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Course code: CS 103 B

Faculty: Computer engineering

Project Report:

Problem statement:

* Title:

Inventory Management System.

* Description:

In a departmental store, the software will be able to track inventory of the stock. At each transaction, the inventory will be updated.

Introduction:

My project was to use C++ language to make an inventory management system which had the functionality that a system at a departmental store should have.

Algorithm and code description:

To show my inventory I created a showres() function which displayed the inventory of stock present in the departmental store system.

**There are 6 main parts of my code. The 4th and 5th part is the crux of my code.**

**Diagram

Description automatically generated**

1. First the int main function in which I made a do while loop to make a menu which gave options for the functions of a departmental store. Each option corresponded to a function which on selection will run that function. The functions that I have used are in the next parts.
2. I created a create function which on execution opens an existing file or creates a new file by the name of “Storage”. It then asks the user that how many records of items will he be creating. Then I used a for loop for the user to enter the record of item and at the same iteration store it in the file.
3. I created a read-record function which on execution opens the csv file by the name of “storage”. By utilizing vector of type string, stringstream, and using a while loop which executed till end of file to push back the string in file to the vector as an array. It then asks the user to enter the barcode which then compares the barcode number to that in file by if statement. If it does not match it goes to the next record till the size of records which I had found beforehand. If it matches it prints the details of that record. At the end the file is closed.
4. I created a m-update-record function which on execution opens the csv file by the name of “Storage” and opens an existing file or creates a new file by the name of “Storagenew”. By utilizing vector of type string, stringstream, and using a while loop which executed till end of file to push back the string in file “Storage” to the vector as an array. It then asks the user to enter the barcode number which then compares the barcode number to that in file by if statement. If it does not match it goes to the next record till the size of records which I had found beforehand. If it matches, then at the index which I know beforehand that stock is present converts it into integer so I can do operation on it. Asking user in this functions case manager to enter the number of items to be added or subtracted from the stock. After the modification it made sends into a string by a stringstream convert which then changes at that point of index of row. At the end, the file is then stored into “Storagenew”. And “storagenew” name is changed to “storage” and the “storage” file from which the date was taken is then deleted. The file is then closed at the end.
5. I created a c-update-record function which on execution opens the csv file by the name of “Storage” and opens an existing file or creates a new file by the name of “Storagenew”. By utilizing vector of type string, stringstream, and using a while loop which executed till end of file to push back the string in file “Storage” to the vector as an array. It then asks the user to enter the barcode number which then compares the barcode number to that in file by if statement. If it does not match it goes to the next record till the size of records which I had found beforehand. If it matches, then at the index which I know beforehand that stock is present converts it into integer and at another index at which price is present, I convert them both to integers. Asking the user how many items S/he would like to buy. I multiply the items the user in this case customer would like to buy with price of it and at the same time updating the stock. After the modification it made sends into a string by a stringstream convert which then changes at that point of index of row. The price is printed and if the stock is zero it prints out of stock. At the end, the file is then stored into “Storagenew” and “storagenew” name is changed to “storage” and the “storage” file from which the date was taken is then deleted. The file is then closed at the end.
6. I created a delete-record function which on execution opens the csv file by the name of “Storage” and “Storagenew”. It asks the user to enter the barcode and if the barcode does not match it stores the file in “Storagenew” and whose barcode matches is not stored in the new file. At the end, the file is then stored into “Storagenew” and “storagenew” name is changed to “Storage” and the “Storage” file from which the date was taken is then deleted. The file is then closed at the end.

Conclusion:

In conclusion using C++ programming language features such as file handling, conditional statements, loops, functions etc. I have made a departmental store system.