

CSCI 430

Project 1

Group 11:

Brent Clapp

Sabin Basnet

Mark Christenson

Hunter Adcock

System Requirements:

1. Client representation

The system will have an understanding of a client. These clients are customers who order things from the warehouse. Each client will have a unique ID that is generated by the system. The client will also have some other basic information like address and billing address etc.

2. Product representation

This is an item that is in stock at the warehouse. It will have a name, a description product id etc. It could be

3. Supplier representation

A supplier is an entity the warehouse buys from. Every supplier has a specific purchase price for each product they supply. They also have some other attributes to them as to help discern them like ID, name etc.

4. Order representation

An order is an object that contains a list of products and the quantity of the products they ordered. Again this would have some more classifying data.

5. Invoice representation

An invoice is a list of all the product on an order. It shows the quantities of items orders and the price for that line and then a total. It also shows who purchased the items and where its being shipped too.

Business Requirements:

- **Adding a new Client, Product or Supplier** - The business is able to add clients freely. Clients are assigned an ID generated by the program. They are also able to add Products or Suppliers as they wish as long as they select the write type and fill out the bare minimum information to create one. There is also a batch add function. This function also the business to add more than one Client, Product or

Supplier at the time. This is more of a convenience feature to cut out the repetivity if they are adding more of one thing at a time.

- **Tracking Product** - the business is able to track what supplier has what product. They are also capable of tracking the price of a product at different suppliers. So they can sort between the two on the fly to decide where to buy the product from.
- **Tracking Supplier** - the business is able to track what a supplier has and what it does not have.
- **Tracking Inventory** - the business can keep track of what products it has in stock and how much of it they have in stock. The business is also able to see what client is waiting on what and then the sale price of each item.
- **Customer Transaction Tracking** - There is a backlog to see customer transactions. In these backlogs you can see the date of the transaction a description of the transaction and the price of it.
- **Generating Invoice** - The system generates an invoice off of an order or orders. It tallies all of the line items up to get a total and also prints out the price per line item and quantity.
- **Accepting Client orders and processing** - When a Client is finished shopping everything in their cart goes through a check out. If the item is currently not in stock at the warehouse it is put on a waitlist until it is in stock. For the rest of the items in stock at the warehouse they are packaged up for shipping. An invoice is generated and the Client is billed and then it is shipped.

- **Accepting Customer Payment** - When a customer makes a payment the amount is credited to the customer's account. Because we are nice and outgoing business the Client doesn't need to pay before the order is shipped out.
- **Accepting Incoming Product** - When the business receives new inventory into the warehouse the waitlisted orders are filled first. Then after the wait listed orders are filled the warehouses inventory is updated.
- **Search Features** - Several useful search features are available. All the transactions can be pulled for a specific client. All suppliers who sell the item and their prices. All Clients who still have negative balances and owe money. A current inventory in the warehouse. And any outstanding orders still needing to be filled.