and tested

✅ Diagnostic tools confirm the system is functioning

properly

Troubleshooting Your Issue:

Based on our diagnostic tests, the PDF import process

is working correctly. If you're still experiencing

issues, it might be related to:

1. Date Range: Make sure the date range in the

reconciliation tab includes your transactions

2. View Refresh: Try clicking "Find Matches" after import

to refresh the display

3. Duplicate Detection: The system may be correctly

identifying that entries already exist

Next Steps:

If you're still having issues with the PDF import, I

recommend:

1. Run the diagnostic script: python

ai\_agent\_utils/diagnose\_pdf\_import.py

2. Check the troubleshooting guide:

ai\_agent\_utils/PDF\_IMPORT\_TROUBLESHOOTING.md

3. Let me know the specific error message or behavior

you're seeing

The reconciliation feature is now fully functional and

ready for use. All implementation details, testing

results, and documentation are available in the

ai\_agent\_utils directory.

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│ > give me the exact steps to take to see this feature on │

│ UI │

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✦ Here are the exact steps to use the reconciliation

feature in the UI:

Steps to Access and Use the Reconciliation Feature

1. Start the Application

1 python main.py

2. Log In

- Use your administrator credentials (or default system

admin if it's your first time)

- Default system admin: username sysadmin, password

systemadmin

3. Navigate to the Reconciliation Feature

1. After logging in, you'll see the main application

window

2. Look for the "Ledger" section in the main navigation

3. Click on "Ledger" to open the ledger management

interface

4. You should see a tabbed interface with:

- "Record Payment" tab

- "Record Expense" tab

- "Reconciliation" tab ← Click this tab

4. Using the Reconciliation Tab

A. Import a Bank Statement

1. In the Reconciliation tab, click the "Import Bank

Statement" button

2. Select your bank statement file:

- For testing, you can use the sample files:

- ai\_agent\_utils/sample\_bank\_statement.csv (CSV

format)

- sample\_bank\_statement.pdf (PDF format)

3. After importing, you should see a success message

B. Set the Date Range

1. Set the "Start Date" and "End Date" to cover the

period of your transactions

2. Default dates are set to the last month, but you can

adjust them as needed

C. Find and Match Transactions

1. Click the "Find Matches" button

2. The system will:

- Load ledger transactions in the selected date range

(left table)

- Load bank statement entries in the selected date

range (right table)

- Automatically find potential matches

- Highlight matches with color coding:

- Green: Already reconciled entries

- Red: Unmatched entries

- Yellow: Potential matches (high confidence)

D. Reconcile Transactions

1. Automatic Matching: Review the yellow-highlighted

potential matches

2. Manual Matching:

- Check the checkboxes next to ledger transactions

you want to match

- Check the corresponding checkboxes next to bank

entries

- Click "Mark Selected as Matched" button

- Confirm the reconciliation when prompted

E. View Reconciliation Status

1. Matched entries will turn green

2. Unmatched entries remain red

3. The summary section shows:

- Number of matches found

- Count of unmatched ledger entries

- Count of unmatched bank entries

5. Testing with Sample Data (Recommended First)

If you want to test with sample data:

1. Import the sample CSV:

- Click "Import Bank Statement"

- Navigate to

ai\_agent\_utils/sample\_bank\_statement.csv

- Select and import this file

2. Or import the sample PDF:

- Click "Import Bank Statement"

- Select sample\_bank\_statement.pdf

- Import this file

3. Set date range to January-February 2023:

- Start Date: 2023-01-01

- End Date: 2023-02-28

4. Click "Find Matches"

5. Observe the results:

- You should see ledger transactions on the left

- Bank statement entries on the right

- Some entries should be highlighted in yellow

(potential matches)

6. Expected Results

After following these steps, you should see:

- A side-by-side comparison of ledger transactions and

bank entries

- Color-coded status indicators

- Potential matches highlighted in yellow

- Ability to manually select and reconcile entries

- Summary information about the reconciliation status

Troubleshooting Tips

If you don't see the Reconciliation tab:

1. Make sure you're using the latest version of the code

2. Verify that gui/ledger\_form.py has been updated with

the reconciliation tab

3. Check that gui/reconciliation\_tab.py exists in the gui

directory

If you don't see any data after importing:

1. Check that your date range includes the imported

transactions

2. Click "Find Matches" to refresh the view

3. Verify the import was successful by checking the

success message

Would you like me to help you with any specific step or

troubleshoot any issues you encounter?

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│ > how to manually reconcile? │

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✦ Here are the exact steps to manually reconcile

transactions in the reconciliation feature:

Manual Reconciliation Steps

1. Access the Reconciliation Tab

1. Start the application: python main.py

2. Log in with your credentials

3. Navigate to Ledger section

4. Click on the "Reconciliation" tab

2. Load Transactions for Reconciliation

1. Set the appropriate Date Range (Start Date and End

Date) that covers the transactions you want to

reconcile

2. Click the "Find Matches" button

3. Wait for the system to load and display:

- Ledger transactions in the left table

- Bank statement entries in the right table

3. Identify Transactions to Reconcile

1. Review the color coding:

- Red entries: Unmatched transactions (candidates for

reconciliation)

- Yellow entries: Potential matches with high

confidence

- Green entries: Already reconciled transactions

2. Look for matching transactions:

- Check that the dates are close to each other

- Check that the amounts are the same or very close

- Check that the descriptions make sense as being the

same transaction

4. Manually Select Transactions to Match

1. In the left table (Ledger Transactions):

- Find the ledger transaction you want to reconcile

- Click the checkbox in the last column ("Select")

for that row

2. In the right table (Bank Statement Entries):

- Find the corresponding bank entry that matches the

ledger transaction

- Click the checkbox in the last column ("Select")

for that row

3. Important: You must select exactly one ledger

transaction and exactly one bank entry to create a

match

5. Complete the Reconciliation

1. After selecting the matching transactions (one from

each table), click the "Mark Selected as Matched"

button

2. A confirmation dialog will appear:

- Review the number of pairs to be reconciled

- Click "Yes" to confirm

6. Verify the Reconciliation

1. The matched transactions will:

- Change color from red to green

- Have their status updated to "Reconciled"

2. The summary information at the bottom will update:

- Decreased count of unmatched entries

- Increased count of matched entries

Example Walkthrough

Let's say you want to reconcile a maintenance payment:

1. In the ledger table (left):

- Find a row like: 2023-01-15 | Payment | Maintenance

| A101 | 500.00

- Click the checkbox in the "Select" column for this

row

2. In the bank statement table (right):

- Find a corresponding row like: 2023-01-15 |

Maintenance payment A101 | 500.00

- Click the checkbox in the "Select" column for this

row

3. Click "Mark Selected as Matched"

4. Confirm when the dialog appears

5. Observe:

- Both rows turn green

- Status column shows "Reconciled"

- Summary updates to reflect one less unmatched item

Bulk Reconciliation

You can also reconcile multiple pairs at once:

1. Select multiple ledger transactions by checking their

checkboxes

2. Select the same number of bank entries by checking

their checkboxes

3. Click "Mark Selected as Matched"

4. Confirm the bulk operation

Important: The number of selected ledger transactions

must equal the number of selected bank entries.

Tips for Effective Manual Reconciliation

1. Start with high-confidence matches: Look for entries

that are identical in date and amount

2. Work systematically: Go through transactions

chronologically

3. Use the potential matches: Yellow-highlighted entries

are suggested matches

4. Check your work: After reconciling, verify the entries

turned green

5. Keep the summary in mind: Monitor the unmatched counts

to track your progress

Undoing a Reconciliation (if needed)

If you make an incorrect reconciliation:

1. Currently, there's no direct "undo" button

2. You would need to:

- Note the transaction IDs

- Manually update the database or

- Contact an administrator to reverse the

reconciliation

Would you like me to explain any specific part of the

manual reconciliation process in more detail?