**Grocery Store**

**I. Problem**

* Create a **grocery store** sales app. In the store, we must manage and store product information such as **name**, **price**, and **quantity**.
* When importing and selling to customers, the application can adjust the quantity. We need to make a shopping cart for each customer so they can add and remove the products they want.
* We will proceed to pay the customer after they have selected the product.
* When a product is imported, we can adjust the price as well as the quantity on the store side.

**II. Solve Problem**

We will structure the program by using **stock items**, **stock lists**, **binary search trees**, **baskets** (shopping carts), and **linked lists**.

1. ***Stock item***

Stock items will save product information such as name, price, quantity, and quantity in the cart but not yet paid for.

1. ***Stock list***

A stocklist is a list that keeps track of all the products in the store. When the application is active, the stock list will read the product data from the file and save it back to the file when finished.

1. ***Binary Search Tree***

To store products, we will use a binary search tree, which will speed up the search.

1. **Basket**

The shopping cart will save the products the customer has chosen as well as the quantity; the customer can add or remove products. We will charge all of the products in the cart for the customer to pay once they have made a selection.

1. **Linked List**

The products in the basket will be stored in a linked list. It is responsible for adding and removing items from the basket.