Design Analysis PS2

Overview
Key design challenges
The main design issues I discovered are as follows:
- Properly counting the quantity of available items
- Sharing items among the store, shopping cart, and order page
- Defining a user only after signing up for the service

Details
Data representation
The schema differs from the object model in the way that items are represented. Each Store object has many instances of actual Item objects, however, each Cart object and Order object have many "mirror" item objects, called cart_items and order_items respectively, that just contain the item_id as a means of referring to the Item object. Since each Item can belong to only one Store, but potentially multiple Carts or Orders, it makes sense to design a system where only the Store object contains direct Item references.

Key design decisions
I made the decision that all users must create an account and sign in to use the site. This allows for a more controlled experience and the ability to personalize in a better way. I also made the decision to have a dynamic item library, i.e. any Storekeeper can create any Item they wish. This design I feel adds more flexibility to the user experience and allows for creative license among users in the community.

My original design separates the abstraction of shopper and storekeeper. The new iteration of my design abstracts this as one in the Storekeeper object. The Storekeeper, only once signed in, has the ability to upload items, place items in the cart, and review incoming orders. Once I began to implement the shopping cart, I found it made more sense to create the whole user experience under one login, so that anyone can both shop and sell.