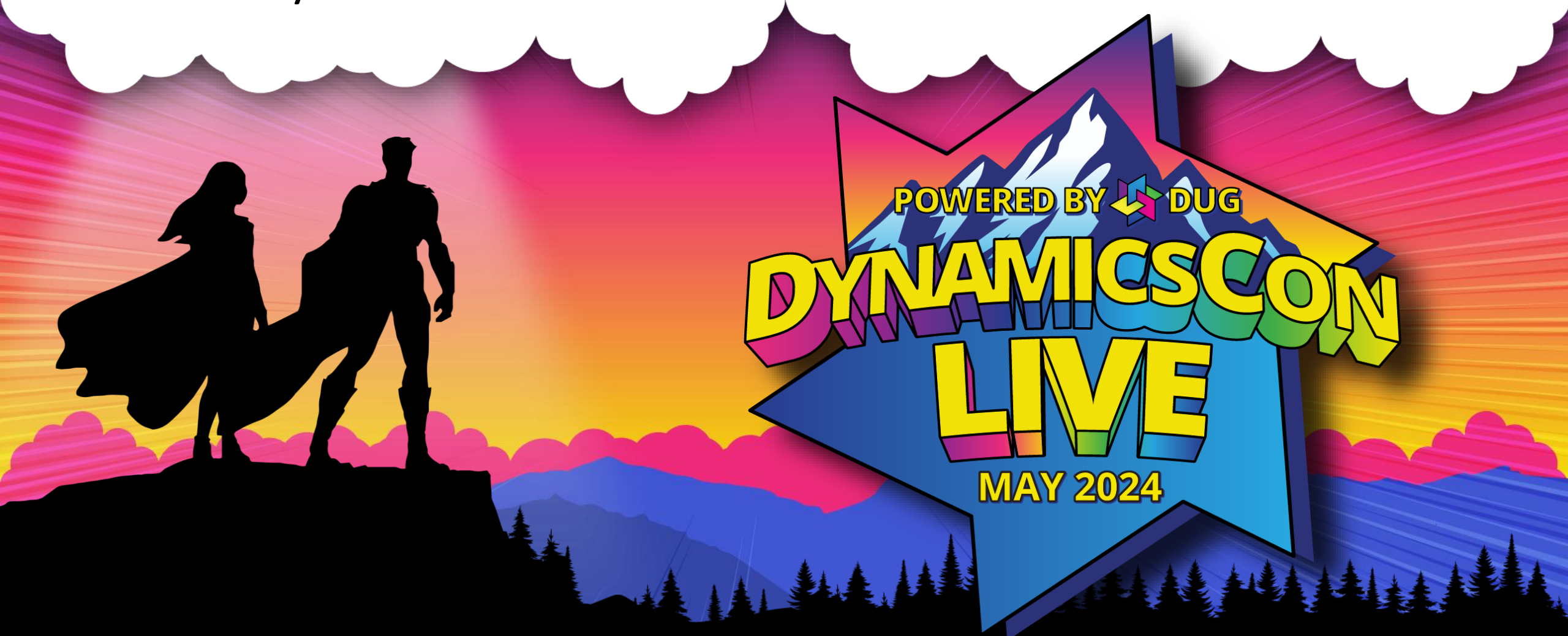


How is my GP data stored? SQL Tables 101



How is my GP data stored? SQL Tables 101

Dynamicscon Live 2024

Presented by: Chris Giesbrecht

When: 15 May 2024 1:15 pm MDT

Where: Denver Tech Center, Longs Peak



Introduction



Manager of IT and Business Analytics – AgriHub Inc.

Been with AgriHub since 2003

GP end user for 10+ years (sales, purchasing, warehousing, service)

Moved into IT in 2014

Merged 7 legal entities into our GP environment between 2016 and 2024

Currently manage 9 employees and look after 300+ computer users across Canada



slido



What is your current level SQL experience?

ⓘ Start presenting to display the poll results on this slide.

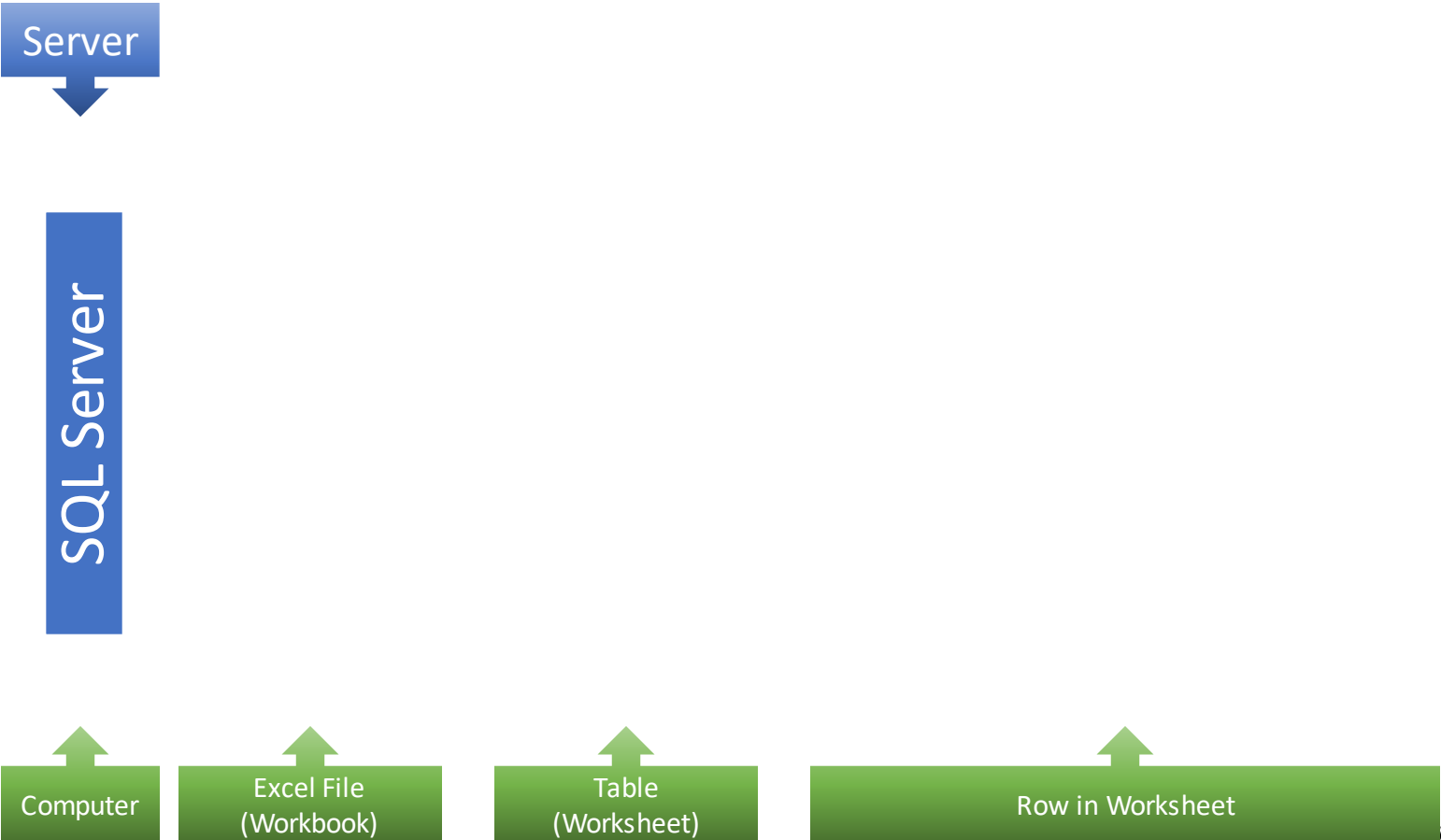
Where is GP information Stored?

Copilot

Microsoft Dynamics GP data is stored using Microsoft SQL Server technology, which includes the SQL Server database, SQL Server Reporting Services, and SQL Server Analysis Services ¹. Dynamics GP is optimized for SQL databases and offers built-in scalability. You can further enhance performance for specific business processes by utilizing the full capabilities of SQL Server technology ¹.



What the heck does that even mean?



GP Table Naming Conventions

- The first characters of the table name are typically the GP module that they are used for.
 - **IV** – Inventory (IV00101)
 - **POP** – Purchase Order Processing (POP10110)
 - **SOP** – Sales Order Processing (SOP10100)
 - **GL** – General Ledger (GL20000)
 - **SY** – System (SY01400)
- Last part of table name (digits)
 - Typically the first digit will tell you what type of information is in the table
 - 0 = master records
 - 1 = unposted transactions
 - 2 = open transactions
 - 3 = posted transactions
 - 4 = setup tables



Item Master

IV00101

Item Maintenance - TWO (sa)

Save Clear Delete Copy All-in-One View Additional Go To File Print Tools Help Add Note

Item Number: 100xLG Inactive

Description: Green Phone

Short Description: Phone

Generic Description: Phone

Class ID:

Item Type: Sales Inventory

Valuation Method: LIFO Periodic

Quantity Decimals: 0

Currency Decimals:

Sales Tax Option: Taxable

Purchase Tax Option: Nontaxable

Tax Schedule ID: ALL DETAILS

U of M Schedule ID: PHONE 1-10

Standard Cost: \$55.50

Current Cost: \$28.46

List Price: \$0.00

Shipping Weight: 5.01

Quantity On Hand: 30

Quantity Available: 26

Options Accounts Suggest Items

by Item Number

```
SELECT  
ITEMNBR [Item Number],  
ITEMDESC [Description],  
ITMSHNAM [Short Description],  
ITMGEDSC [Generic Description],  
ITEMTYPE [Item Type],  
VCTMTHD [Valuation Method],  
TAXOPTNS [Sales Tax Options],  
ITMTHSID [Tax Schedule ID],  
UOMSCHDL [U of M Schedule],  
ITEMSHWT [Shipping Weight],  
INACTIVE [Inactive],  
ITMCLSCO [Class ID],  
DECPLQTY [Quantity Decimals],  
DECPLCUR [Currency Decimals],  
Purchase_Tax_Options [Purchase Tax Option],  
Purchase_Item_Tax_Schedu [Purchase Tax Schedule ID],  
STNDCOST [Standard Cost],  
CURRCOST [Current Cost]  
from iv00101 where itemnbr = '100xlg'
```

Item Number	Description	Short Description	Generic Description	Item Type	Valuation Method	Sales Tax Options	Tax Schedule ID	U of M Schedule	Shipping Weight	Inactive	Class ID	Quantity Decimals	Currency Decimals	Purchase Tax Option	Purchase Tax	Standard Cost	Current Cost
100xLG	Green Phone	Phone	Phone	1	S	1	ALL DETAILS	PHONE 1-10	5.01	0		1	3	2		55.50000	28.46000

IV00102

Item Site

IV00102

```

select IV00102.ITEMNBR "Item Number"
,IV00102.LOCCODE "Site ID"
,IV00102.BINNBR "Bin"
,IV00102.PRIHMNR "Primary Vendor ID"
,IV00102.Landed_Cost_Group_ID "Landed Cost Group ID"
,INACTIVE "Inactive"
,IV00102.QTYONHD "On Hand"
,IV00102.ATYALLOC "Allocated"
,IV00102.QTYSOLD "Sold"
,IV00102.QTYRTRND "Returned"
,IV00102.QTYINUSE "In Use"
,IV00102.QTYINSVC "In Service"
,IV00102.QTYDMGED "Damaged"
,IV00102.QTYBKORD "Backordered"
,IV00102.QTYRQSTN "Non Purch Req"
,IV00102.QTYONORD "On Order"
,IV00102.QTY_Drop_Shipped "Drop-Ship PO"
from IV00102 where itemnbr = '100xlg'

```

Item Number char(31)	Site ID char(11)	Bin char(21)	Primary Vendor ID char(15)	Landed Cost Group ID char(15)	Inactive tinyint	On Hand decimal(18, 4)	Allocated decimal(18, 5)	Sold decimal(18, 5)	Returned decimal(18, 5)	In Use decimal(18, 5)	In Service decimal(18, 5)	Damaged decimal(18, 5)	Backordered decimal(18, 5)	Non Purch Req decimal(18, 5)	On Order decimal(18, 5)	Drop-Ship PO decimal(18, 5)
100XLG	WAREHOUSE				0	10.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100XLG					0	25.00000	6.00000	82.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.00000	0.00000
100XLG	NORTH				0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100XLG					0	36.00000	6.00000	82.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	1.00000	0.00000

Item Quantities Maintenance - TWO (sa)

Save Clear Delete All-in-One View Additional Go To File Tools Help Add Note

Item Number: 100XLG Inactive Base U of M: Each
Description: Green Phone

Site Lookup: All Assigned
Sites: All Site ID: WAREHOUSE

Quantities:

On Hand	26
Allocated	6
Sold	82
Returned	0
In Use	0
In Service	0
Damaged	0
Back Ordered	0
Non Purch Req	0
On Order	1
Drop-Ship PO	0

Description: Main Site
Default Site ID:
Bin: |
Item Print Option: Both

Last:
Order Quantity: 1
Receipt Quantity: 11
Order Date: 4/12/2027
Receipt Date: 3/21/2027
Order Vendor ID: ASSOCIAT0001
Vendor Name: Associated Insurance Inc.

Primary Vendor ID:
Vendor Name:

Landed Cost Group ID:

Bins Planning Stock Count

by Item Number



Sales Document Open/Unposted Header SOP10100

```

26  SELECT
27  ,SOFTYPE (Type)
28  ,DOCID (Type ID)
29  ,SOPNUMBE (Document No.)
30  ,CUSTNAME (Customer Name)
31  ,CUSTNAME (Customer Name)
32  ,MSTADCD (Ship To Address)
33  ,DOCDATE (Date)
34  ,BATCHID (Batch ID)
35  ,LOOKCODE (Default Site ID)
36  ,CSTPONER (Customer PO Number)
37  ,CURNCYID (Currency ID)
38  ,AMOUNT (Amount Received)
39  ,COMMENTID (Comment ID)
40  ,SUBTOTAL (Subtotal)
41  ,TRDISCNT (Trade Discount)
42  ,FREIGHT (Freight)
43  ,MISCAMNT (Miscellaneous)
44  ,TAXAMNT (Tax)
45  ,DOCAMT (Total)
46  ,SOPSTATUS (Document Status)
47  FROM SOP10100

```

Type	Type ID	Document No.	Customer ID	Customer Name	Ship To Address	Date	Batch ID	Default Site ID	Customer PO Number	Currency ID	Amount Received	Comment ID	Subtotal	Trade Discount	Freight	Miscellaneous	Ta
2	STORD	ORDST2234	AARONFIT0001	Aaron Fitz Electrical	WAREHOUSE	2027-04-12 00:00:00.000	ORDERS	WAREHOUSE		Z-US\$	0.00000		119.90000	0.00000	0.00000	0.00000	2
2	STORD	ORDST2232	ROSELLEN0001	Rosellen General Hospital	PRIMARY	2027-04-12 00:00:00.000	ENRZL	WAREHOUSE		Z-US\$	0.00000		12000.00000	0.00000	0.00000	0.00000	2
2	STORD	ORDST2231	BAKERST0001	Baker's Emporium Inc.	PRIMARY	2027-04-12 00:00:00.000	ENRZL	WAREHOUSE		Z-US\$	0.00000		12000.00000	0.00000	0.00000	0.00000	2
2	STORD	ORDST2230	BAKERST0001	Baker's Emporium Inc.	PRIMARY	2027-04-12 00:00:00.000	ENRZL	WAREHOUSE		Z-US\$	0.00000		125.20000	0.00000	0.00000	0.00000	2

Sales Transaction Entry - TWO (sa)

Save Actions Options View Additional Go To File Print E-mail Tools Help Add Note Help

Type/Type ID: Order STDORD Date: 4/12/2027

Document No: ORDST2234 Batch ID: ORDERS

Customer ID: AARONFIT0001 Default Site ID: WAREHOUSE

Customer Name: Aaron Fitz Electrical Customer PO Number:

Ship To Address: WAREHOUSE 11403 45 St. South Currency ID: Z-US\$

Line Items by Order Entered

Item Number	D	U of M	Qty Ordered	Unit Price	Extended Price
100-LG	<input type="checkbox"/>	Each	2	\$119.95	\$239.90
HD-20	<input type="checkbox"/>	Each	1	\$75.00	\$75.00

Amount Received: \$0.00 Subtotal: \$314.90

Terms Discount Taken: \$0.00 Trade Discount: \$0.00

On Account: \$331.70 Freight: \$0.00

Comment ID:

Miscellaneous: \$0.00

Tax: \$16.80

Total: \$331.70

Document Status



Sales Document Open/Unposted Line SOP10200

```

73 SELECT
74 SOPNUMBER
75 ,ITORNBER [Item Number]
76 ,UOM [U of M]
77 ,QTYORDER [Qty Ordered]
78 ,UNITPRICE [Unit Price]
79 ,XTNPRICE [Extended Price]
80 ,ITNDESC [Description]
81 ,MKDNGMT [Markdown]
82 ,UNTCOST [Unit Cost]
83 ,REQSHIPDATE [Req Ship Date]
84 ,ACTLSHP [Date Shipped]
85 ,QTYINVT [Qty to Invoice]
86 ,QTYFULF [Qty Fulfilled]
87 ,QTYCANCL [Qty Cancelled]
88 ,QTYBACKR [Qty to Backorder]
89 ,LDCNDR [Site ID]
90 ,PRLVL [Price level]
91 ,SHPADCD [Ship To Address ID]
92 ,SHPMTH [Shipping Method]
93 FROM SOP10200

```

SOPNUMBER	Item Num.	U of M	Qty Ordered	Unit Price	Extended Price	Description	Markdown	Unit Cost	Req Ship Date	Date Shipped	Qty to Invoice	Qty Fulfilled	Qty Cancelled	Qty to Backorder	Site ID	Price Level	Ship To Address
ORDST2234	HD-20	Each	0.00000	75.00000	75.00000	20 Glg Hard Drive	0.00000	50.00000	2027-04-12 00:00:00.000	2027-04-12 00:00:00.000	1.00000	1.00000	0.00000	0.00000	WAREHOUSE	RETAIL	WAREHOUSE
ORDST2234	100-LG	Each	0.00000	59.95000	119.90000	Green Phone	0.00000	55.50000	2027-04-12 00:00:00.000	2027-04-12 00:00:00.000	2.00000	2.00000	0.00000	0.00000	WAREHOUSE	RETAIL	WAREHOUSE
ORDST2235	100-LG	Each	0.00000	59.95000	119.90000	Green Phone	0.00000	55.50000	2027-04-12 00:00:00.000	2027-04-12 00:00:00.000	2.00000	2.00000	0.00000	0.00000	WAREHOUSE	RETAIL	WAREHOUSE
ORDST2232	1-A3261A	Each	0.00000	32000.00000	32000.00000	Multi-Core Processor	0.00000	10000.00000	2027-04-12 00:00:00.000	2027-04-12 00:00:00.000	1.00000	1.00000	0.00000	0.00000	WAREHOUSE	RETAIL	PREPWAY
ORDST2231	1-A3261A	Each	0.00000	32000.00000	32000.00000	Multi-Core Processor	0.00000	10000.00000	2027-04-12 00:00:00.000	2027-04-12 00:00:00.000	1.00000	1.00000	0.00000	0.00000	WAREHOUSE	RETAIL	PREPWAY
ORDST2230	120 S040F	Each	0.00000	155.20000	155.20000	120 wq S040F	0.00000	152.10000	2027-04-12 00:00:00.000	2027-04-12 00:00:00.000	1.00000	1.00000	0.00000	0.00000	WAREHOUSE	RETAIL	PREPWAY

Sales Transaction Entry - TWO (sa)

Save Actions Options View Additional Go To File Print E-mail Tools Help Add Note

Order: STDORD Date: 4/12/2027
 Document No.: ORDST2234 Batch ID: ORDERS
 Customer ID: AARONFIT0001 Default Site ID: WAREHOUSE
 Customer Name: Aaron Fitz Electrical Customer PO Number:
 Ship To Address: WAREHOUSE 11403 45 St. South Currency ID: Z-US\$

Line Items by Order Entered

Item Number	D	U of M	Qty Ordered	Unit Price	Extended Price
100-LG		Each		\$59.95	\$119.90

Description: Green Phone

Markdown: \$0.00 Qty to Invoice: 2
 Unit Cost: \$55.50 Qty Fulfilled: 2
 Req Ship Date: 4/12/2027 Qty Cancelled: 0
 Date Shipped: 4/12/2027 Qty to Back Order: 0

Site ID: WAREHOUSE
 Price Level: RETAIL
 Ship To Address ID: WAREHOUSE
 Shipping Method: LOCAL DELIVERY
 Quantity Available: 22

Amount Received: \$0.00 Subtotal: \$194.90
 Terms Discount Taken: \$0.00 Trade Discount: \$0.00
 On Account: \$203.30 Freight: \$0.00
 Miscellaneous: \$0.00
 Tax: \$8.40
 Total: \$203.30



Sales Document Posting

SOP10100

- Sales Document Header Open



SOP30200

- Sales Document Header Posted

SOP10200

- Sales Document Line Open



SOP30300

- Sales Document Line Posted

Purchase Order Processing

Header POP10100 Line POP10110

```

121 SELECT
122     PO_NUMBER [PO Number]
123     ,ITEM_NUM [Item]
124     ,UOM [U of M]
125     ,QTY_ORDER [Quantity Ordered]
126     ,UNIT_COST [Unit Cost]
127     ,ITEM_DESC [Description]
128     ,LOC_CODE [Site ID]
129     ,QTY_CANCEL [Quantity Cancelled]
130     ,EXT_COST [Extended Cost]
131     ,VENDOR_NUM [Vendor Item]
132     ,VENDOR_DESC [Vendor Description]
133 FROM pop10110
    
```

PO Number	Item	U of M	Quantity Ordered	Unit Cost	Description	Site ID	Quantity Cancelled	Extended Cost	Vendor Item	Vendor Description		
1	PO2875	100KLG	Each	10.00000	28.46000	Green Phone	-	WAREHOUSE	0.00000	284.60000	100KLG	Green Phone
2	PO2874	100KLG	Each	1.00000	28.46000	Green Phone	-	WAREHOUSE	0.00000	28.46000	100KLG	Green Phone
3	PO2872	ACCS-CRD-12MH	Each	12000.00000	3.29000	Phone Cord - 12" White	-	WAREHOUSE	0.00000	39480.00000	ACCS-CRD-12MH	Phone Cord - 12" White
4	PO2872	ACCS-CRD-12MH	Each	1000.00000	3.29000	Phone Cord - 12" White	-	WAREHOUSE	0.00000	3290.00000	ACCS-CRD-12MH	Phone Cord - 12" White
5	PO2872	ACCS-CRD-12MH	Each	1000.00000	3.29000	Phone Cord - 12" White	-	WAREHOUSE	0.00000	3290.00000	ACCS-CRD-12MH	Phone Cord - 12" White
6	PO2872	ACCS-CRD-12MH	Each	1000.00000	3.29000	Phone Cord - 12" White	-	WAREHOUSE	0.00000	3290.00000	ACCS-CRD-12MH	Phone Cord - 12" White
7	BN3873	SPFC-PB-15MH	Each	1000.00000	1.50000	Phone Cord - 15" White	-	WAREHOUSE	0.00000	1500.00000	SPFC-PB-15MH	Phone Cord - 15" White

Purchase Order Entry - TWO (sa)

Save Blanket Actions AA Options View File Print E-mail Tools Help Add Note

Type: Standard Hold Vendor ID: ACETRAVE0001
 PO Number: PO2075 Name: A Travel Company
 Buyer ID: TERRYADAMS Currency ID: Z-US\$
 Date: 4/12/2027

Allow Document Commitments

Line Items by Order Entered

Line	Vendor Item	U of M	Quantity Ordered	Unit Cost	Quantity Cancelled	Extended Cost
1	100KLG	Each	10	\$28.46	0	\$284.60
0			0.00	\$0.00	0.00	\$0.00

Remaining PO Subtotal: \$284.60

Subtotal: \$284.60
 Trade Discount: \$0.00
 Freight: \$0.00
 Miscellaneous: \$0.20
 Tax: \$0.00
 Total: \$284.80

Company Tax Sched: COMPANYPUR
 Comment ID:

PO Number: PO2075 PO Status: New Revision: 0



Live Demo



SQL Queries

SQL file for all the queries used in the previous slides.

https://drive.google.com/file/d/1qRSV57jC-j2SOKPWMC0-ncxDAwly3Wcy/view?usp=drive_link




Great Online Resources

VictoriaYudin.com

DynDeveloper.com

AzureCurve.co.uk



Q&A

Thank You!

Linked



Chris Giesbrecht
Manager of IT and Business Analytics at
AgriHub Inc.

