

# Aged Debtor Report Automation

**Category:** Finance and receivables automation

---

**Problem:** Daily debtor updates required repetitive manual CSV imports, reconciliation, and third-party syncing with high error risk.

---

**What I Built:** Built a guided Google Sheets workflow with controlled uploads, automated balance recalculation, smart syncing, and auto-generated aging summaries.

---

**Tools Used:** Google Sheets, Google Apps Script, Google Drive API, Gmail API, Custom HTML/CSS Sidebar

---

**Output:** Automated aged debtor dashboard, synced third-party sheets, write-off export, audit log

---

# Aged Debtor Report Automation

Google Sheets + Drive + Gmail + Apps Script

## Quick Backstory

This started as a daily operational pain point.

Every day, a new **debts.csv** file had to be downloaded, uploaded, reviewed, filtered, copied into spreadsheets, cross-checked against existing debtor records, and manually updated.

It was repetitive.

It required constant attention.

And it was easy to make mistakes.

The process worked, but it relied heavily on memory and manual discipline.

So I rebuilt the entire Aged Debtor workflow inside Google Workspace, turning it into a controlled, trackable system instead of a daily manual routine.

---

## The Problem

A typical daily cycle looked like this:

- Download debts.csv from the accounting system
- Upload into Drive
- Open Google Sheets
- Manually import and reformat data
- Preserve payment remarks and status
- Recalculate balances
- Categorize invoices
- Update third-party sheets like Trilogy and Capital Guardians
- Generate summary reports
- Check which invoices were written off

- Double-check nothing was missed

If handling 80 to 150 invoices per cycle, this could easily take:

- 45 to 90 minutes per day
- Around 20 to 30 hours per month

The bigger risk was not time. It was accuracy.

- Overwriting remarks
- Losing historical payment notes
- Duplicating rows
- Missing invoices that should sync to third-party portals
- Forgetting to track who ran the update

It worked. But it was fragile and dependent on manual attention.

---

## The System I Built

Instead of treating this as a spreadsheet task, I turned it into a guided daily workflow.

### Step 1: Controlled CSV Upload

Inside the spreadsheet, users open a branded sidebar panel.

They can:

- Drag and drop **debts.csv**
- Automatically replace older versions
- Generate a unique batch ID
- Log upload timestamp
- Track file ID and replacement history

The system keeps a hidden audit sheet that logs:

- Upload time
- Run time
- Manual or time-triggered run
- Processed count
- Who ran it

No guessing. Everything is tracked.

---

## Step 2: One-Click Daily Update

When “Run Update” is clicked:

- The system validates that debts.csv exists
- Parses and cleans invoice data
- Filters only invoice-type entries
- Sorts intelligently
- Preserves existing Payment Remarks
- Preserves Payment Status
- Recalculates balances
- Computes elapsed time from due date
- Automatically assigns invoice category based on client tags

No manual filtering.

No copy-paste.

---

## Step 3: Smart Payment Handling

When someone edits the Payment Remarks column:

- Typing “Paid” automatically zeroes the balance
- Typing a partial amount subtracts correctly

- Clearing the remark restores the original total

The original values are safely stored in document properties, so nothing is permanently lost.

---

## **Step 4: Third-Party Sync (Trilogy + Capital Guardians)**

The system automatically syncs invoices into:

- **Trilogy Outstanding**
- **CG Outstanding**

Rules:

- Only specific contact names qualify
- Only invoices with blank Payment Remarks sync
- Existing entries update instead of duplicating
- Removed invoices are automatically pruned

For Capital Guardians:

- Upload timestamps are written back into Aged Debtors
- Remarks are appended cleanly
- Duplicate notes are avoided

This keeps external portal reporting aligned with internal records.

---

## **Step 5: Auto-Generated Summary Dashboard**

A separate “Aged Debtors Summary” sheet is rebuilt automatically:

- Groups by client
- Buckets by aging (0–29, 30–60, 61–90, 90+)
- Joins invoice remarks cleanly

- Bold invoice numbers inside remarks
- Skips write-offs
- Formats totals properly

Users can click a bucket cell and instantly see which invoice numbers belong there.

No manual filtering required.

---

## **Step 6: Write-Off Export**

With one click:

- All write-off rows are exported
- A new dated sheet is created
- Includes elapsed time and category
- Adds a notes column for documentation

No manual searching.

---

## **Step 7: Built-In History & Controls**

The sidebar shows:

- Upload events
- Run events
- Manual vs Time-trigger tags
- Who ran it
- Processed count
- Status badges
- Notes

It refreshes automatically and checks availability every 15 seconds.

This turns the spreadsheet into an operational dashboard.

---

## The Tools Used

- Google Apps Script
- Google Sheets automation
- Google Drive API
- Gmail session user tracking
- Document and Script Properties
- CacheService
- Custom HTML and CSS sidebar
- Spreadsheet UI menus

All built directly inside Google Workspace.  
No third-party automation tools required.

---

## The Measurable Result

Before automation:

- 45 to 90 minutes per daily cycle
- High manual dependency
- Multiple cross-check steps
- Sync errors with third-party sheets
- No structured audit trail

After automation:

- 5 to 15 minutes total review time
- 70 to 85 percent reduction in manual work

- Automatic third-party syncing
- Controlled payment adjustments
- Zero duplicate rows
- Built-in audit tracking
- Clear Manila timezone timestamps

Estimated time saved:

- 15 to 20 hours per month
- 180 to 240 hours per year

For a clinic or service-based business, that is several weeks of admin time reclaimed annually.

---

## Why This Matters Beyond Debtor Reports

This same structure can be reused for:

- Daily billing imports
- Payment reminder workflows
- Portal upload tracking
- Automated follow-ups
- Monthly revenue dashboards
- Insurance claim tracking
- Subscription reconciliation
- Compliance reporting

Any recurring spreadsheet-heavy task can be turned into a guided workflow like this.

If a business already operates in Google Workspace, automation like this removes operational friction without adding new platforms.

It is not about adding more tools.

It is about making the tools you already use work properly.