

**Andrew Morris
Jared Kariniemi
Ross Kostron**

Business Processes for a Warehouse

Add a client

When a new client is added to the system, the client provides his/her name, company name, company phone, client's phone extension, and company address. The warehouse assigns a unique ID to each client.

Add a product

For each product added, an ID is generated and stored with the added product name.

Add a manufacturer

When a new manufacturer is added, the warehouse acquires the manufacturer's name, phone number, and address. The warehouse assigns a unique ID to each manufacturer.

Add a client transaction

When a new transaction is added for a customer, the date, a descriptive string, and a dollar amount is saved in a customer specific transaction list.

Process an order from a client

Each order has a list of products and an associated quantity. This list is compared to the available products, and a list of products that were ordered and are on hand, called an invoice, is generated. The invoice includes the products and the associated quantities, as well as the sale price of each item, and the total invoice cost. The products that can't be shipped at the time are added to a waitlist.

Accept a shipment from a supplier

When a shipment is received, the items on the warehouse waitlist are addressed first. Each product is compared to each waitlist that is requesting said product, and the total available amount of said product is deducted by the requested amounts on each waitlist. The waitlists are addressed until the product runs out, or there are no more product requests. Once each product from the shipment is applied towards each waitlist, new invoices are generated for each client that had a waitlist item updated. The leftover products are applied to the inventory.

Add a manufacturer to the supplier list for a particular product:

The clerk receives information about a new supplier for a particular product. For each product, the clerk will enter the supplier information along with the cost into the system.

Delete a manufacturer from the supplier list for a particular product:

The clerk needs to remove a manufacturer from the supplier list for a particular product. For the product, the clerk enters the manufacturer information and then confirms that the manufacturer should be deleted.

Accept an order from a customer:

The clerk receives an order from a client. Each order will have products and quantities for each product. The clerk enters the products and quantities and saves them into the system.

Accept payment from a customer:

A customer sends a payment of a specified amount to the clerk. The clerk enters the client ID, and the amount of the payment. The amount is deducted from the client's current bill.

Process an invoice:

The worker receives the invoice from the clerk. The worker gathers all of the items on the invoice and ships them. After the invoiced items are sent to shipping, the worker marks the invoice as complete.

List all transactions for a client:

The clerk wants to get a list of all transactions for a client. The clerk enters the client's ID to return a list of all transactions for that client.

List all manufacturers and their prices for a given product:

The clerk wants to get details about a product. The clerk supplies the product information. All manufacturers and prices are returned to the clerk.

List all clients who have an outstanding balance:

The clerk wants a list of all clients who currently have an outstanding balance. The clerk requests for the list of clients. The list of clients whose balance is greater than zero is returned.

Use Cases

Use Case: *Add a client*

Actions performed by the Actor	Responses from the system
1. The warehouse receives an order from a new client.	
2. A clerk makes a request to add a new client to the system.	
	3. The system prompts the clerk to enter the client's name, company name, phone number, and company address.
4. The clerk obtains the information from the client, and enters it into the system.	
	5. The system saves the client information, along with a system generated unique ID.

Use Case: *Add a product*

Actions performed by the Actor	Responses from the system
1. A clerk makes a request to add a product to the system.	
	2. The system prompts the clerk to enter the product name.
3. The clerk enters the product name.	
	4. The system saves the product name, along with a system generated unique ID.

Use Case: *List all transactions for a client*

1. A clerk issues a request to view all past transactions for a particular client.	
	2. The system prompts the clerk to enter the client's ID.
3. The clerk enters the client's ID.	
	4. The system prints a list of prior transactions for the specified client.

Use Case: *Process Order*

1. Clerk has an order that needs to be processed.	
2. The clerk invokes the system to process order	
	3. The system asks for the order information.
4. The clerk enters the order ID	
	5. The system searches for the order ID. If the order ID is not found, the system exits, else continue.
	6. The system retrieves the order. The system then searches for each product and verifies that there is enough stock to fulfill the order. If there is not enough stock, then the system will fill as much of the order as possible and send it out to invoice. The rest of the stock that could not be fulfilled is put on a waitlist. The system then exits

Business Rules

1. The <i>outstanding balance</i> is the amount owed by a client.
2. A <i>waitlist</i> is a collection of items that are not currently in stock at a warehouse.