Pet Vet – Activity Diagram for Medication Purchase

Course: IT 501 FA2025 VH1

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Overview of Scenario

This activity diagram models the complete workflow when a **Pet Vet staff member** purchases medications and supplies through an online ordering system. The process encompasses every critical step—from initial browsing through the product catalog to final payment processing and order fulfillment.

Primary Goal: To demonstrate how the Pet Vet system seamlessly integrates with PayPal's payment infrastructure and the fulfillment department to complete secure online transactions efficiently.

Actors & Swimlanes

The purchasing process involves coordination between three distinct actors, each represented by their own swimlane in the activity diagram:

Pet Vet Staff Member

Initiates the process by browsing the medication catalog, selecting items, and managing the shopping cart through checkout

PayPal System

Serves as the payment gateway, handling authorization, verification, and secure transaction processing

Fulfillment Department

Receives approved orders, prepares shipments, and sends confirmation notifications to complete the cycle

Pet Vet Staff Member Activities

The staff member's workflow follows a logical sequence of actions within their designated swimlane:

01

System Login & Initialization

Staff member accesses the Pet Vet ordering platform with secure credentials

02

Browse Medication Catalog

Navigate through available medications, supplies, and veterinary products

03

Select & Add Items

Choose specific medication and add to the shopping cart with quantity specifications

04

Decision Point

"Add more items?" If yes → return to browsing. If no → proceed to checkout

05

Payment Method Selection

Choose PayPal as the preferred payment gateway for secure transaction processing

06

Submit Payment Request

Transmit payment information to PayPal system for authorization

PayPal & Fulfillment Activities

PayPal System

Receive Payment Request

Accept transaction details from Pet Vet system

Verification Process

Validate payment information and approve or decline based on security checks

Send Confirmation

Transmit payment authorization back to Pet Vet platform

Trigger Fulfillment

Notify fulfillment department of approved order

Fulfillment Department

Order Reception

Receive notification of approved purchase order

Package Preparation

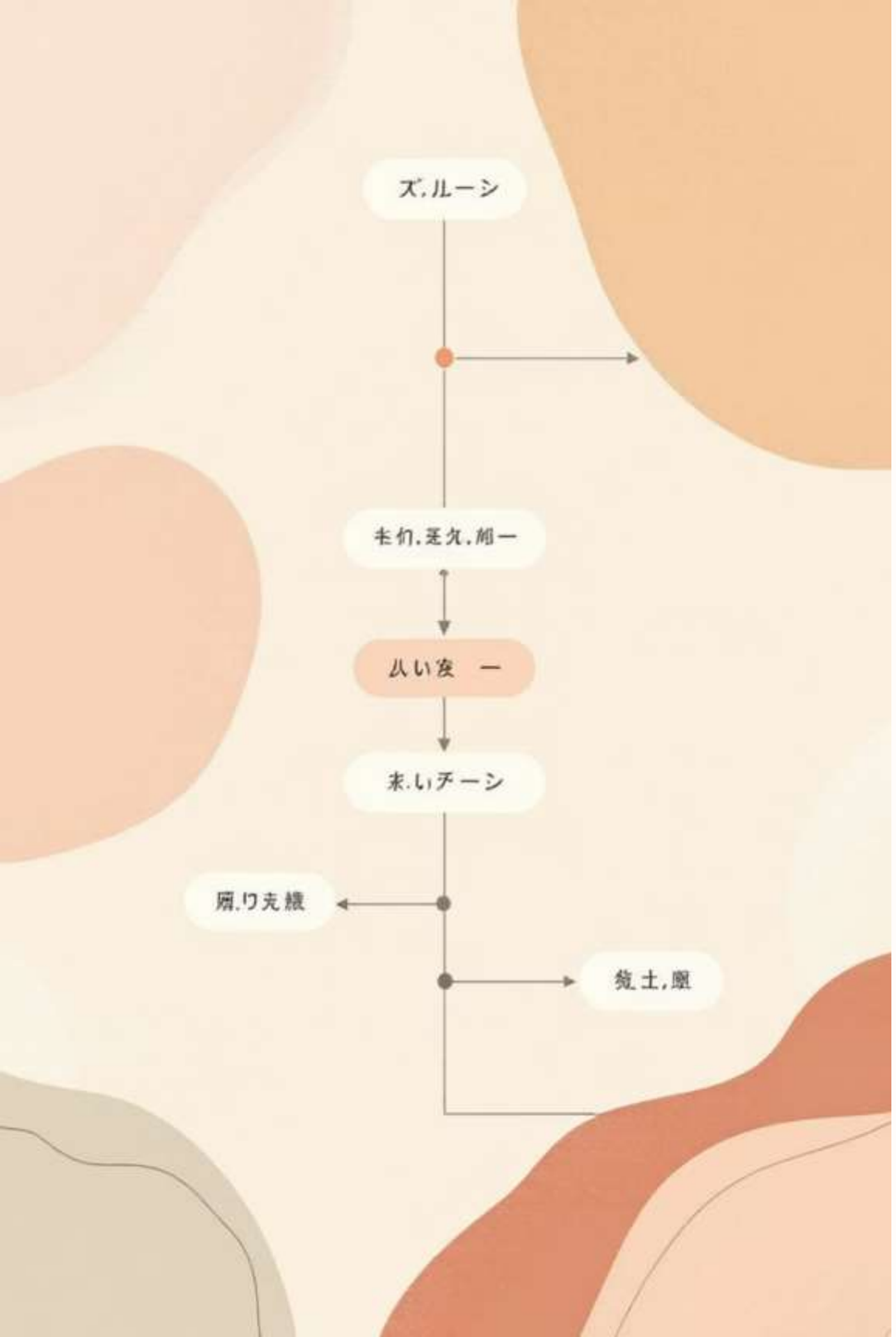
Gather medications and supplies, prepare for shipment

Ship Order

Dispatch package via designated carrier with tracking

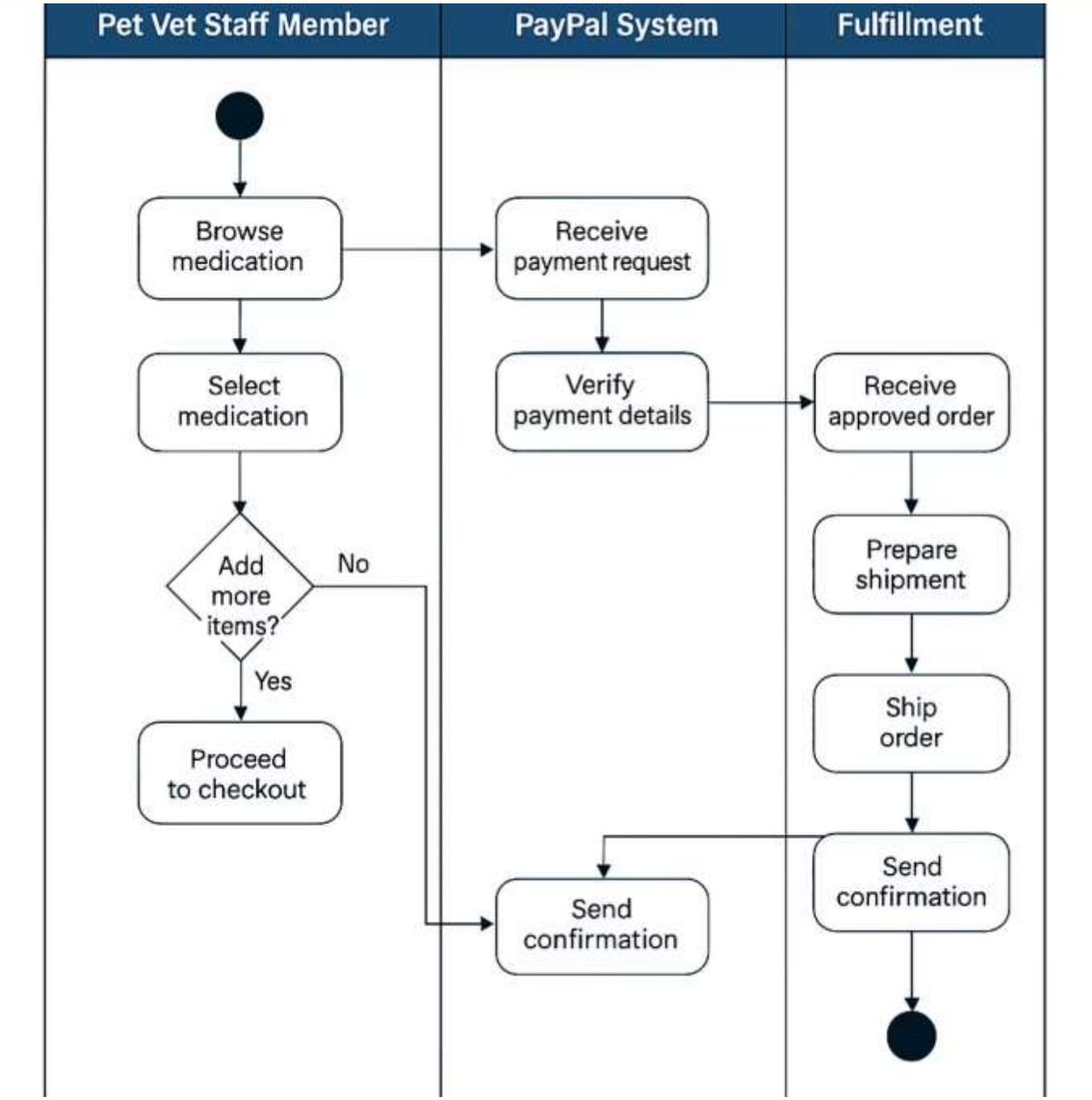
Confirmation Email

Send shipment confirmation and tracking details to staff member, completing the process



Activity Diagram – Complete Process Flow

Activity Diagram



Process Logic Summary

The activity diagram captures the complete purchasing workflow with precise logical flow:

Iterative Shopping Cart Loop

Staff member can browse and add multiple items through a decision loop before proceeding to checkout

Payment Gateway Integration

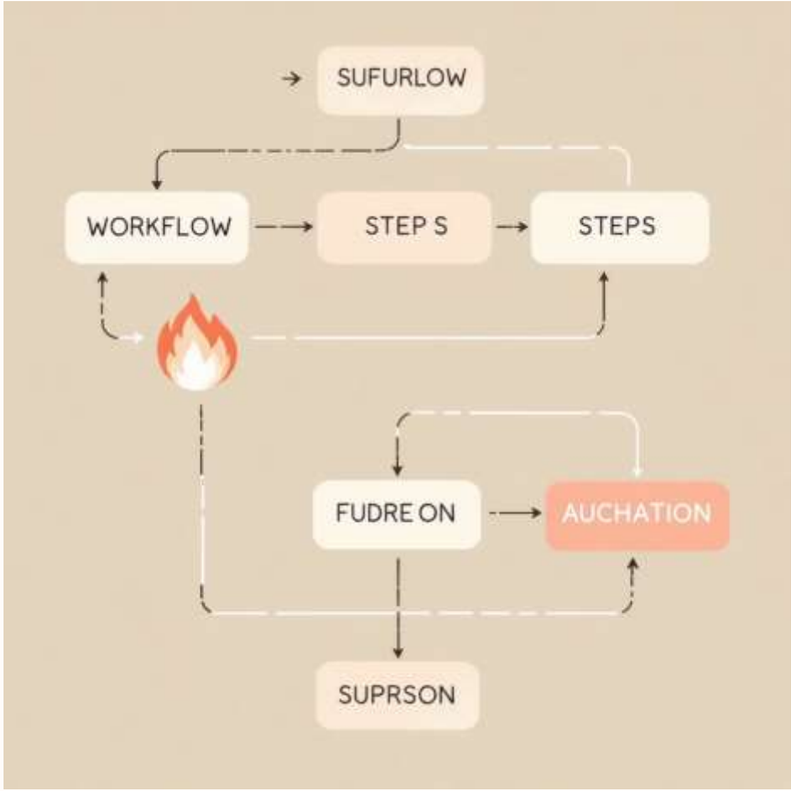
Checkout phase triggers PayPal verification process with approval/decline decision point

Automated Fulfillment Notification

Upon successful payment authorization, fulfillment receives immediate notification

Closed-Loop Confirmation

Fulfillment completes the cycle by shipping items and sending confirmation back to the originating user



UML Compliance: The diagram follows standard UML notation with proper use of decision nodes, merge nodes, activity flows, and swimlane boundaries to demonstrate accurate logical sequencing.

Conclusion

This comprehensive activity diagram successfully models the complete online medication purchasing workflow for Pet Vet, demonstrating:

Clear Role Separation

Distinct division of responsibilities across user interface, payment processing, and order fulfillment

Symbol Accuracy

Correct application of UML activity diagram conventions including swimlanes, decision nodes, and control flow

Logical Consistency

Coherent process flow demonstrating loops, conditional branches, and sequential activities