

SSPMO Virtual Store - Comprehensive System Documentation

Project Name: SSPMO Virtual Store **Version:** 1.0 **Framework:** Django (Python)

1. Executive Summary

The **SSPMO Virtual Store** is an enterprise-grade inventory management and internal procurement system. Unlike standard e-commerce platforms, it is engineered to handle complex organizational workflows, specifically addressing the need for **Document-Based Requisitions, FIFO (First-In, First-Out) Inventory Tracking, and Real-Time Logistics Monitoring**. The system digitizes the entire supply chain from request to delivery, ensuring audit compliance and operational efficiency.

2. Advanced Core Modules

2.1. The Document-Driven Procurement Engine

A critical requirement for internal auditing is the submission of physical paperwork. The system digitizes this by integrating file uploads directly into the checkout workflow.

- **Mandatory Uploads:** The checkout process is "gated." A user *cannot* submit an order without uploading a **Requisition and Issuance Slip (RIS)**.
- **Optional Support:** Users can attach supplementary files like **Disbursement Vouchers** or other approval documents.
- **Secure Storage:** Documents are stored in a protected media directory, linked permanently to the specific Transaction ID.
- **Admin Review:** Administrators can view/download these documents directly from the Transaction Dashboard before approving an order.

2.2. Intelligent "Smart" Dashboards

The system moves away from static tables to dynamic, data-driven dashboards that provide instant situational awareness.

A. Transaction Dashboard (For Approvers)

- **Real-Time Counters:** Instantly see how many requests are Pending vs. Ready.

- **Trend Analytics:** A visual **Line Graph** (powered by Chart.js) plots request volume over time, helping management identify peak requisition periods.
- **Lead Time Monitoring:** A built-in stopwatch calculates the exact duration from *Request Creation* to *Admin Approval*, highlighting bottlenecks.

B. Logistics & Delivery Dashboard (For Fulfillment)

- **Job Card Interface:** Orders are presented as "Packing Cards" rather than rows, showing only the relevant packing list.
- **Status Filtering:** Automatically filters out "Pending" requests so logistics staff only see actionable items ("Ready for Pickup").
- **Daily Performance:** A mini-counter tracks "Items Completed Today" to measure team productivity.

C. Inventory Health Dashboard

- **Stock Alerts:** Instantly flags items that are **Low Stock** (≤ 10 units) or **Out of Stock**.
 - **Valuation:** Calculates the total monetary value of current inventory on hand.
-

3. The FIFO (First-In, First-Out) Engine

To ensure accurate costing and prevent stock obsolescence, the system employs a sophisticated FIFO algorithm in the backend.

1. **Batch Ingestion:** When supplies arrive, they are not just added to a total number. They are recorded as a specific **StockBatch** (e.g., "Batch A: 100 units @ ₱50").
 2. **Automated Deduction:** When a user orders 10 units:
 - The system checks the *oldest* batch (Batch A).
 - If Batch A has 10 units, it takes them.
 - If Batch A only has 4 units, it takes all 4, closes Batch A, and takes the remaining 6 from Batch B.
 3. **Price Adjustment:** The system automatically updates the "Selling Price" based on the most recent batch cost, ensuring pricing reflects current market rates.
-

4. Database & Architecture (ERD Concept)

The system relies on a relational database structure to maintain data integrity:

- **User (Auth):** The central identity provider.
- **Product:** The master definition of an item (Name, Brand, Code).
- **StockBatch:** The "Ledger" of inventory. Linked to Products. Tracks *when* and *how many* items arrived.

- **Order:** The "Header" of a transaction. Stores the User, Status, Timestamps, and Uploaded Document paths.
 - **OrderItem:** The "Lines" of a transaction. Links an Order to specific Products and freezes the price/quantity at the moment of purchase.
-

5. Security & Scalability

Security Features

- **Role-Based Access Control (RBAC):** Strict separation between "Employees" (Shop access only) and "Superusers" (Admin/Logistics access).
- **Auto-Logout:** A client-side security script forces a session timeout after 1 minute of inactivity, protecting unattended workstations.
- **CSRF Protection:** All forms are protected against Cross-Site Request Forgery attacks.

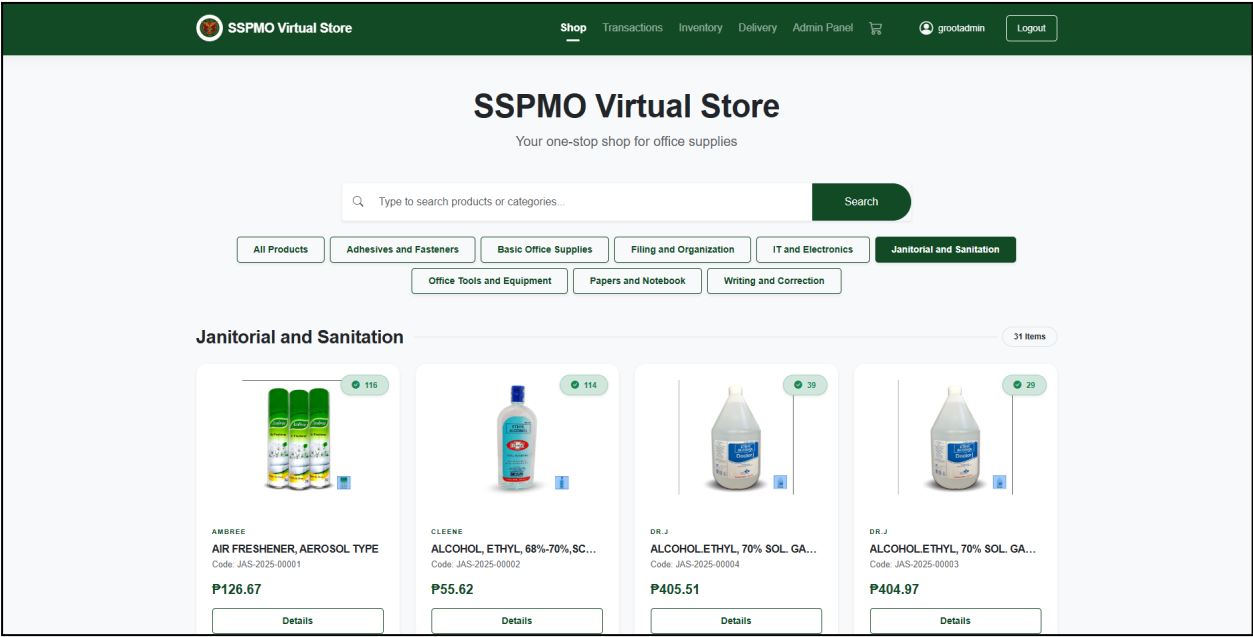
Scalability

- **Cloud Ready:** The application is container-ready and can be deployed to cloud platforms like AWS or DigitalOcean.
 - **Database Agnostic:** Built on Django ORM, allowing easy migration from SQLite/PostgreSQL to other enterprise databases if needed.
 - **Modular Design:** The "Supplies" app is self-contained, meaning new modules (e.g., "Asset Management" or "Vehicle Reservation") can be added without breaking the existing core.
-

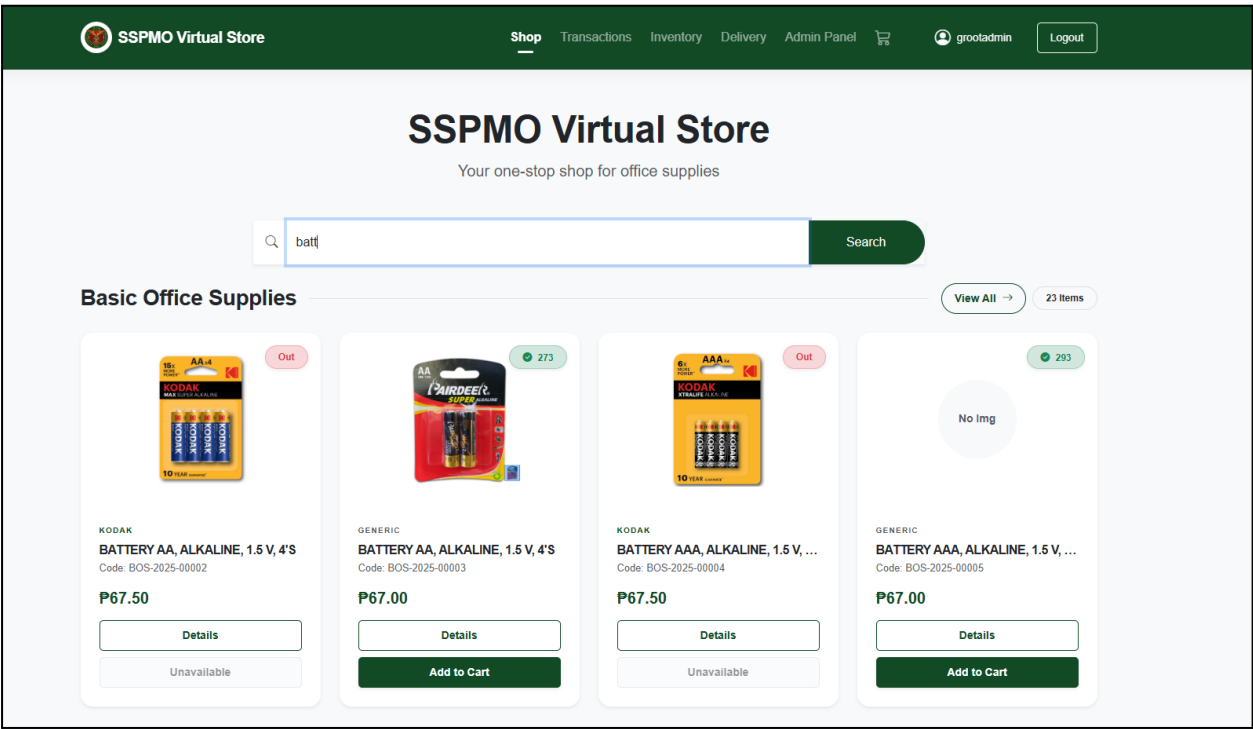
6. Conclusion

The SSPMO Virtual Store is not just a shopping cart; it is a **compliance and logistics tool**. By enforcing document uploads, automating FIFO inventory rotation, and providing real-time analytics, it transforms a manual, paper-heavy requisition process into a transparent, data-driven digital workflow.

Admin Panel View



Homepage



Smart Search

SSPMO Virtual Store

ShopTransactionsInventoryDeliveryAdmin Panel

grootadminLogout

ADMIN PANEL

Product Inventory

+ Add Product

TOTAL INVENTORY

12391

Across 194 Products

LOW STOCK

30

Items need re-ordering

OUT OF STOCK

26

Items completely empty

QUICK SEARCH

Type to search name, brand, or code...

CATEGORY

All Categories

STOCK STATUS

All Items

Filter Database

PRODUCT NAME	BRAND	CATEGORY	PRICE	STOCK	ACTIONS
 ACETATE, THICKNESS: 0.075MM MIN, (GAUGE #3), 48"X 50 METERS BOS-2025-00001	POINTER	Basic Office Supplies	P1262.50	20	 
 AIR FRESHENER, AEROSOL TYPE JAS-2025-00001	AMBREE	Janitorial and Sanitation	P126.67	116	 
 ALCOHOL, ETHYL, 68%-70%,SCENTED,500ML (-5ML) JAS-2025-00002	CLEENE	Janitorial and Sanitation	P55.62	114	 
 ALCOHOL.ETHYL, 70% SOL. GALLON JAS-2025-00003	DR.J	Janitorial and Sanitation	P404.97	29	 

Product Inventory

SSPMO Virtual Store

ShopTransactionsInventoryDeliveryAdmin Panel

grootadminLogout

←

Add New Product

NAME

Product Name

CATEGORY

BRAND

Brand Name

PRICE

STOCK

0

ITEM CODE

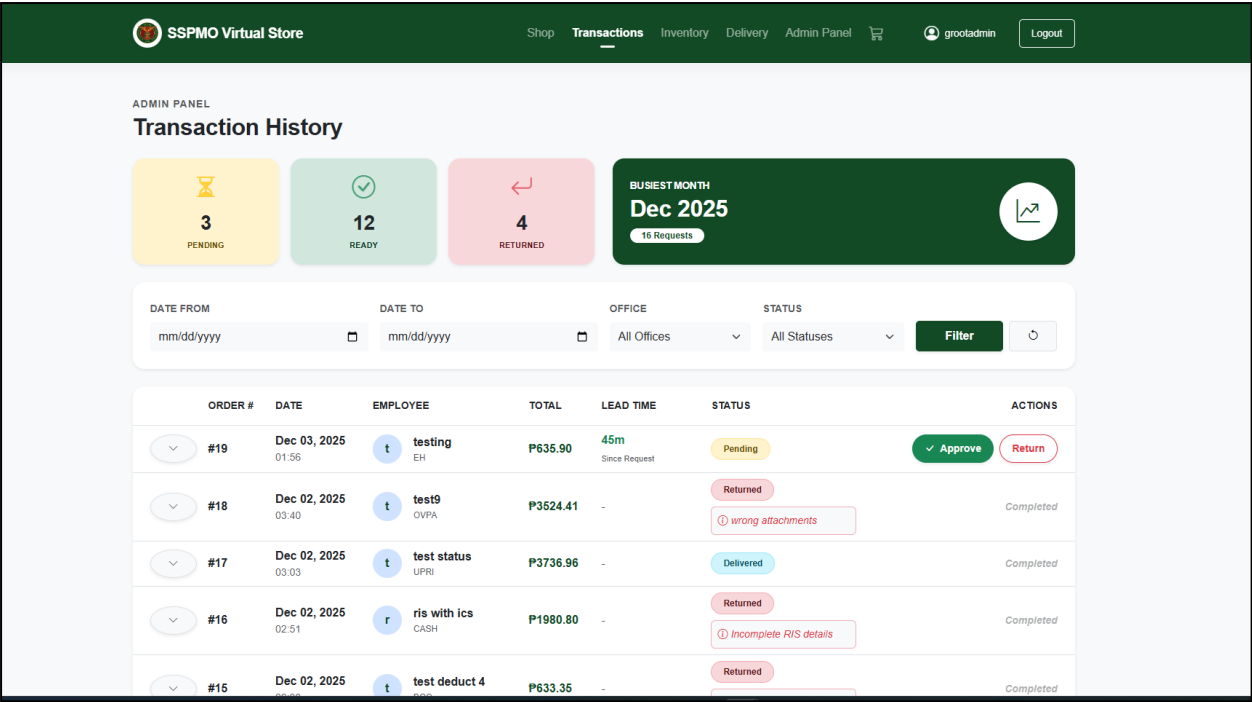
Optional

SUPPLIER

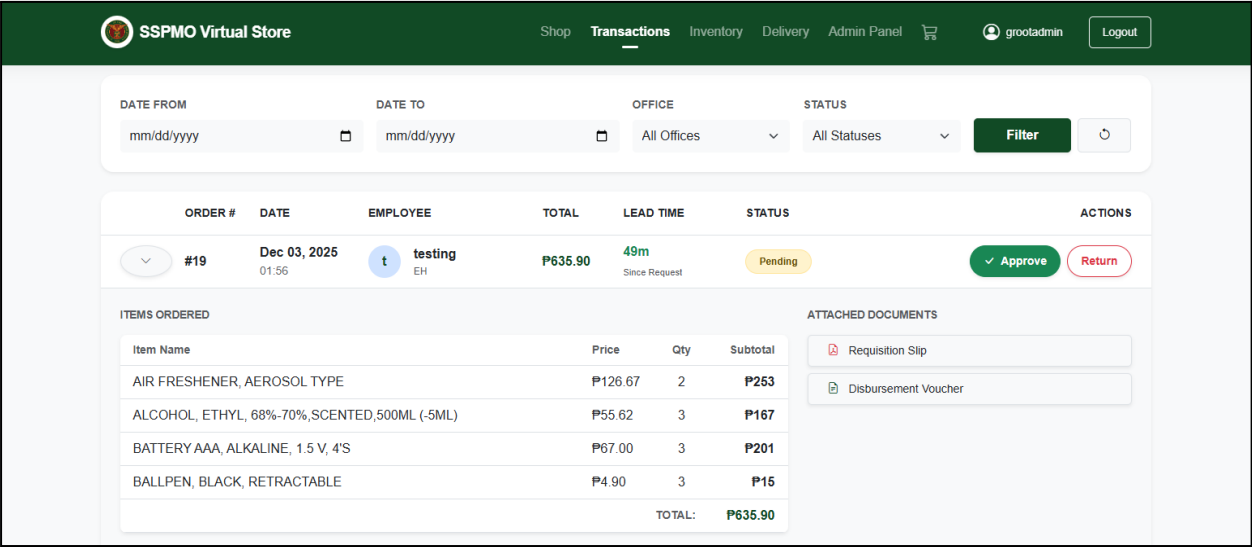
Supplier/Vendor

DESCRIPTION

Add New Product



Transaction Logs



Order viewing and Document upload

▼	#10	Dec 02, 2025 01:29	t test deduction ITDC	P3787.50	23h 36m Processing Time	Ready	Revert
▼	#9	Dec 01, 2025 08:26	e egay4 SPMO	P653.70	1d 18h 19m Since Request	Pending	✓ Approve Return
▼	#8	Dec 01, 2025 08:06	e egay2 UPRI	P1785.45	1d 18h 39m Since Request	Pending	✓ Approve Return
▼	#7	Dec 01, 2025 08:04	e egay SPMO	P8756.47	1d 17h 24m Processing Time	Ready	Revert
▼	#6	Dec 01, 2025 07:36	t test3 CIDS ADMIN	P1389.92	1d 17h 52m Processing Time	Ready	Revert
▼	#5	Dec 01, 2025 07:33	t test 2 UPRI	P2716.13	1d 17h 56m Processing Time	Ready	Revert
▼	#4	Dec 01, 2025 07:31	T Test ACCOUNTING	P4040.84	1d 17h 58m Processing Time	Ready	Revert
▼	#3	Nov 28, 2025 06:18	n nigga2 HR	P382.26	4d 19h 30m Processing Time	Ready	Revert
▼	#2	Nov 28, 2025 06:14	n nigga IT	P254.84	4d 19h 14m Processing Time	Ready	Revert
▼	#1	Nov 28, 2025 04:20	t test IT	P191.13	-	Delivered	Completed

Live lead time tracking

SSPMO Virtual Store		Shop	Transactions	Inventory	Delivery	Admin Panel	grootadmin	Logout
ADMIN PANEL								
Pickup & Delivery								
READY FOR PICKUP 10 Pending action			COMPLETED TODAY 2 Items released					
DATE FROM	DATE TO	OFFICE						
mm/dd/yyyy	mm/dd/yyyy	All Offices		Filter				
ORDER #	REQUESTER	DEPARTMENT	LEAD TIME (SINCE APPROVED)				ACTION	
▼ #12	test	OVPA	1h 41m Waiting for Pickup				✓ Complete	
▼ #11	test deduction	BGC	1h 41m Waiting for Pickup				✓ Complete	
▼ #10	test deduction	ITDC	1h 38m Waiting for Pickup				✓ Complete	
▼ #7	egay	SPMO	1h 15m Waiting for Pickup				✓ Complete	
▼ #6	test3	CIDS ADMIN	1h 15m Waiting for Pickup				✓ Complete	
▼ #5	test 2	UPRI	1h 15m Waiting for Pickup				✓ Complete	

Delivery module

Django administration

WELCOME, AARON CHRISTIANVIEW SITE / CHANGE PASSWORD / LOG OUT

HomeSuppliesProducts

Start typing to filter...

AUTHENTICATION AND AUTHORIZATION

GroupsAdd

UsersAdd

SUPPLIES

CategoriesAdd

Order itemsAdd

OrdersAdd

ProductsAdd

Stock batchesAdd

Select product to change

Search

Action:-----Go0 of 100 selected

ITEM CODE	NAME	BRAND	CATEGORY	PRICE	STOCK
PAN-2025-00025	WRAPPING PAPER, KRAFT, "36 X 40", 100 SHEETS/ PACK	ADVANCE	Papers and Notebook	326.96	11
BOS-2025-00023	WASTE BASKET	SINBAD	Basic Office Supplies	71.12	19
BOS-2025-00022	UNIVERSAL SOCKET ADAPTER	OMNI	Basic Office Supplies	50.00	0
BOS-2025-00021	TWINE, PLASTIC	OMEGA	Basic Office Supplies	71.78	54
JAS-2025-00031	TRASHBAG, XXL (37"X 40")PE BLACK, 100 PCS/ PACK	PINGCON	Janitorial and Sanitation	538.00	21
JAS-2025-00030	TRASHBAG, EXTRA LARGE XL (30"X 37")PE BLACK, 100 PCS/ PACK	PINGCON	Janitorial and Sanitation	393.00	6
JAS-2025-00029	TRASHBAG, MEDIUM (22"X 24")PE BLACK, 100 PCS/ PACK	PINGCON	Janitorial and Sanitation	220.00	15
JAS-2025-00028	TRASHBAG, SMALL (18"X 18")PE BLACK, 100 PCS/ PACK	PINGCON	Janitorial and Sanitation	165.00	29
IAE-2025-00007	TONER CART, HP CES05A(HP 05AL BLACK	HP	IT and Electronics	4050.80	5
PAN-2025-00024	TOILET TISSUE PAPER, 2PLY,128ROLL/ PACK	ECO HYGIENE	Papers and Notebook	100.88	79
PAN-2025-00023	TISSUE, INTERFOLDEDD PAPER TOWEL	ECO HYGIENE	Papers and Notebook	34.31	100
AAF-2025-00036	TAPE, TRANSPARENT,(48MM X 50M),CLEAR	ARMAK	Adhesives and Fasteners	29.12	559
AAF-2025-00035	TAPE, TRANSPARENT, 24 MM X 25 YARDS	ARMAK	Adhesives and Fasteners	19.00	97
AAF-2025-00034	TAPE, PACKAGING,(2" X 50M), TAN	ARMAK	Adhesives and Fasteners	29.56	322
AAF-2025-00033	TAPE MASKING, (48 MM X 50M)	ARMAK	Adhesives and Fasteners	140.39	106
AAF-2025-00032	TAPE MASKING, 24 MM	ARMAK	Adhesives and Fasteners	59.11	74
AAF-2025-00031	TAPE, ELECTRICAL, PVC (0.16MM X 19MM XX16M), BLACK	ARMAK	Adhesives and Fasteners	45.00	12
AAF-2025-00030	TAPE, DOUBLE ADHESIVE, (24MM X 5METER), WITH FOAM	POLAR BEAR	Adhesives and Fasteners	119.00	7
OTE-2025-00014	TAPE DISPENSER, TABLE TOP	PRINTO	Office Tools and Equipment	77.36	25
BOS-2025-00020	T8 TUBE FIXTURE, FOR T8 LED LINEAR TUBE	FIAM	Basic Office Supplies	790.00	3

FILTER

Show counts

By category

All

Basic Office Supplies

Janitorial and Sanitation

IT and Electronics

Office Tools and Equipment

Adhesives and Fasteners

Filing and Organization

Papers and Notebook

Writing and Correction

By brand

All

A+

ADVANCE

ADVENTURER

ALBATROSS

AMBREE

ARMAK

ARTLINE

B.E

BACTIGEL

BAGUIO

BONITA

BRITE

BROTHER

CENTURIAN

CLASE MUNDIAL

CLEENE

COPY ONE

DELU

DOND A

Django admin panel

User View

SSPMO Virtual Store

Welcome

Please sign in to access the store

USERNAME

Enter your username

PASSWORD

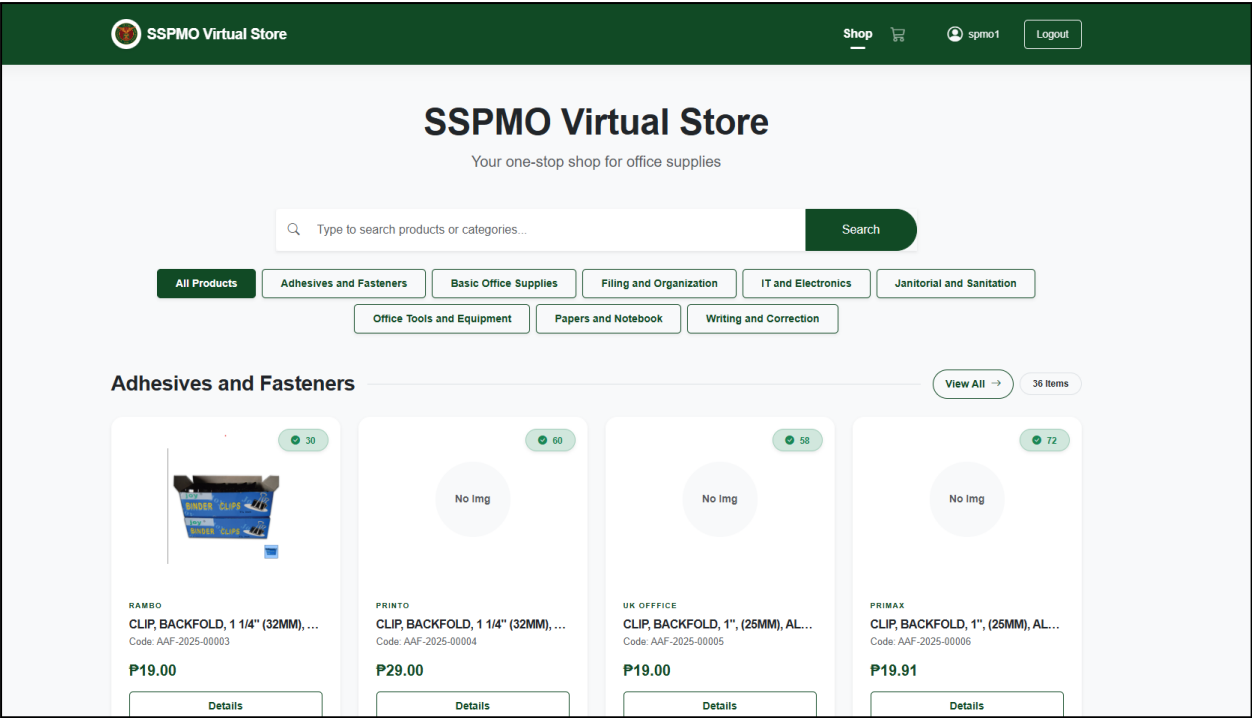
Sign In

Forgot password? Contact Admin

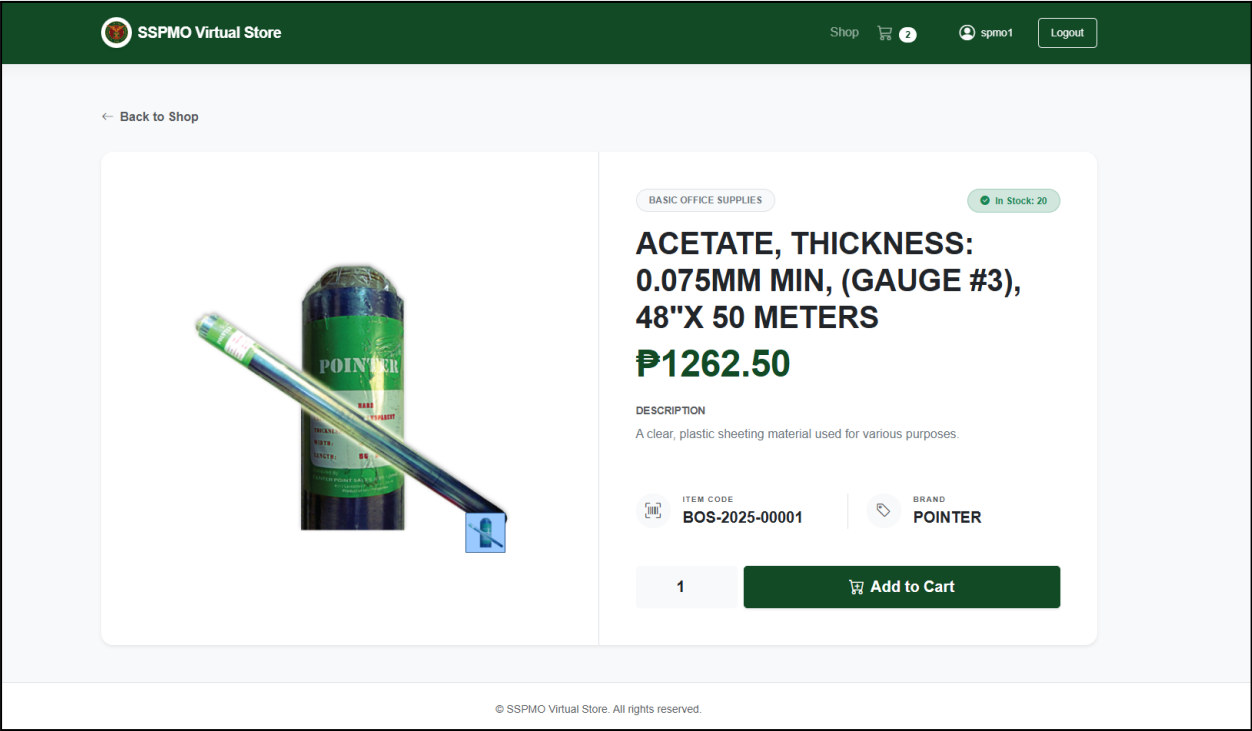
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Login page



Shop - User



Product Details

SSPMO Virtual Store

Shop  2  spmo1 Logout

Shopping Cart

2 Items

PRODUCT	PRICE	QUANTITY	SUBTOTAL	ACTIONS
CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL, CLAMPING, BLACK, 12'S Adhesives and Fasteners	P19.00	1	P19.00	
CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL, CLAMPING, BLACK, 12'S Adhesives and Fasteners	P29.00	1	P29.00	

← Continue Shopping

Order Summary

ITEMS SELECTED

CLIP, BACKFOLD, 1...	P19.00
CLIP, BACKFOLD, 1...	P29.00

Total **P48.00**

Proceed to Checkout

Shopping Cart

SSPMO Virtual Store

Shop  2  spmo1 Logout

Checkout

Complete your request details below

Request Form

EMPLOYEE INFORMATION

Employee Name *

Aaron Basa test

Unit/Office *

Select Office...

BUDGET
OP
EH
OVPA
SPMO
CASH
HRDO
OVPPF
OVPAA
OIL
TTBDO
CWGS
OVPD
ODPI
PADAYON
OAR
OVPLA
OSU
CIFAL
KRC

SUPPORTING DOCUMENTS

Requisition and Issuance Slip *

Choose File

No file chosen

① Required. Accepted formats: PDF, Word, Images (Max 10MB)

Disbursement Voucher *

Choose File

No file chosen

① Required.

Other Documents (Optional)

Choose File

No file chosen

 **Ready for Review**
Your order will be sent to the admin team for approval

Checkout Form

 SUPPORTING DOCUMENTS

Requisition and Issuance Slip *

Choose File

University Employee Data - SUMMARY JUNE 2025.pdf

 Required. Accepted formats: PDF, Word, Images (Max 10MB)

Disbursement Voucher *

Choose File

d0313dbba9a02be3aa88939578dc0ceb (1).jpg

 Required.

Other Documents (Optional)

Choose File

No file chosen

 **Ready for Review**

Your order will be sent to the admin team for approval upon submission.

Cancel

Place Order 

Document Upload



Order Submitted!

Thank you, Aaron Basa test

Order ID:

#20

Date:

Dec 03, 2025

Department:

SPMO

ITEMS ORDERED

CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL, CLAMPING, BLACK, 12'S

₱19

₱19.00 x 1

CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL, CLAMPING, BLACK, 12'S

₱29

₱29.00 x 1

Total Amount

₱48.00

 Pending Approval: Your request has been sent to the admin team for review.

Continue Shopping

Order success - user

SSPMO Virtual Store

Shop

spmo1

Logout

My Profile

Welcome back, spmo1

S

@spmo1

Logout

My Request History

ORDER #	DATE	OFFICE	ITEMS	STATUS																
▼ #20	Dec 03, 2025	SPMO	2 Items	Pending																
ITEMS REQUESTED <table><thead><tr><th>Item Name</th><th>Price</th><th>Qty</th><th>Subtotal</th></tr></thead><tbody><tr><td>CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL,CLAMPING, BLACK,12'S</td><td>₱19.00</td><td>1</td><td>₱19</td></tr><tr><td>CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL,CLAMPING, BLACK,12'S</td><td>₱29.00</td><td>1</td><td>₱29</td></tr><tr><td colspan="3">TOTAL:</td><td>₱48.00</td></tr></tbody></table> YOUR DOCUMENTS Requisition Slip Disbursement Voucher					Item Name	Price	Qty	Subtotal	CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL,CLAMPING, BLACK,12'S	₱19.00	1	₱19	CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL,CLAMPING, BLACK,12'S	₱29.00	1	₱29	TOTAL:			₱48.00
Item Name	Price	Qty	Subtotal																	
CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL,CLAMPING, BLACK,12'S	₱19.00	1	₱19																	
CLIP, BACKFOLD, 1 1/4" (32MM), ALL METAL,CLAMPING, BLACK,12'S	₱29.00	1	₱29																	
TOTAL:			₱48.00																	
▼ #19	Dec 03, 2025	EH	4 Items	Pending																
▼ #18	Dec 02, 2025	OVPA	0 Items	Returned Note: wrong attachments																
▼ #17	Dec 02, 2025	UPRI	0 Items	Delivered																
▼ #16	Dec 02, 2025	CASH	0 Items	Returned Note: Incomplete RIS details																

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Profile View