```cpp
///project 02

#include<bits/stdc++.h>

using namespace std;

class BookStore;

class Book
{
    string book_name, writer_name, category;
    double price;
    int quantity = 0;
public:
    Book() {}
    Book(string book_name, string writer_name, string category, double price, int quantity)
    {
        book_name = book_name;
        writer_name = writer_name;
        category = category;
        price = price;
        quantity += quantity;
    }
    void getBookDetails()
    {
        cout<<".....Book Information....."<<endl;
        cout<<"Book name: "<<book_name<<endl;
        cout<<"Writer name: "<<writer_name<<endl;
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        cout<<"Price: "<<price<<endl;

        cout<<"Category: "<<category<<endl;

        cout<<"Quantity: "<<quantity<<endl;

    }

    double getPrice(int x)

    {

        return price;

    }

    double getQuantity(int x)

    {

        return quantity;

    }

    void setQuantity(int x)

    {

        quantity += x;

    }

    friend double selectBook( BookStore store );

};


class Customer

{

    string name, date_of_birth;

    double bill = 0;

    string customer_number;

    vector<int> book_numbers;

public:

    Customer() {}

    Customer(string name,string dob, string customer_number)
```

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{
    name = name;

    date_of_birth = dob;

    customer_number = customer_number;
}

double getBill()

{
    return bill;
}

string getID()

{
    return customer_number;
}

void getCustomerDetails()

{
    cout<<".....Customer Information....."<<endl;

    cout<<"Customer Number: "<<customer_number<<endl;

    cout<<"Customer Name: "<<name<<endl;

    cout<<"Contact No: "<<date_of_birth<<endl;

    cout<<"Due: "<<bill<<endl;
}

void clearBill()

{
    bill = 0;
}

void setBill(double x)

{
    bill += x;
```

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    }
};



class BookStore
{
    vector<Customer> customers;
    vector<Book> books;

public:
    int isCustomer(string customer_id)
    {
        int i;
        for(i = 0; i < customers.size(); i++)
        {
            cout<<customers[i].getID()<<endl;
            if(customers[i].getID() == customer_id)
            {
                return i;
            }
        }
        return -1;
    }

    friend double selectBook(BookStore store);

    void addCustomer(Customer c)
    {
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        customers.push_back(c);

    }

    void setBill(int i, double x)

    {

        customers[i].setBill(x);

    }

    void addBook(Book b)

    {

        books.push_back(b);

    }

    Customer getCustomer(int i)

    {

        return customers[i];

    }

    void clearBill(int i)

    {

        customers[i].clearBill();

    }

};


double selectBook( BookStore store )

{

    double prices = 0;

    for(int i = 0; i < store.books.size(); i++)

    {

        int x;

        store.books[i].getBookDetails();

        cout<<"Enter 1 to buy book, 0 to ignore" ;
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        cin>>x;

        if(x==1)

            prices += store.books[i].price;

    }

    return prices;

}


int main()

{

    int option;

    BookStore bookStore;

    while(1)

    {

        cout <<"------------Book Store------------"<<endl;

        cout <<"Enter Menu"<<endl;

        cout <<"1  Input Customer in Bookstore"<<endl;

        cout <<"2  Input Book in Bookstore"<<endl;

        cout <<"3  Buy books"<<endl;

        cout <<"4  Get Customer data"<<endl;

        cout <<"5  Clear Payment"<<endl;

        cout <<"0  Exit"<<endl;


        cin>>option;


        switch(option)

        {

        case 0:

            return 0;
```

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        break;
    case 1:
    {
        string name,dob,id;
        cout<<"Enter Customer Name: ";
        cin>>name;
        cout<<"Enter Customer Contact No: ";
        cin>>dob;
        cout<<"Enter Customer ID: ";
        cin>>id;
        Customer customer(name,dob,id);
        bookStore.addCustomer(customer);
    }
    case 2:
    {
        string name,writer,category;
        double price;
        int qty;
        cout<<"Enter book name: ";
        cin>>name;
        cout<<"Enter writer name: ";
        cin>>writer;
        cout<<"Enter Category: ";
        cin>>category;
        cout<<"Enter Price: ";
        cin>>price;
        cout<<"Enter quantity: ";
        cin>>qty;
```

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        bookStore.addBook(Book(name,writer,category,price,qty));

        break;

    }

    case 3:

    {

        string id;

        cout<<"Enter customer number: ";

        cin>>id;

        int customer_id = bookStore.isCustomer(id);

        if(customer_id!=-1)

        {

            double bill = selectBook(bookStore);

            bookStore.setBill(customer_id, bill);

        }

        else

            cout<<"User Not Found!"<<endl;

        break;

    }

    case 4:

    {

        string id;

        cout<<"Please enter customer id: ";

        cin>>id;

        int customer_id = bookStore.isCustomer(id);

        if(customer_id==-1)

            cout<<"User Not Found!"<<endl;

        else

        {
```

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                Customer c = bookStore.getCustomer(customer_id);

                c.getCustomerDetails();

            }

            //else

            //  cout<<"User Not Found!"<<endl;

            break;

        }

        case 5:

        {

            string id;

            cout<<"Please enter customer id: ";

            cin>>id;

            int customer_id = bookStore.isCustomer(id);

            if(customer_id==-1)

                cout<<"User Not Found!"<<endl;

            else

            {

                Customer c = bookStore.getCustomer(customer_id);

                cout<<"Payment Amount: " <<c.getBill()*.95 <<"Taka(5%% discount)" ;

                double amount;

                cin>>amount;

                if((c.getBill()*.95)==amount)

                {

                    bookStore.clearBill(customer_id);

                }

            }

            //else

            //  cout<<"User Not Found!"<<endl;
```

```cpp
            break;
        }
        default:
            cin>>option;
    }
}
return 0;
}
```