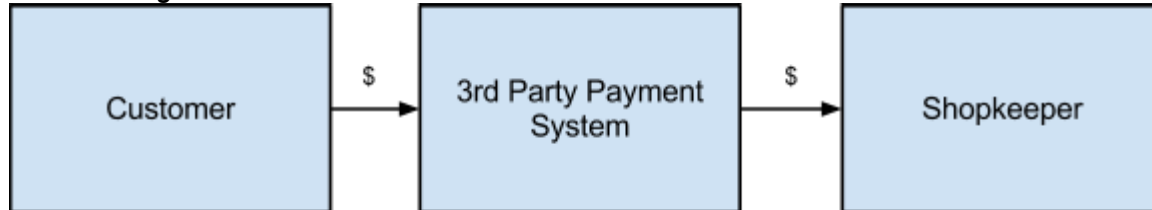**Problem Analysis PS2**

Overview
Purpose and goals
The goal of this product is to create an intuitive interface for customers and sellers to interact. This product will allow customers to easily browse products from multiple vendors. It will also be easy to shopkeepers to set up and connect with customers. Existing solutions don't allow for a dialogue between customers and store owners about current and future products, so this product will lower the barrier separating the two parties.
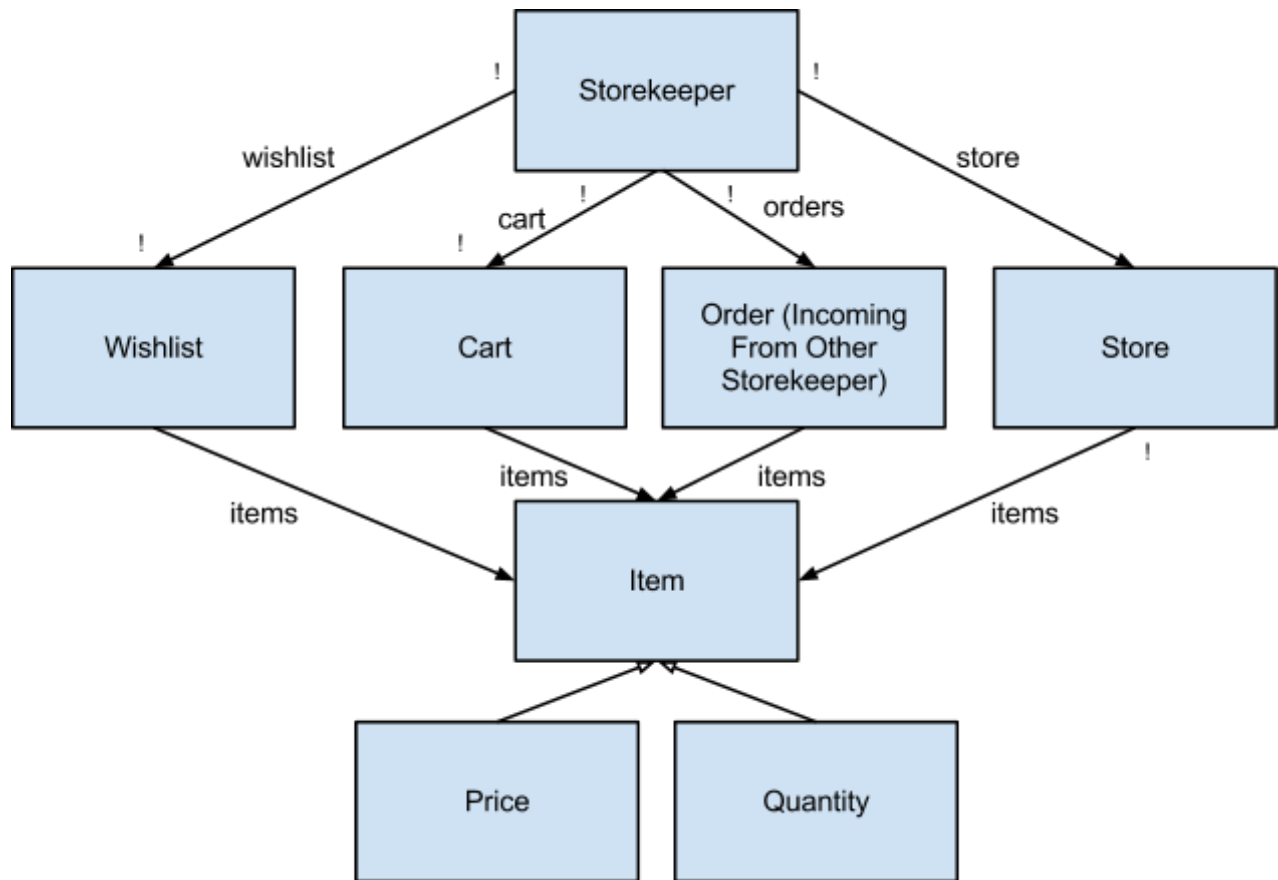
Context diagram

Key features
- Shopping cart and wishlist: allow customer to add existing items to their cart/wishlist, or create a non-existing item and add it to their wishlist
- Orders: will be seamless from a shopper perspective, as all items purchased at one time will be in one order; meanwhile, the shopkeeper will only be responsible for items in the order from their shop
- Individual storefronts: allow for shopkeepers to distinguish themselves and adjust prices of goods

Domain
Object model

Event model
Storekeeper Login
Storekeeper Logout
Storekeeper Add Item
Storekeeper Edit Item: edit the price or quantity of an item
Storekeeper Fulfill Order: send items of customer order and receive payment
Shopper Login: not required
Shopper Logout
Shopper Add to Cart: reserve item from particular store
Shopper Add to Wishlist
Shopper Place Order: can only be placed if items are in cart

ShoppingCart ::= (StorekeeperStart) (Shopper)+ (StorekeeperEnd)+
StorekeeperStart ::= Login+ (AddItem EditItem)* Logout*
Shopper ::= Login* AddtoWishlist* (AddtoCart* | PlaceOrder)* Logout*
StorekeeperEnd ::= Login+ FulfillOrder Logout*

Behavior
Feature descriptions
  ● Shopping cart: shoppers can add items from any store into one cart and proceed to checkout normally
  ● Wishlist: shoppers add both existing items or create items they would like to see in the future

- Shopkeeper Homepage: can easily view pending orders, current merchandise, and add new items
- Shopper Homepage: show all merchandise from all shopkeepers organized by stores
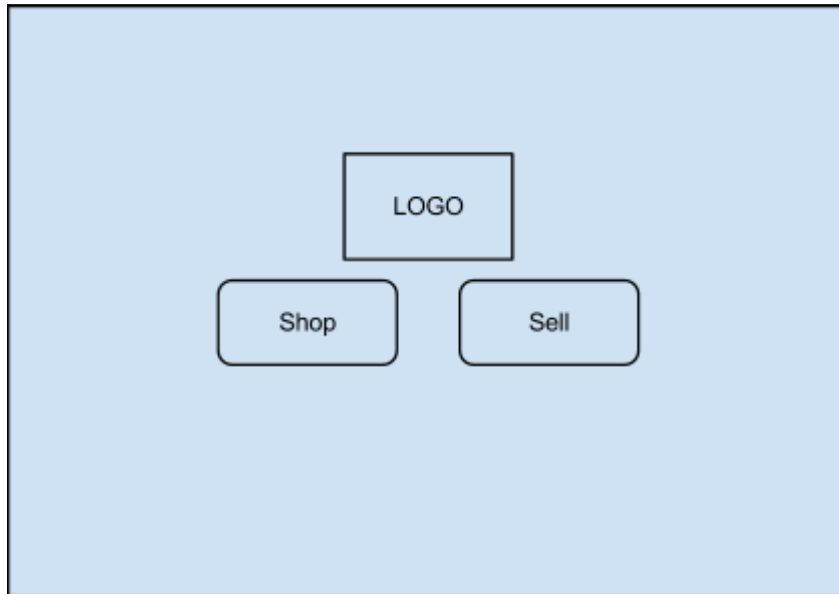- Checkout: redirect to third party vendor for payment processing

Security concerns
The most sensitive part of this project is the payment procedure. In this case, all payments will be handled by a third party (think PayPal), which eliminates this risk.

Operations
- Add to cart: reserves item and decrements quantity available
- Create order: notifies shopkeeper of new customer order
- Fulfill order: notifies shopper of completed order
- Create new wishlist item: notifies select shopkeepers of new item suggestions

User interface

Homepage
Shop => Shopper Landing Page
Sell => Storekeeper Landing Page
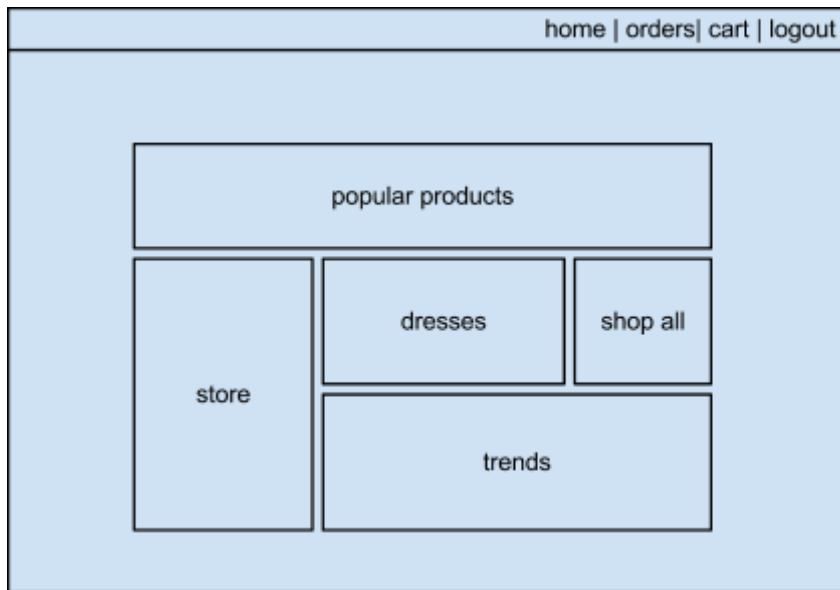
username

password

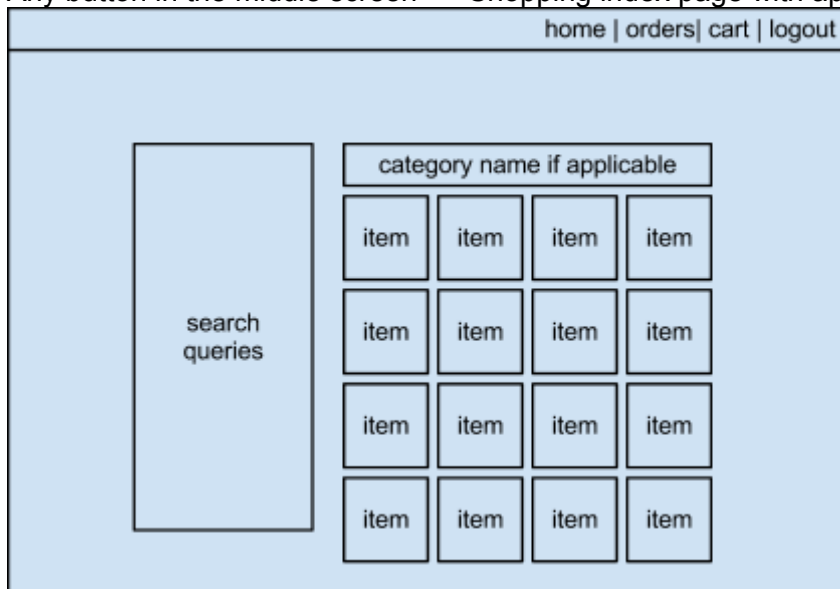Login

Login page

home | store | logout

Inventory

Orders

Suggestions

Storekeeper landing page

popular products

store

dresses

shop all

trends

Shopper landing page
Any button in the middle screen => Shopping index page with appropriate filters

category name if applicable

item	item	item	item
item	item	item	item
item	item	item	item
item	item	item	item

search queries

Shopping index page