CSE 111 Fall 2024: Project Checkpoint 1

Electronic Warehouse Management

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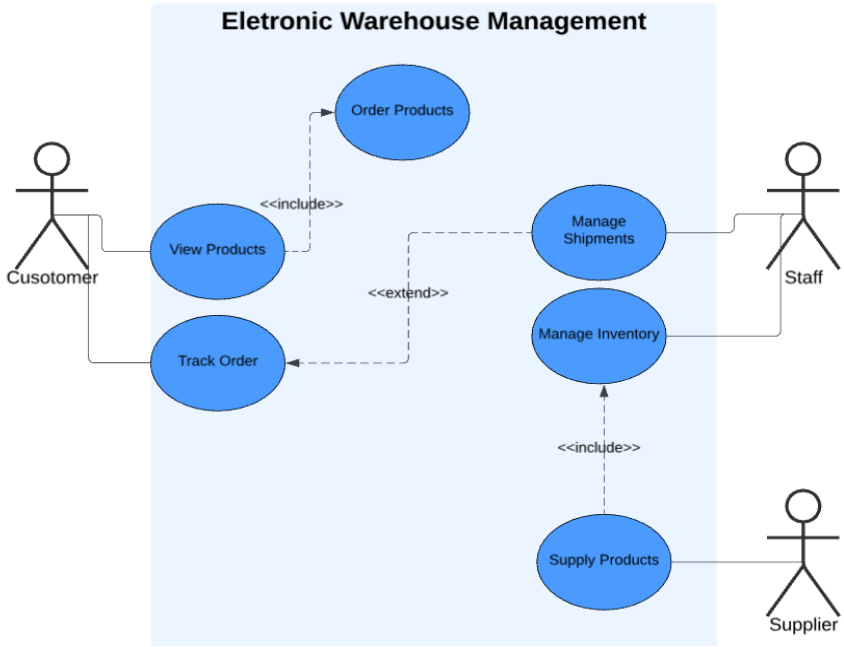
Synopsis

This database project aims to develop a system to manage and track customer orders, products, inventory suppliers, and staff from an electronics warehouse. The system will enable customers to place orders for products, which are processed, shipped, and managed through various entities, including suppliers and staff. The use case focuses on tracking the entire lifecycle of an order, from the customer placing it to the product being shipped and delivered. The system is built using UML for process design and ER diagrams for the structure.

UML Use Case Diagram

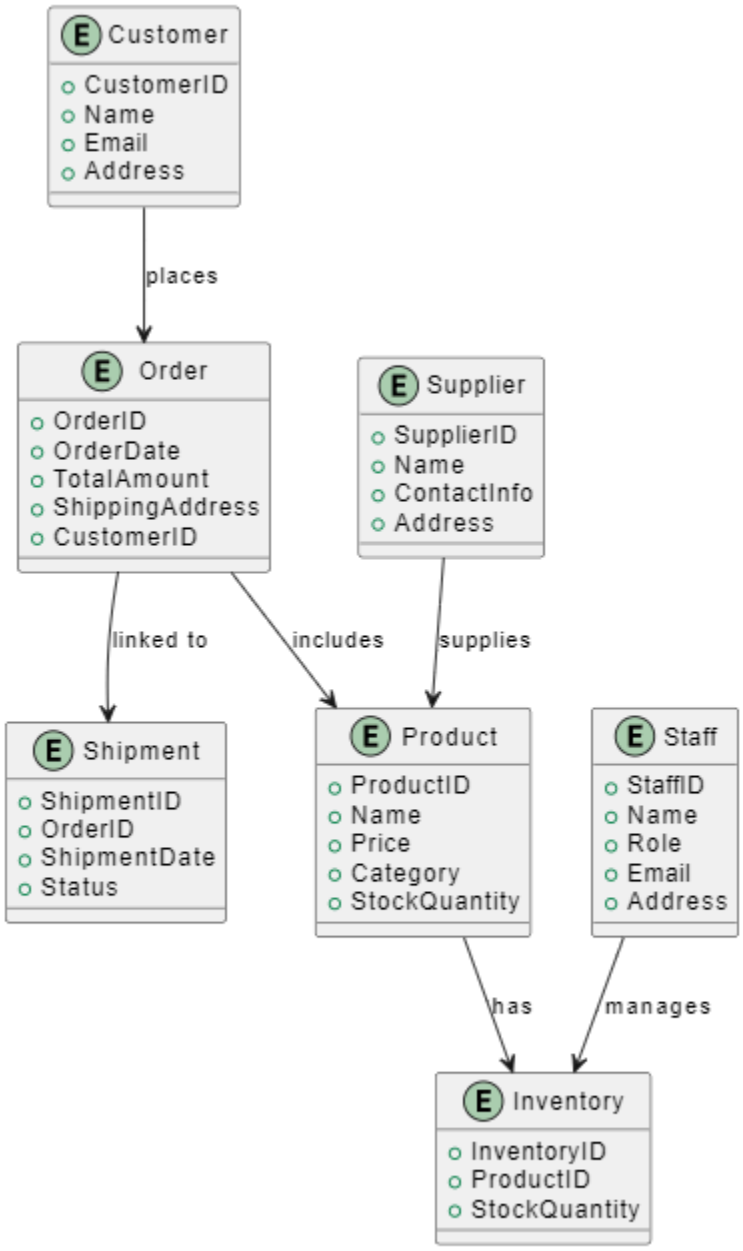
The user can view products, purchase products, and view the product's tracking info. The staff gets to update inventory and manage the shipments of the products. The supplier can supply products that the staff can then manage the inventory.



ER Diagram


Customer
CustomerID
Name
Email
Address
Places
Order
OrderID
OrderDate
TotalAmount
ShippingAddress
CustomerID
isShippedBy
Shipment
ShipmentID
OrderID
ShipmentDate
Status
Handles
Contains
Product
ProductID
Name
Price
Category
StockQuantity
Supplies
Supplier
SupplierID
Name
ContactInfo
Address
isStoredBy
Inventory
InventoryID
ProductID
StockQuantity
Manages
Staff
StaffID
Name
Role
Email
Address

Relational Schema



1. **Customer**:
    - Attributes: CustomerID, Name, Email, Address
2. **Product**:
    - Attributes: ProductID, Name, Price, Category, StockQuantity
3. **Order**:
    - Attributes: OrderID, OrderDate, TotalAmount, ShippingAddress, CustomerID
4. **Supplier**:
    - Attributes: SupplierID, Name, ContactInfo, Address
5. **Inventory**:
    - Attributes: InventoryID, ProductID, StockQuantity
6. **Shipment**:
    - Attributes: ShipmentID, OrderID, ShipmentDate, Status
7. **Staff**:
    - Attributes: StaffID, Name, Role, Email, Address

Link to project: https://github.com/elginli/CSE-111-Project