CS201 Assignment 3 Solution Fall 2020

Solution

```cpp
#include <iostream>

#include <fstream>

using namespace std;


class Inventory
{
        private:
                int itemID;

                char itemName[20];

                float itemPrice;

                float quanitity;

                float totalPrice;


        public:
                void readItems();

                void displayItem();

                int getItemID();

                float getPrice();

                float getQuanitiy();

                int ret_ItemID();

                void updateQuantity(float q);
};


void Inventory::readItems()
{
        int price, quantity;

        cout <<"Please enter item ID: ";
```

```cpp
        getItemID();

        cout<<"Please enter item name: ";

        cin>>itemName;

        cout<<"Please enter item price: ";

        price=getPrice();

        cout<<"Please enter item quanity: ";

        quantity=getQuanitiy();

        totalPrice=price*quantity;


}


float Inventory::getPrice()

{

        cin>>itemPrice;

        return itemPrice;

}


int Inventory::getItemID()

{

        cin>>itemID;

        return itemID;

}

float Inventory::getQuanitiy()

{

        cin>>quanitity;

        return quanitity;

}


int Inventory :: ret_ItemID()
```

```cpp
    {
            return itemID;

    }


    void appendToFile()

    {

            Inventory obj;

                    ofstream enter;

                    enter.open("inventory.txt",ios::app);

                    obj.readItems();

                    enter.write(reinterpret_cast<char *> (&obj), sizeof(Inventory));

                    enter.close();

                    cout<<"Inventry record added successfully ";


    }



    void displayAll()

    {

    Inventory st;

            ifstream inFile;
            inFile.open("inventory.txt");

            if(!inFile)

            {

                    cout<<"File could not be open !! press any key …………";

                    cin.ignore();

                    cin.get();

                    return;

            }
            while(inFile.read(reinterpret_cast<char *> (&st), sizeof(Inventory)))
```

```cpp
                {
                        st.displayItem();
                        cout<<endl;
                }
                inFile.close();
                cin.ignore();
                cin.get();
        }
        void Inventory::displayItem()
        {


                cout<<"ItemID:"<<itemID;
                cout<<"\tItem Name:"<<itemName;
                cout<<"\tItem Price:"<<itemPrice;
                cout<<"\tItemQuantity:"<<quanitity;
                cout<<"\tTotal Price:"<<totalPrice;
        }
        void increaseQuanity(int x)
        {
                bool found=false;
                Inventory std;
                float quantity;
                fstream file;
                file.open("inventory.txt");
                if(!file)
                {
                        cout<<"File could not be open !! Press any key…………";
                        cin.ignore();
                        cin.get();
                        return;
```

```cpp
                }
        while(!file.eof() && found==false)
        {
                file.read(reinterpret_cast<char *> (&std), sizeof(Inventory));
                if(std.ret_ItemID()==x)
                {
                        cout<<"Add Quantity: ";
                        std.getQuanitiy();
                        int pos=(-1)*static_cast<int>(sizeof(std));
                        file.seekp(pos,ios::cur);
                        file.write(reinterpret_cast<char *> (&std), sizeof(Inventory));
                        cout<<"Item Quantity updated successfully"<<endl;
                        found=true;
                }
        }
        file.close();
        if(found==false)
        cout<<"\n\n Record Not Found ";
        cin.ignore();
        cin.get();
}


int main()
{
        int id;
        Inventory obj;
        char ch;
                do{
```

```cpp
cout<<"ENTER CHOICE\n";

cout<<"01.      ADD AN INVENTORY ITEM\n";

cout<<"02.      DISPLAY FILE DATA\n";

cout<<"03.      INCREASE QUANITY\n";

cout<<"Please enter your choice: ";

cin>>ch;

switch(ch)

{

        case '1': appendToFile();
```

```cpp
                        break;
            case '2': displayAll();
                        break;
            case '3': cout<<"Enter Item ID: ";
                        cin>>id;
                        increaseQuanity(id);
                        break;
            case 'y':
                        break;
            default :
                        cout<<"Enter valid number"<<endl;
        }
    }
    while(ch != 'y');


    return 0;
}
```

The END