Collectible Store Simulation

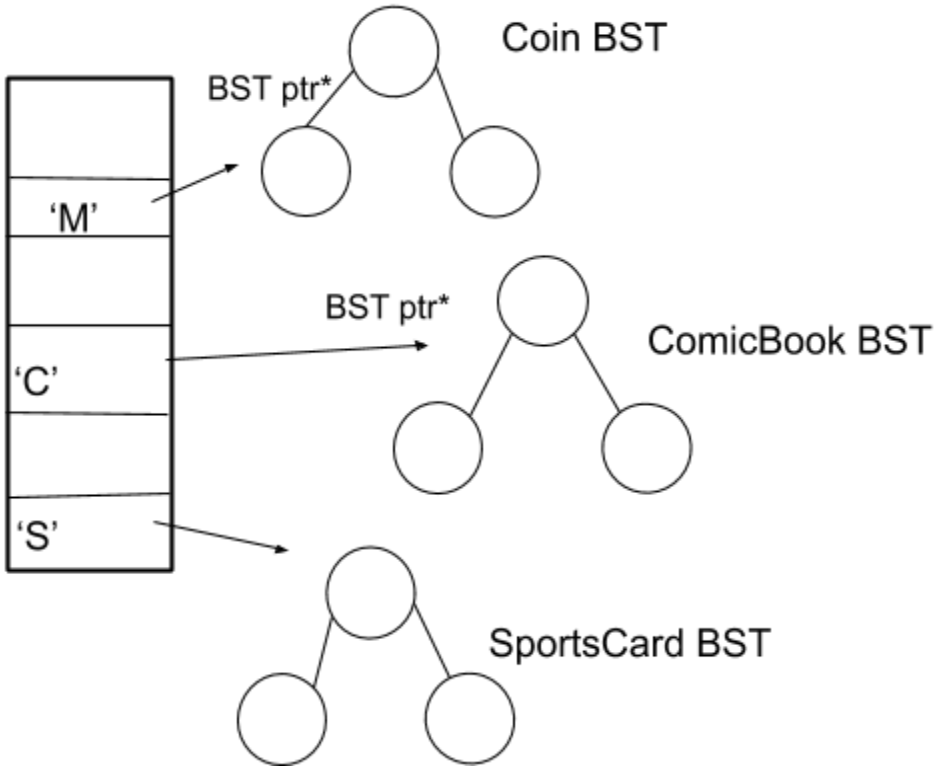
Overview

This project is a simulation of a store that sells collectibles such as coins, sport cards, and comic books. The store can process different transactions such as: sell, buy, display all its inventory, display the complete history of all customers and a singular customer. This program has multiple classes including: Store, Customer, HashTable, Binary Search Tree, Factory, Inventory, Transaction, Sell, Buy, History, Display, Collectibles, Coin, Sports Card, Comic Book.

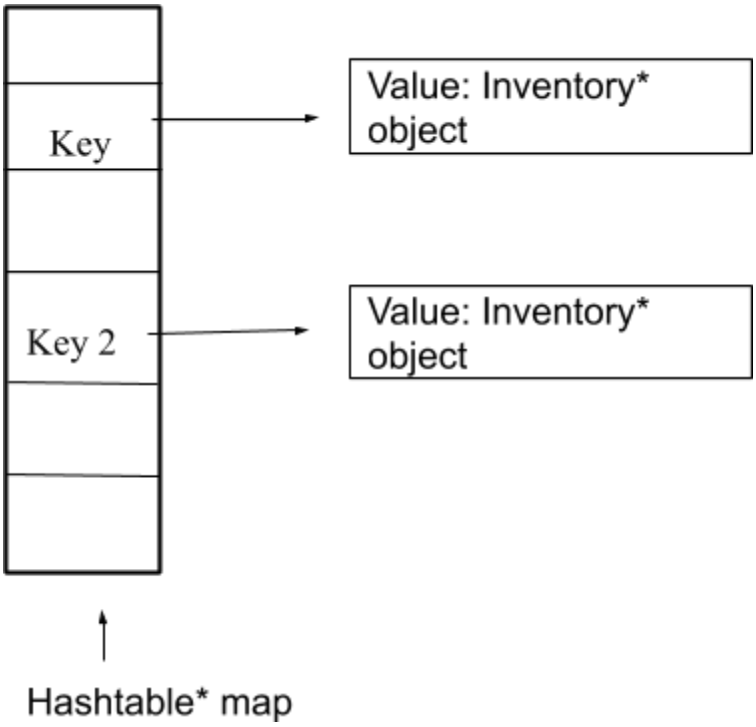
The classes Sell, Buy, History, Display are all children classes from the Transaction class. The Binary Search Tree and HashTable classes are used in the Store class & Factory class. inventoryList BST in Store points to different Collectible BST Objects. Factory has a HashTable that stores as a value pointer to Inventory objects. The Factory class is used to build different types of Inventory objects. The Sports Card, Comic Book, Coin classes inherit from the Collectibles Class. The Collectibles class is a general class that simulates any item that is considered a collectible. The inventory class is an abstract class that allows other items to be created from there, including transactions and collectibles.

Memory Diagrams

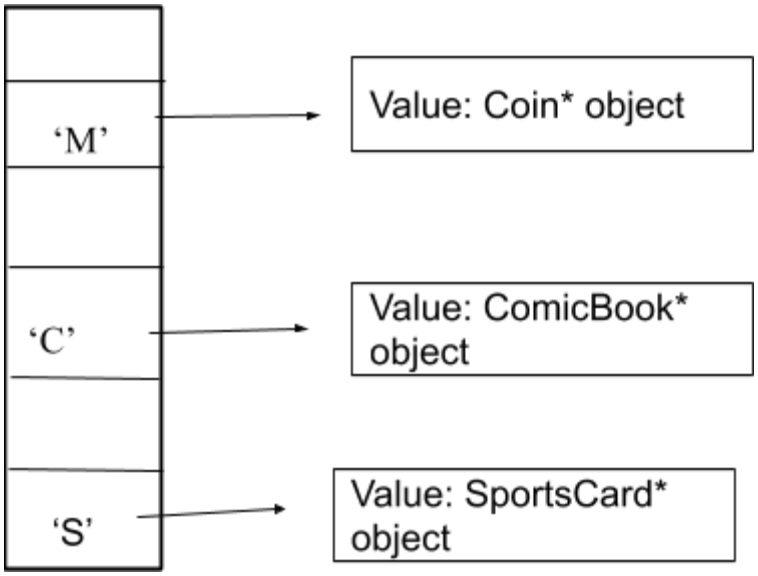
BST* inventoryList in Store Class



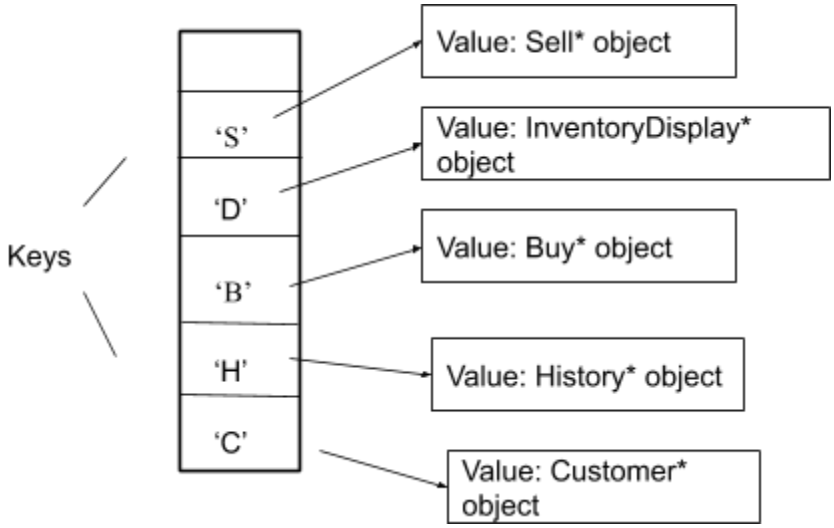
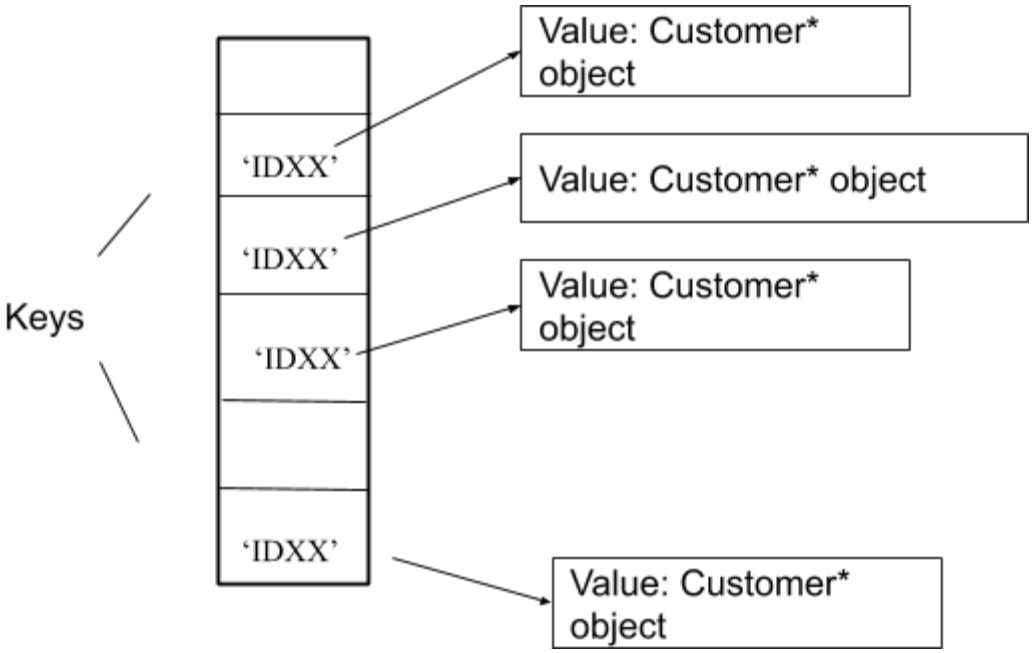
Factory Class



CollectFactory in Store Class



TransFactory Store Class



HashTable Customers