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# Library Management System
import sys

# Data Structures
items = []
memberships = []
orders = []

# Counters for IDs
item_id = 0
membership_id = 0
order_id = 0

# Admin, Vendor, User credentials
credentials = {
    "admin": "admin123",
    "vendor": "vendor123",
    "user": "user123"
}

# Functions
def main():
    print("\nWelcome to the Library Management System")
    login()

def login():
    print("\n--- Login Page ---")
    username = input("Enter Username: ").strip()
    password = input("Enter Password: ").strip()

    if username in credentials and credentials[username] == password:
        if username == "admin":
            print("Welcome Admin!")
            admin_menu()
        elif username == "vendor":
            print("Welcome Vendor!")
            vendor_menu()
        elif username == "user":
            print("Welcome User!")
            user_menu()
    else:
        print("Invalid credentials. Try again.")
        login()

# Admin Menu
def admin_menu():
    while True:
        print("\n--- Admin Menu ---")
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        print("1. Add/Update Memberships")
        print("2. Vendor Management")
        print("3. User Management")
        print("4. Logout")
        choice = input("Enter your choice: ")

        if choice == '1':
            manage_memberships()
        elif choice == '2':
            print("\n--- Vendor Management ---")
            print("Managing vendors... Feature Placeholder.")
        elif choice == '3':
            print("\n--- User Management ---")
            print("Managing users... Feature Placeholder.")
        elif choice == '4':
            print("Logging out...")
            main()
        else:
            print("Invalid choice. Try again.")

def manage_memberships():
    global membership_id
    print("\n--- Add/Update Memberships ---")
    vendor_name = input("Enter Vendor Name: ").strip()
    duration = int(input("Select Membership Duration (6, 12, or 24 months): "))
    if duration not in [6, 12, 24]:
        print("Invalid duration. Defaulting to 6 months.")
        duration = 6
    membership = {"id": membership_id + 1, "vendor_name": vendor_name, "duration":
duration}
    memberships.append(membership)
    membership_id += 1
    print(f"Membership for {vendor_name} added/updated successfully!")

# Vendor Menu
def vendor_menu():
    while True:
        print("\n--- Vendor Menu ---")
        print("1. Add Item")
        print("2. Delete Item")
        print("3. View Items")
        print("4. Logout")
        choice = input("Enter your choice: ")

        if choice == '1':
            add_item()
        elif choice == '2':
            delete_item()
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        elif choice == '3':
            view_items()
        elif choice == '4':
            print("Logging out...")
            main()
        else:
            print("Invalid choice. Try again.")

def add_item():
    global item_id
    print("\n--- Add New Item ---")
    name = input("Enter Item Name: ").strip()
    quantity = int(input("Enter Quantity: "))
    item_id += 1
    items.append({"id": item_id, "name": name, "quantity": quantity})
    print(f"Item '{name}' added successfully with ID: {item_id}.")

def delete_item():
    print("\n--- Delete Item ---")
    view_items()
    item_to_delete = int(input("Enter Item ID to delete: "))
    for item in items:
        if item['id'] == item_to_delete:
            items.remove(item)
            print(f"Item ID {item_to_delete} deleted successfully.")
            return
    print("Item not found.")

def view_items():
    print("\n--- View Items ---")
    if not items:
        print("No items available.")
    else:
        print("ID\tName\t\tQuantity")
        for item in items:
            print(f"{item['id']}\t{item['name']}\t\t{item['quantity']}")

# User Menu
def user_menu():
    while True:
        print("\n--- User Menu ---")
        print("1. View Vendors")
        print("2. Cart and Payment")
        print("3. Order Status")
        print("4. Logout")
        choice = input("Enter your choice: ")

        if choice == '1':
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            view_items()
        elif choice == '2':
            user_payment()
        elif choice == '3':
            order_status()
        elif choice == '4':
            print("Logging out...")
            main()
        else:
            print("Invalid choice. Try again.")

def user_payment():
    global order_id
    print("\n--- Cart and Payment ---")
    amount = int(input("Enter Payment Amount: "))
    order_id += 1
    orders.append({"id": order_id, "amount": amount, "status": "Pending"})
    print(f"Payment Successful! Order ID: {order_id}, Status: Pending")

def order_status():
    print("\n--- Order Status ---")
    if not orders:
        print("No orders placed yet.")
    else:
        print("Order ID\tAmount\tStatus")
        for order in orders:
            print(f"{order['id']}\t\t{order['amount']}\t{order['status']}")

# Run the system
if __name__ == "__main__":
    main()
```