

1. LIBRARIES

fstream	Used for generating and displaying text files
String	Used for basic_string and for the function template getline()

2. CLASS

Inventory

3. VARIABLES & STRING

Int productID
Id
inventoryQty
Char choice
String inventoryMaster[16][8]
String outofstockMaster[16][8]
Long double price restock price

4. CONTROL STRUCTURES

The control structures that I've used in this program are conditional selection statement and repetition statement.

5. FUNCTIONS

PUBLIC:

void menu();	It allows the user to assume the character of a customer or an admin.
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PRIVATE:

void adminMenu();	User chooses the admin option in the mainMenu()
void customerMenu();	Will ask the user to choose between showInv or buyItems
void restockItems();	It restocks the out of stock items
void buyItems();	Function that consists a loop through the inventory master array to look for in stock.
bool tryAgain();	It asks the user if he wants to try a certain procedure or not
void loadInv();	Initializes the inventory array by taking the data

	from the inventory master file
<code>void loadoutofStock();</code>	Function that opens the outofStock file.
<code>void checkoutofStock();</code>	Function that checks if the inventory has out of stock items below reorder point and update the file.
<code>void showInv();</code>	It shows the inventory master file
<code>void showSales();</code>	It shows the sales text file
<code>void showPurchases();</code>	It's function is to print the purchases file
<code>void showoutofStocks();</code>	function it prints the out of stock list
<code>void updatePurchases();</code>	It's function is to update the Purchases text file.
<code>void updateSales();</code>	function it appends the data of a new sale using information from the buyItems method.
<code>void updateInv();</code>	It's function is to update the Inventory text file

6. OOP

Class	
Objects	inventory
Specifiers	public and private

The library that we used is `fstream` and `string`. We create a class named `Inventory`. In this class there are variables and string and they are `int productID, id, quantity, inventoryQty, long double price` and `restock price, char choice, string inventoryMaster[16][8], string outofstockMaster[16][8]`. In public access specifier there's a function called `void menu()`. In private access specifier there are functions called `void adminMenu(), customerMenu(), restockItems(), void buyItems(), bool tryAgain(), void load Inv(), void loadoutofStock(), void checkoutofStock(), void showInv(), void showSales(), void showPurchases(), void showoutofStocks(), void updatePurchases(), void updateSales(), void updateInv()`.

In the menu function, the program will ask the user to choose a number between 1 and 2, if the user will pick number 1 it will go to adminMenu function and then if the user will pick number 2 it will go to customerMenu. But if the user will pick number 0 it will terminate the program.

In adminMenu function, the program will ask the user to choose a number between 1 to 4. If the user will pick number 1 it will go to showInv function, and if the user will pick number 2 it will go to showSales function, and if the user will pick number 3 it will go to showPurchases function, and if the user will pick number 4 it will go to showoutofStocks function. But if the user input a number or character which is not in the choices the program will display in the screen "INVALID INPUT!!" and then goes back to adminMenu function. In customerMenu function, the program will ask the user to choose between 1 and 2, if the user will pick number 1 it will go to showInv function and if the user will pick

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number 2 it will go to buyItems function. But if the user will input a character or number that is not in the choices the program will display in the screen "INVALID INPUT!!!" and then goes back to customerMenu function. In showInv function consists a loops through the entire array and prints it.

In buyItems function consists a loop through the inventory master array to look for in stock items and if there's an in stock item, the program will carry on with the rest of the function. Basically it is a function that the user will use in order to buy items and enter the quantity of it. In updateInv function in this function it will update the inventoryMasterFile.txt. In loadInv function it initializes the inventory array by taking the data from the inventory master file. In updateSales function it appends the data of a new sale using information from the buyItems method. In Sales function it just a function that shows the sales of the company. In loadoutofStock function it is a function that opens the outofStock file. In checkoutofStock function it checks if the inventory has out of stock items below reorder point(ROP) and not already in the out of stock file and it take those items to the our of stock master array and update the file. In showoutofStocks function it prints the out of stock list and the program will ask the user to choose a number between 1-2 and if the user will pick number 1 it will go to restockItems function and if the user pick number 2 it will go to adminMenu function. In this restockItems function if there's an out of stock item, the program will carry on with the rest of the function and if there isn't an out of stock item, the program will show a message and return to adminMenu function. In this function the program will ask the user to choose the id of out of stock item and asks the user how much would the user like to order. In showPurchases function it prints the purchases file. In updatePurchases function it is just a function that updates the Purchases text file.