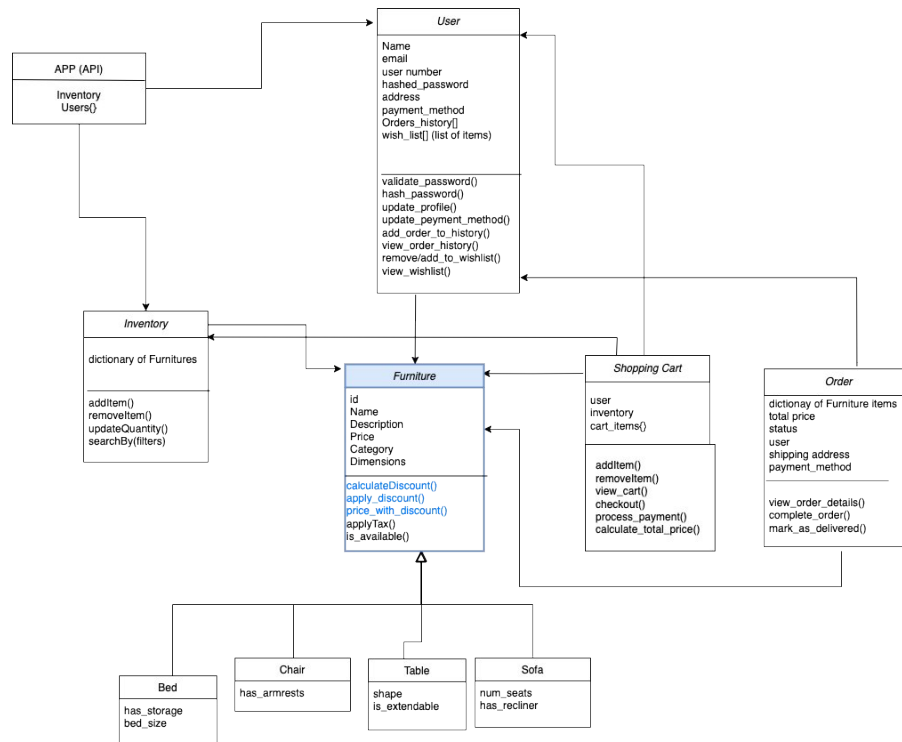


# System Design Updates

## Updated Class Architecture



## Changes Details

The overall class architecture remains consistent with the previous design. However, updates have been made to refine value handling and method definitions (add some new and deleted some). Certain attributes that were previously defined as lists have been transitioned to dictionaries to enhance code efficiency (we used dictionaries instead of lists for storing features across different classes to improve search efficiency for several methods). In addition to all of this the key changes are:

### Checkout System

- **Previous Design:** The checkout process was shown as a separate class.
- **Updated Design:** The checkout functionality is now integrated into the **Shopping Cart** class, streamlining the process by consolidating related operations such as:
  - o Collecting user information
  - o Validating the cart and checking inventory availability

- Processing payments and finalizing orders
- Updating inventory accordingly

### **New classes**

- **FurnitureFactory**

The factory class was implemented for creating furniture dynamically.

- **Observer classes**

The observer class hierarchy was added: InventoryObserver, CartObserver, UserObserver. This is to observe the changes that happen in these classes and update them accordingly.