



# GP, SQL AND MACROS...

OPTIMIZING YOUR SYSTEM IS EASIER THAN EVER!





# AMBER BELL

Email: [amber@trainingdynamo.com](mailto:amber@trainingdynamo.com)

Website: [trainingdynamo.com](http://trainingdynamo.com)



Rnoldz 🖐️



# JOHN ARNOLD

Email: [John\\_P\\_Arnold@hotmail.com](mailto:John_P_Arnold@hotmail.com)

Website: [Rnoldz.com](http://Rnoldz.com)



# Session Overview

**Solving GP issues using the  
Macro Replicator,  
and Excel “Refreshable Report Template”  
(FREE Tools from John!)**



# Common Requests (and how to fix them)

- Customer Detailed Aging in Excel using a Stored Procedure
  - By Customer
  - By Salesperson
- Inactivate GL Accounts that no longer are needed or were never used.



# First a Little Pre-QL

## SQL Script

- Run Manually
- Can be used to UPDATE, DELETE, VIEW, INSERT, etc.

## SQL Views / Stored Procedures

- Views create VIRTUAL tables.
  - (Example: Table showing last item bought by customer)
- Query is stored in the Database



# Views

Pro – Used by SmartLists

Pro – A View is a Virtual Table

Pro – Great for reusable query

Pro – Can hide query complexity

Con – Can hide query complexity

Con – Evaluated at run time

# Stored Procedures

Pro – **GREAT** source for Excel data

Pro – Compiled

Pro – Can take parameters

Pro – Code (Variables, Looping...)

Con – Compiled, indexes change

Con – **NOT** supported by SmartLists



# Security Tips

- Security is **NOT** controlled by GP User Security!!
- Security for SQL Views is not the same as SQL Stored Procedures
- Access to SQL Views is different for SmartList Designer vs. SmartList Builder vs. Excel Reports vs. SSRS

Check out John's SQL Tips and Tricks:

Community Summit NA, Fall 2023

Deep Dive into Excel Refreshable Reports, SQL Views, GP Macros and Replicator

 Download PowerPoint

[Rnoldz.com](https://Rnoldz.com)

Put the Pedal to the Metal with GP, Excel Tables, Database Queries, and Macros



# Best Practices!

Tips on how to create/request new reports & data sources...



What  
Information?

How will it  
be used?  
Report or  
Update

Where do  
you want to  
view/use the  
results?



# What Information Do We Need?

- **GL Account Information**
  - Status (Is it already inactive?)
  - Account Type (Is it an Allocation Account? They won't have transaction history)
  - Created Date
- **Transaction Information (Last Date for Each)**
  - Unposted Transactions
  - Current Year Transactions
  - Closed Year Transactions
- **Budget – How would we know which ones to look at?**



# What, How, and Where

- What information do you want to see?
  - Master Records (Customers, Items)
  - Transactions (Cash Receipts, Sales Transactions)
  - Setup Records (Terms Setup, Unit of Measure)
- How will the data be used?
  - View Only vs. Update
  - One Time vs. Reusable
  - Filters vs. All Records
- Where?
  - SmartList, Excel, Navigation List, SQL Report

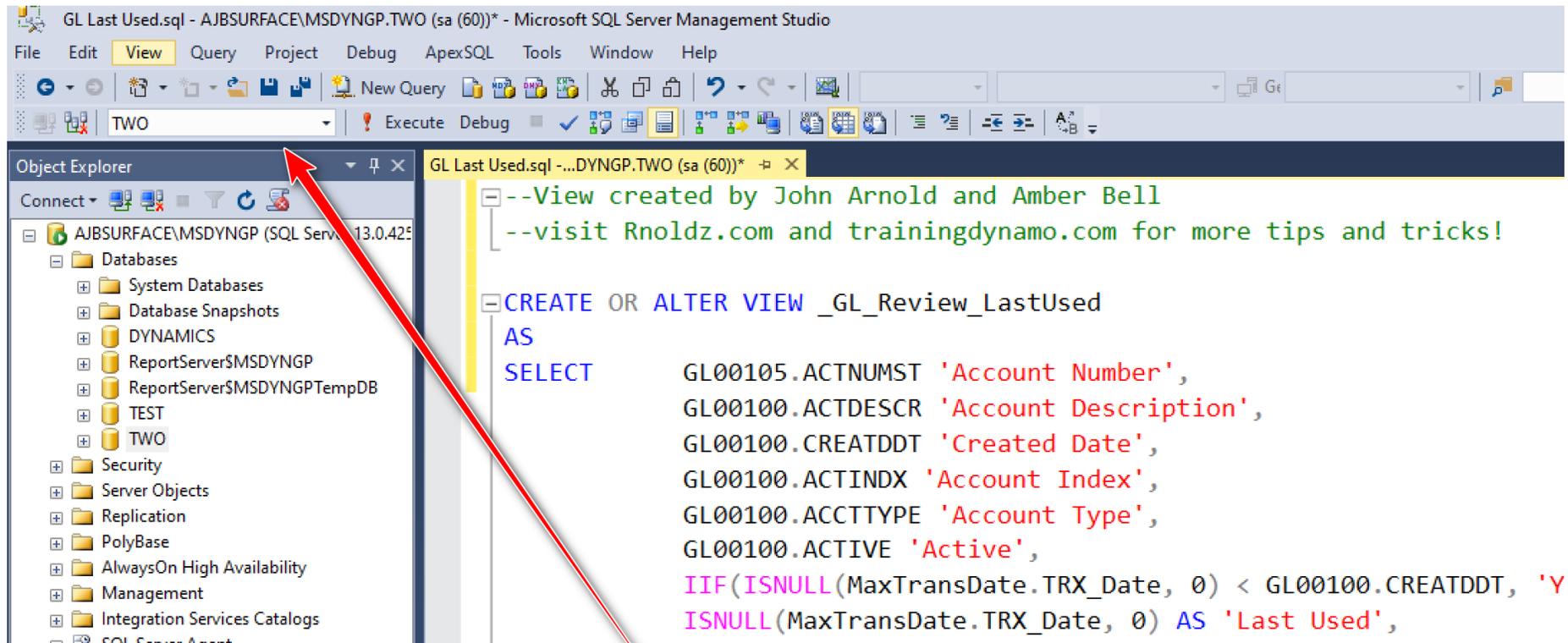


# Request #1

- View Customer Detailed Aging in Excel
- Allow user to add parameters



# Create SQL View



GL Last Used.sql - AJBSURFACE\MSDYNGP.TWO (sa (60))\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug ApexSQL Tools Window Help

Object Explorer

- Connect
- AJBSURFACE\MSDYNGP (SQL Server 13.0.425)
- Databases
  - System Databases
  - Database Snapshots
  - DYNAMICS
  - ReportServer\$MSDYNGP
  - ReportServer\$MSDYNGPTempDB
  - TEST
  - TWO
- Security
- Server Objects
- Replication
- PolyBase
- AlwaysOn High Availability
- Management
- Integration Services Catalogs
- SQL Server Agent

```
--View created by John Arnold and Amber Bell
--visit Rnoldz.com and trainingdynamo.com for more tips and tricks!

CREATE OR ALTER VIEW _GL_Review_LastUsed
AS
SELECT      GL00105.ACTNUMST 'Account Number',
            GL00100.ACTDESCR 'Account Description',
            GL00100.CREATDDT 'Created Date',
            GL00100.ACTINDX 'Account Index',
            GL00100.ACCTTYPE 'Account Type',
            GL00100.ACTIVE 'Active',
            IIF(ISNULL(MaxTransDate.TRX_Date, 0) < GL00100.CREATDDT, 'Y',
            ISNULL(MaxTransDate.TRX_Date, 0)) AS 'Last Used',
```

Create view for applicable companies by using the Dropdown and Execute.



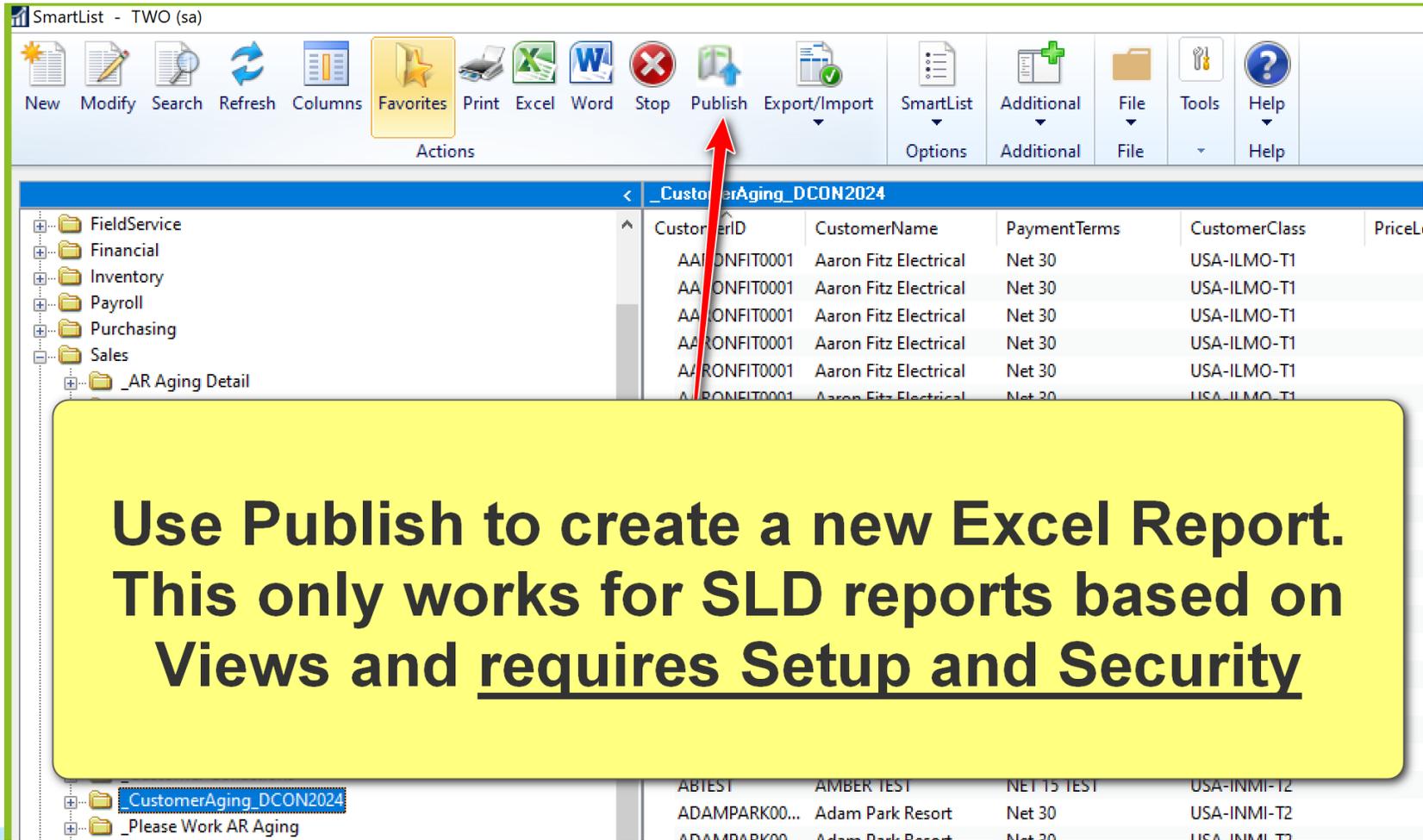
# Create New SmartList Using Designer

The screenshot displays the SmartList Designer application window. The interface includes a menu bar with options like New, Modify, Search, Refresh, Columns, Favorites, Print, Excel, Stop, Letter Merge, Publish, Export/Import, SmartList, Additional, File, Tools, and Help. Below the menu is a toolbar with icons for OK, Execute Query, Delete, Create Go To, File, Tools, and Help. The main workspace is divided into several sections:

- Database View:** A tree view on the left showing a hierarchy of folders including Additional SmartLists, Company, Electronic Reconcile, FieldService, Financial, Inventory, Payroll, Purchasing, Sales, and System. Under the 'System' folder, there is a 'Company' sub-folder containing various views and tables, with `_view_Current_Receivables` selected.
- List Name:** `_CustomerAging_DCON202`
- Product:** Microsoft Dynamics GP
- Series:** Sales
- Selected Fields:** A list of fields from the selected view, including `_view_Current_Receivables_Aging_Detail.CustomerID`, `_view_Current_Receivables_Aging_Detail.CustomerName`, `_view_Current_Receivables_Aging_Detail.PaymentTerms`, `_view_Current_Receivables_Aging_Detail.CustomerClass`, `_view_Current_Receivables_Aging_Detail.PriceLevel`, `_view_Current_Receivables_Aging_Detail.SalesPersonID`, and `_view_Current_Receivables_Aging_Detail.DocumentType`.
- Relationship:** A table with columns for TableName, FieldName, TableName2, and FieldName2. It includes an 'Auto Link' checkbox.
- Filter:** A table with columns for Field Name, Condition, and Value.
- Result's Preview / T-SQL Query:** A section at the bottom for viewing query results or the generated T-SQL code.



# Publish to Create Excel Report



The screenshot shows the Microsoft Dynamics 365 SmartList interface. The title bar reads "SmartList - TWO (sa)". The ribbon contains several tabs: "New", "Modify", "Search", "Refresh", "Columns", "Favorites", "Print", "Excel", "Word", "Stop", "Publish", "Export/Import", "SmartList", "Additional", "File", "Tools", and "Help". The "Publish" button is highlighted with a red arrow. Below the ribbon, a tree view on the left shows folders for "FieldService", "Financial", "Inventory", "Payroll", "Purchasing", "Sales", and "\_AR Aging Detail". The main area displays a table with columns: "CustomerID", "CustomerName", "PaymentTerms", "CustomerClass", and "PriceL". The table contains several rows of data, including "AA ONFIT0001 Aaron Fitz Electrical Net 30 USA-ILMO-T1".

| CustomerID    | CustomerName          | PaymentTerms | CustomerClass | PriceL |
|---------------|-----------------------|--------------|---------------|--------|
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| AA ONFIT0001  | Aaron Fitz Electrical | Net 30       | USA-ILMO-T1   |        |
| ABTEST        | AMBER TEST            | NET 15 TEST  | USA-INMI-T2   |        |
| ADAMPARK00... | Adam Park Resort      | Net 30       | USA-INMI-T2   |        |
| ADAMPARK00    | Adam Park Resort      | Net 30       | USA-INMI-T2   |        |

**Use Publish to create a new Excel Report.  
This only works for SLD reports based on  
Views and requires Setup and Security**



# SmartList, Navigation List and GP “Published” Excel Report - **CONS**

- SmartLists
  - SmartList limits to 4 filters
  - Cannot mix AND / OR option in search
  - Formatting does not export
- Navigation Lists
  - Requires purchasing Navigation List Designer from eOne.
  - Navigation Lists have unlimited filters but include less columns.
- GP “Published” Excel Reports
  - Difficult to modify
  - Does not allow user to add parameters when running the report.



# SQL Stored Procedures

And John's Refreshable Report Template



# Create SQL Stored Procedure

- You can review data in SQL Server Management Studio before deploying as a Report using the Stored Procedure
- Review John's security session to learn how to grant access to the Stored Procedure. **If you skip this step, the report will not have data!**

Community Summit NA, Fall 2023

Deep Dive into Excel Refreshable Reports, SQL Views, GP Macros and Replicator

 Download PowerPoint

[Rnoldz.com](https://Rnoldz.com)

Put the Pedal to the Metal with GP, Excel Tables, Database Queries, and Macros



# Steps to Add Stored Procedure to Excel

- Download John's Excel Report Template
- Load Stored Procedure in SQL
- Update Connections



# How to Use John's FREE Refreshable Report Template

## Refreshable Report Template

Simplify generation of refreshable reports

 [Download Excel File](#)

[Rnoldz.com](https://Rnoldz.com)

A template for quickly generating Excel refreshable reports with up to 3 parameters



# Demo

Setting Up the “Refreshable Report Template”



# Data – Refreshable Reports

## Configure RefreshableReportTemplate.xls

1. This only needs to be done once
2. Download from Rnoldz.com
3. The spreadsheet contains four worksheets for zero to three parameters
4. Update all four Queries & Connections under the Data Tab

1. Right click and select “Properties...” on each of the four Connections
2. Click on the Definition Tab to update the Connection String

DRIVER=SQL Server; SERVER=**GP**; UID=YourUser; Trusted\_Connection=Yes; APP=Microsoft Office 2016; WSID=YourComputer; DATABASE=**TWO**

1. Change SERVER= your DB server’s name – GP is a great DNS entry the IT Folks should setup!
2. Change DATABASE= your database’s name

5. Save spreadsheet



# Data – Connect to Database

## Create new Refreshable Report

1. Open the newly configured RefreshableReportTemplate.xls
2. Right click on the appropriate tab and select “Move or Copy...”
  1. Select “(new workbook)” in the “To book:”
  2. Check “Create a Copy” and then press the “OK” button
3. In the Connection Properties, set:
  1. Connection name: `_ja_RM00102SelectAll`
  2. Command Text: `EXEC _ja_RM00102SelectAll`
4. Close RefreshableReportTemplate.xls
5. In Replicator.xlsx, click “Replace Data Table...” and highlight new worksheet
6. Press the “Replace Table” button to import the refreshable report
7. Close the new worksheet – no need to save



# Request #2 – Inactivate GL Accounts

- Report needs to include:
  - Last Transaction Date
  - Account Type (Allocation Accounts do not have transaction history) (friendly name)
  - ADD - Max Budget Year (GL00201)
  - Exclude inactive accounts
- Parameters
  - Account Type
  - Last Trx Date – Less than (user to enter date) include never used
  - Max Budget Year



# What is the “Replicator”?

## Replicator

A new way to replicate GP Macros

[Rnoldz.com](https://Rnoldz.com)

Learn More at this Link [↗](#)

Replicator makes mapping macro data columns a breeze!



# What is a Macro?

- A **macro is a recording** of each key you pressed or mouse click you made while performing a procedure. (You could think of creating a macro as a “recording session.”) Later, the macro can be played. As it is played, **each entry will be re-created** just as though you were typing the keystrokes and using the mouse yourself.



# What Can a Macro Do?

1

**Open / Close  
Windows**

2

**Click Buttons**

3

**Move to Fields**

4

**Enter Data**



# What **Can't** a Macro Do?

1

**Set Printer Options  
/ System Dialogs**

2

**Move the Main GP  
Window**

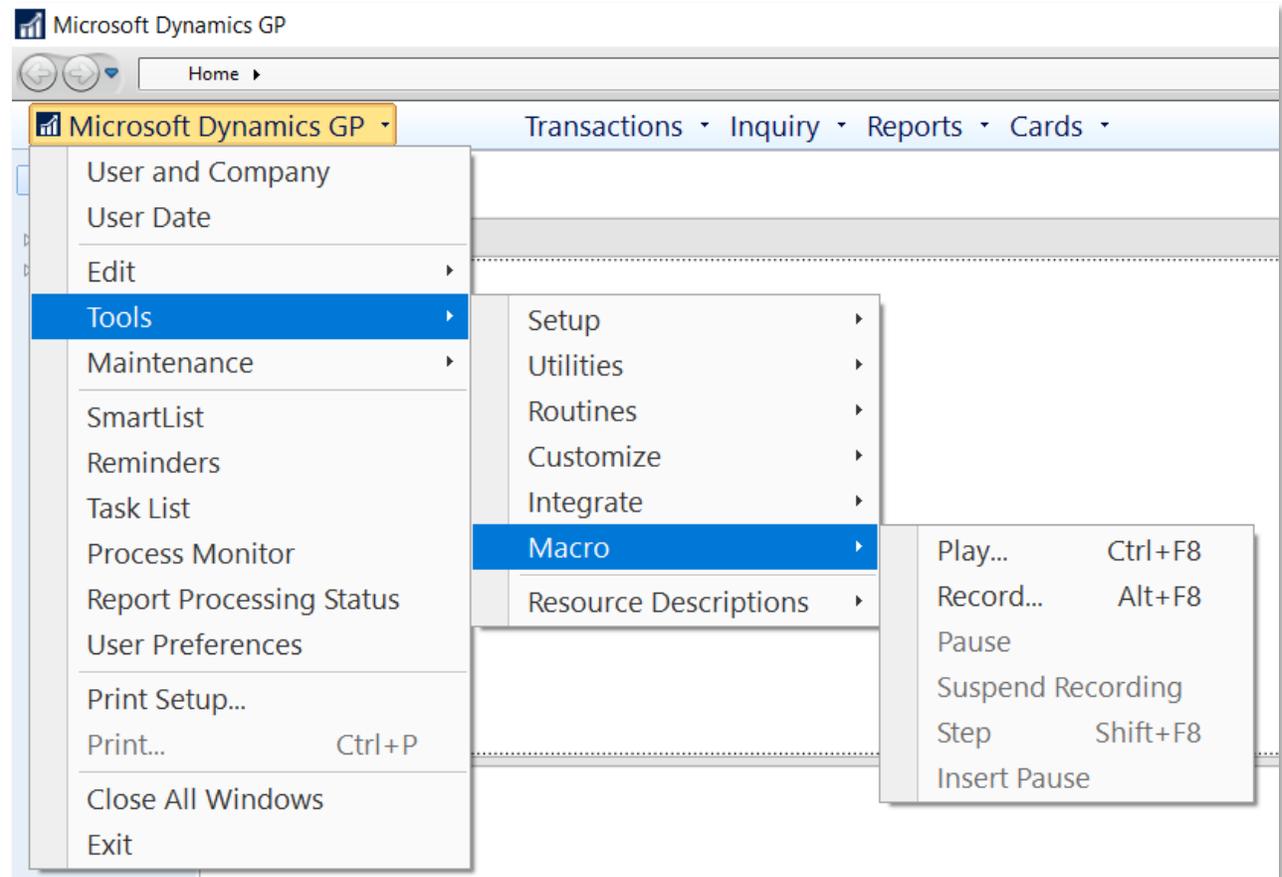
3

**Selecting from  
SmartLists can  
break as Favorites  
are added**



# Macro Basics

- Macro Menu
- Main Dynamics GP Menu
- Tools Menu on Windows
- Shortcut Keys
  - Ctrl+F8 – Playback Macro
  - Alt+F8 – Record Macro



# Macro Replicator

- Source = Excel Sheet with connection to Stored Procedure
- Write Macro to inactivate
- Tip: Use the “Header Lines” field to skip checking in the window is open.



# Macro Replicator Based on Stored Procedure

Replicator GL Account Activity... Saved to this PC

File Home Insert Draw Page Layout Formulas **Data** Review View Automate Developer Help

Get & Transform Data: From Text/CSV, From Web, Recent Sources, From Table/Range, Existing Connections

Queries & Connections: Refresh, Properties, Workbook Links

Data Types: Organization, Stocks

Sort & Filter: Sort, Filter, Clear, Reapply, Advanced

Data Tools: Text to Columns, What-If Analysis, Forecast Sheet

Outline: Group, Ungroup, Subtotal

O2 =IF(D7="",100,D7)

Import Macro... Map Columns... **Replicate...** Clear Macro... ?

Header Lines: 3  
 Data Table Name: FILTER  
 Filter Column: FILTER  
 Max (RecordNumber):  
 Replicated Macro File: \\GL Inactivate\_DEMO.mac  
 Years Since Activity:  
 Max Budget Year:  
 Account Type: Posting Account

Update the text in Macro Lines with {DataColumnName} or {RecordNumber} everywhere data is to be replaced.

Macro Lines

# DEXVERSION=18.00.0028.000 2 2

CommandExec dictionary 'default' form 'Command\_Financial' command 'GL Account\_Maintenance'

NewActiveWin dictionary 'default' form 'GL\_Account\_Maintenance' window 'GL\_Account\_Maintenance'

TypeTo field 'Account Number CS':'Account\_Segment\_Pool1', 'SEG1'

MoveTo field 'Account Number CS':'Account\_Segment\_Pool2'

TypeTo field 'Account Number CS':'Account\_Segment\_Pool2', 'SEG2'

MoveTo field 'Account Number CS':'Account\_Segment\_Pool3'

TypeTo field 'Account Number CS':'Account\_Segment\_Pool3', 'SEG3'

MoveTo field 'Account Description'

MoveTo field Inactive # 'FALSE'

ClickHit field Inactive # 'TRUE'

CommandExec dictionary 'default' form 'GL\_Account\_Maintenance' command 'Save Button\_w\_GL\_Account\_Maintenance'

Account Type: Posting Account

Data Table: The macro will be repeated 62 times out of 449 rows.

| Account Number | Account Description         | Created Date | Accto | Accto | Account Type    | NeverUsed | Last Used  | Not Used |
|----------------|-----------------------------|--------------|-------|-------|-----------------|-----------|------------|----------|
| 000-2120-00    | Commissions Payable         | 1/1/1990     | 39    | 1     | Posting Account |           | 8/31/2027  |          |
| 000-2140-00    | Accrued Vacation Payable    | 1/1/1990     | 41    | 1     | Posting Account |           | 12/31/2026 |          |
| 000-2150-00    | Taxable Benefits Payable    | 1/1/1990     | 42    | 1     | Posting Account |           | 12/1/2028  |          |
| 000-2161-00    | IL State Withholding Payab  | 1/1/1990     | 43    | 1     | Posting Account |           | 12/1/2028  |          |
| 000-2162-00    | NE State Withholding Payab  | 1/1/1990     | 44    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2163-00    | IN State Withholding Payabl | 1/1/1990     | 45    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2164-00    | MN State Withholding Pay.   | 1/1/1990     | 46    | 1     | Posting Account |           | 12/31/2026 |          |
| 000-2165-00    | MO State Withholding Pay.   | 1/1/1990     | 47    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2166-00    | Bloomington City Withhold   | 1/1/1990     | 48    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2170-00    | Federal Withholding Payab   | 1/1/1990     | 49    | 1     | Posting Account |           | 12/1/2028  |          |
| 000-2175-00    | FICA Payable                | 1/1/1990     | 50    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2180-00    | FUTA Payable                | 1/1/1990     | 51    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2191-00    | IL State SUTA Payable       | 1/1/1990     | 52    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2200-00    | Payroll Deductions Payable  | 1/1/1990     | 57    | 1     | Posting Account |           | 12/1/2028  |          |
| 000-2220-00    | Insurance Premiums Payab    | 1/1/1990     | 59    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2230-00    | Medical Reimbursement Pa    | 1/1/1990     | 60    | 1     | Posting Account |           | 12/31/2026 |          |
| 000-2240-00    | Dependent Care Payable      | 1/1/1990     | 61    | 1     | Posting Account |           | 12/31/2026 |          |
| 000-2270-00    | IL Workers Compensation F   | 1/1/1990     | 65    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2272-00    | IN Workers Compensation     | 1/1/1990     | 67    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2275-00    | Ontario Workers Compensi    | 1/1/1990     | 70    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2276-00    | Alberta Workers Compensa    | 1/1/1990     | 71    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2277-00    | Quebec Workers Compensi     | 1/1/1990     | 72    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-2280-00    | RRSP Payable                | 1/1/1990     | 73    | 1     | Posting Account |           | 12/31/2026 |          |
| 000-2281-00    | CPP Payable                 | 1/1/1990     | 74    | 1     | Posting Account |           | 1/31/2024  |          |
| 000-6170-04    | Repair & Maintenance Exp    | 1/1/1990     | 151   | 1     | Posting Account | Yes       | 1/1/1990   | 1        |



**ANY  
QUESTIONS?**





# AMBER BELL

Email: [amber@trainingdynamo.com](mailto:amber@trainingdynamo.com)

Website: [trainingdynamo.com](http://trainingdynamo.com)



# JOHN ARNOLD

Email: [John\\_P\\_Arnold@hotmail.com](mailto:John_P_Arnold@hotmail.com)

Website: [Rnoldz.com](http://Rnoldz.com)

