Department of Computer Science

Software Project Proposal

Course	OBJECT ORIENTED PROGRAMMING 2	**Group No.**	**04**

Student ID	Name	Section
21-45600-3	WALIUL HASNAT WASIF	E
22-47038-1	ABIR BOKHTIAR	E
21-45605-3	MD.SABBIR HOSSAIN	E
21-45599-3	MD. SAFWAN BHUIYAN SOHAN	E

Project Title:

Optimizing User Experience and Operational Efficiency in an Online Bookstore System.

Project Description:

The project based on an online bookstore system is a comprehensive C# windows form project designed to facilitate the book selling management through diminishing lengthy of time, expenses, etc. The project basically focuses on effectiveness of users' activities, and operational efficiency.

There are four distinct roles of the project such as Admin, customer, employee, and supplier.

Here admin is the omnipotent who can oversee every account of the users. He has an impactful role throughout the system. Customers can see the details of the enlisted

books. While ordering books, he can search books in accordance with his will.
Employees are appointed by admin in order to assist customers in generating bills, and its modifications through updating and deleting.
Suppliers have the capability to view all the enlisted books. If necessary, he can ask for approval of adding new book-stock from admin.

Admin:

1. Being omnipotent, he oversees the users' activities and checks basic information of all accounts.
2. An admin has the capacity of activating and deactivating users' account.
3. Having access of viewing the collection of books, modifying books' information through adding, updating and deleting.
4. The capacity of checking bill and deleting its history.
5. To add new books in the store by suppliers, it requires the approval of the admin.

Supplier:

1. A supplier also has access of viewing the collection of books.
2. A supplier can add new book stock in the store. It just requires the approval of the admin to execute the process.
3. A supplier sometimes modifies the new book-stock through adding or deleting. But he has some limitations in its modification. Whenever the book-stock is approved by the admin, suppliers can't modify anymore.
4. He can modify the information of his own account except his ID and Role.

Employee:

1. An employee can check users' bill history through searching client name.
2. He also can edit the bill history. But it requires the security key of the customer.
3. He has the capacity to generate bills. To execute the process, the validity of the customer's ID & Security Key is prerequisite. Besides this, the ID has to be active.

Customers:

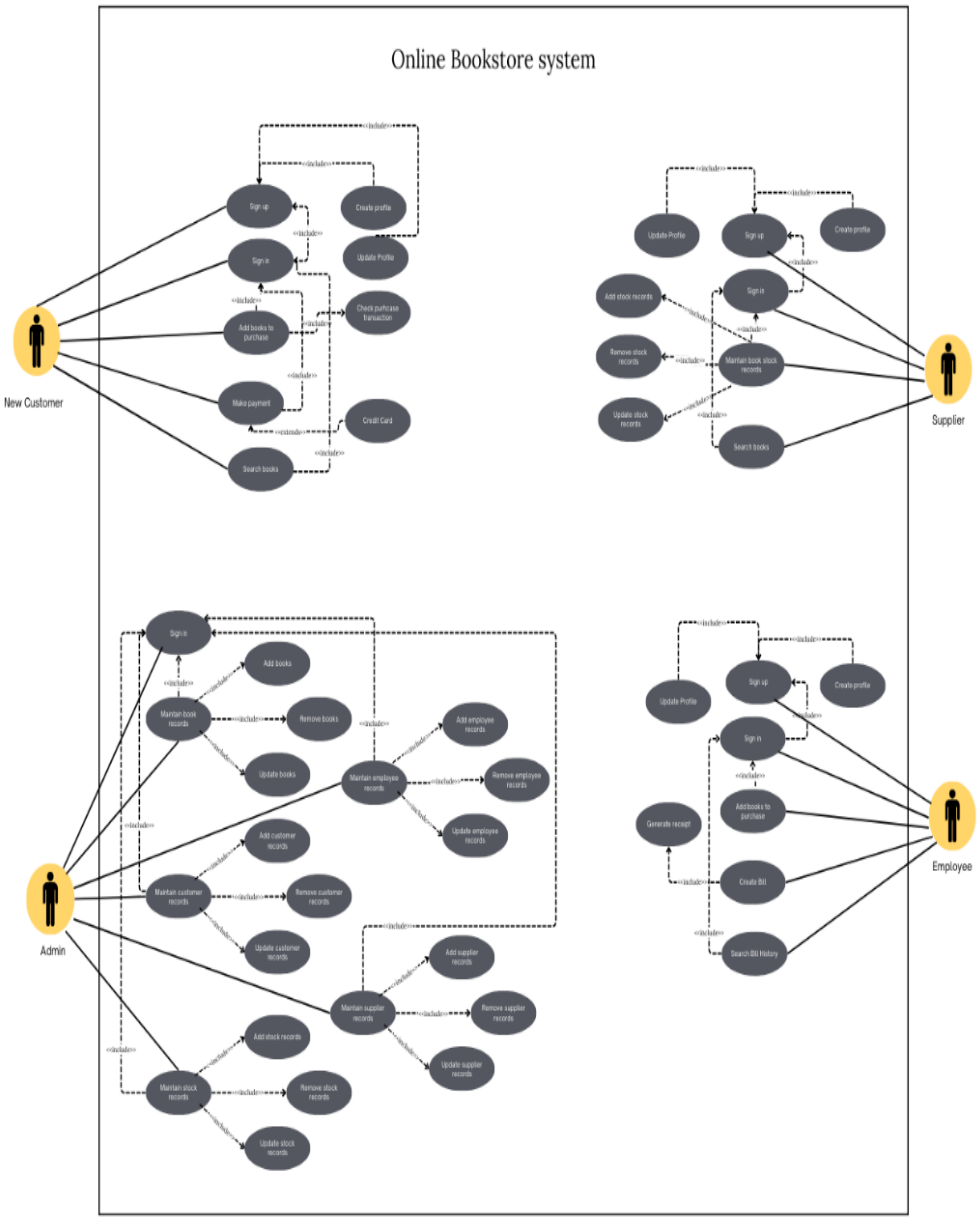
1. Customers can see the details of the enlisted books including book id, book title, author name, category, quantity, price and status.
2. A customer can search for books in two ways such as category wise and name wise.
3. Before ordering books, he needs to select its quantity.
4. He can see the total amount of the bill after selecting the quantity of books.
5. He has the ability to check his bill history.
6. A customer can see his account information, and modify except the user ID and Role.

User Story:

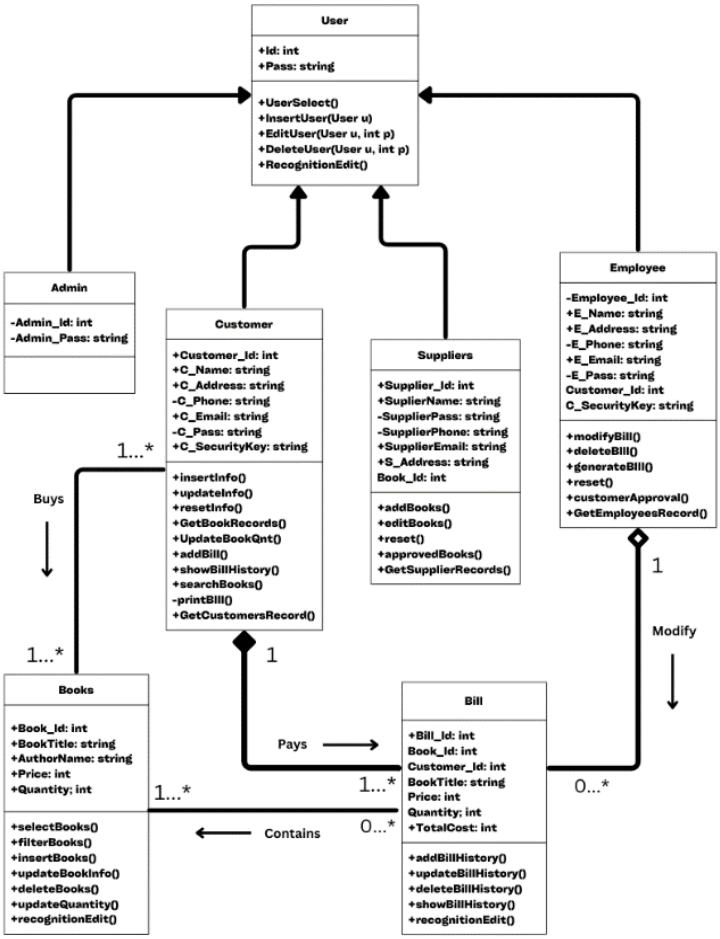
Use Case Name	Actor	User Story
Signing up	Customer, Supplier, Employee	As a customer, Supplier or Employee of the system, he/she can sign-up to the system to access the features of the system.
Log in	Admin, Customer, Supplier, Employee	After signing up, all of them can log in to the system. Admin doesn't need to sign up.
Search books	Customer, Supplier	Customer can search for books to purchase. Supplier can search for books for adding new books.
Add books to purchase	Customer, Employee	Customer can add books to purchase. Customer can also add books to purchase through an Employee.
Cancel purchased books	Employee	Customer can cancel the purchased books through Employee.
Make Payment	Customer	Customer can make payment.
See Bill History	Admin	Admin can view bill history & delete.
Maintain book records	Admin	Admin can maintain book records by adding, removing and updating.
Maintain employee records	Admin	Admin can maintain employee records by adding new employees, removing.

Maintain customer records	Admin	Admin can maintain customer records by adding, removing.
Maintain supplier records	Admin	Admin can maintain supplier records.
Maintain stock records	Admin	Admin can maintain stock records by adding, removing & updating stocks.

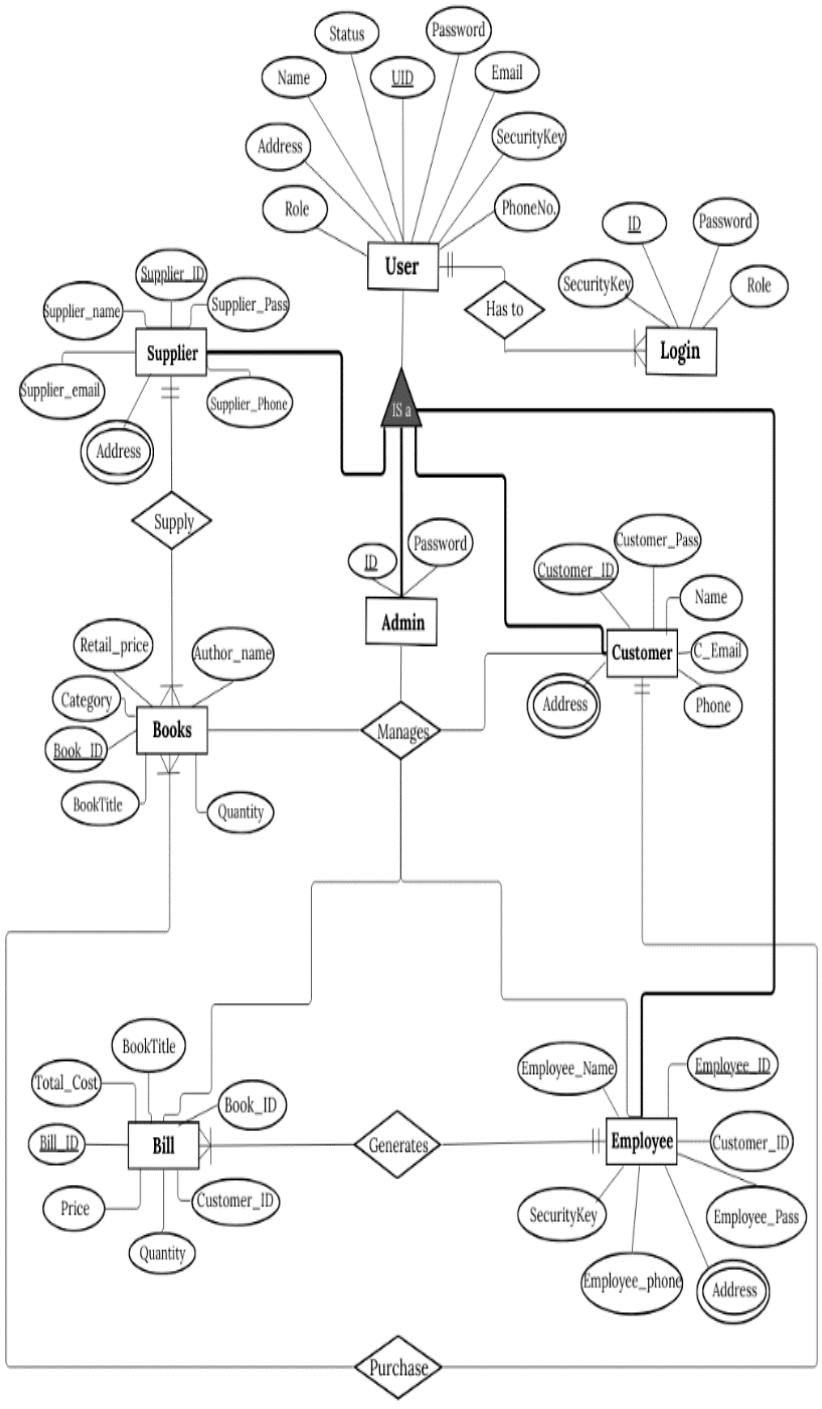
Use case diagram:



Class diagram:



E-R diagram:


Status
Password
Name
UID
Email
Address
SecurityKey
Role
PhoneNo.
User
ID
Password
SecurityKey
Role
Has to
Login
Supplier_ID
Supplier_name
Supplier_Pass
Supplier
Supplier_email
Supplier_Phone
Address
IS a
Supply
ID
Password
Admin
Customer_ID
Customer_Pass
Name
Customer
C_Email
Address
Phone
Retail_price
Author_name
Category
Book_ID
Books
BookTitle
Quantity
Manages
BookTitle
Total_Cost
Book_ID
Bill_ID
Bill
Price
Customer_ID
Quantity
Generates
Employee_Name
Employee_ID
Employee
Customer_ID
SecurityKey
Employee_Pass
Employee_phone
Address
Purchase

User Interface Design:

Fig 1 : Loading Page

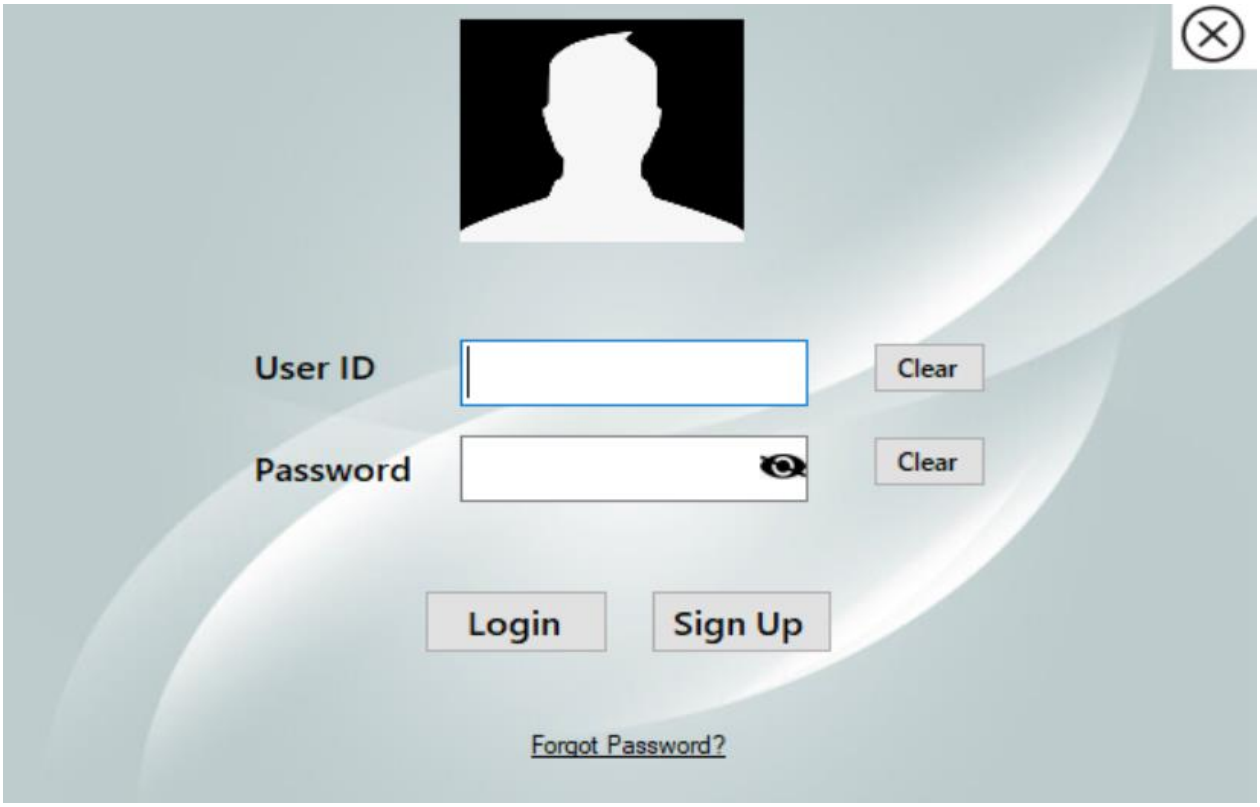


Fig 2 : Login Page

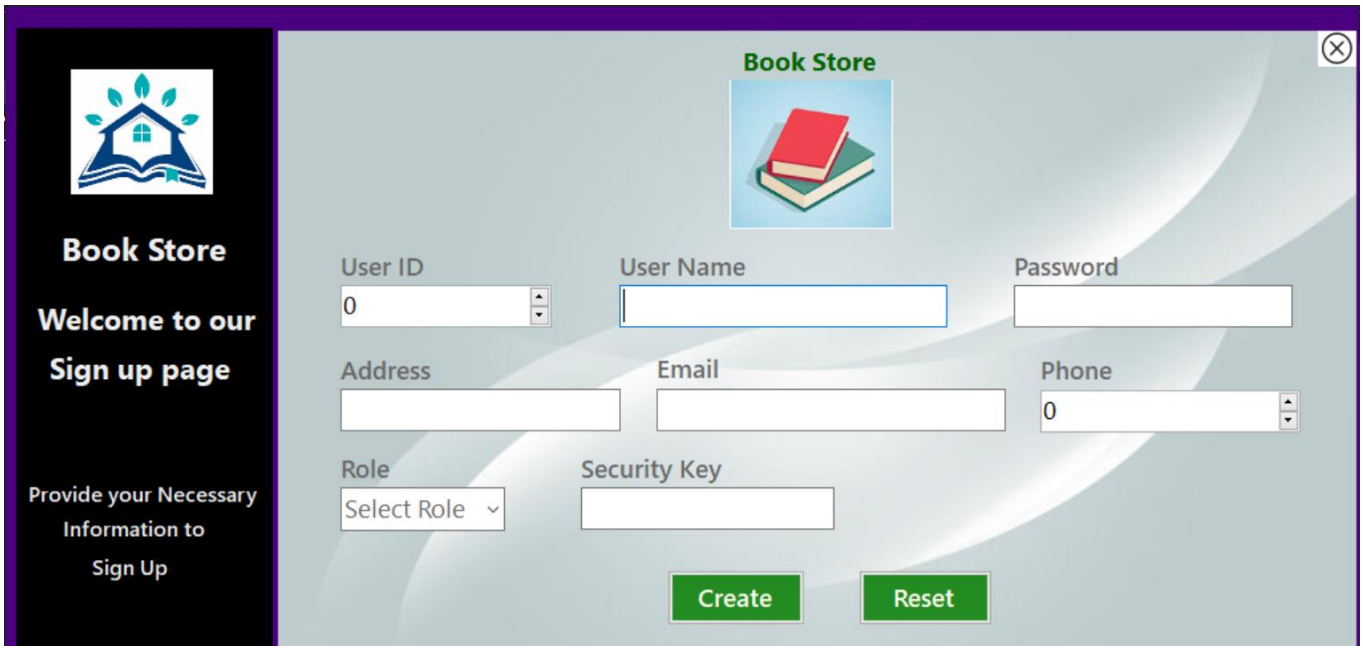


Fig 3 : Sign Up Page

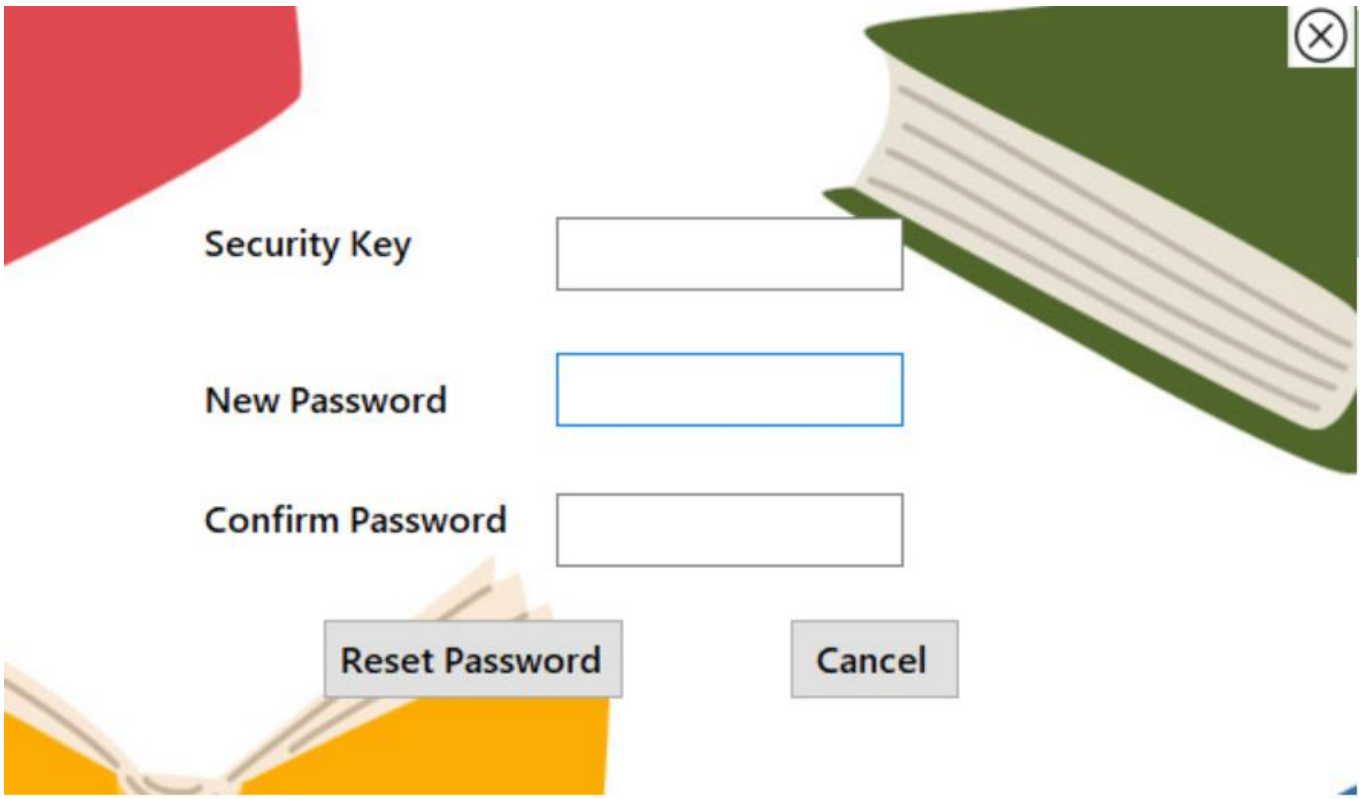


Fig 4 : Password Recovery Page

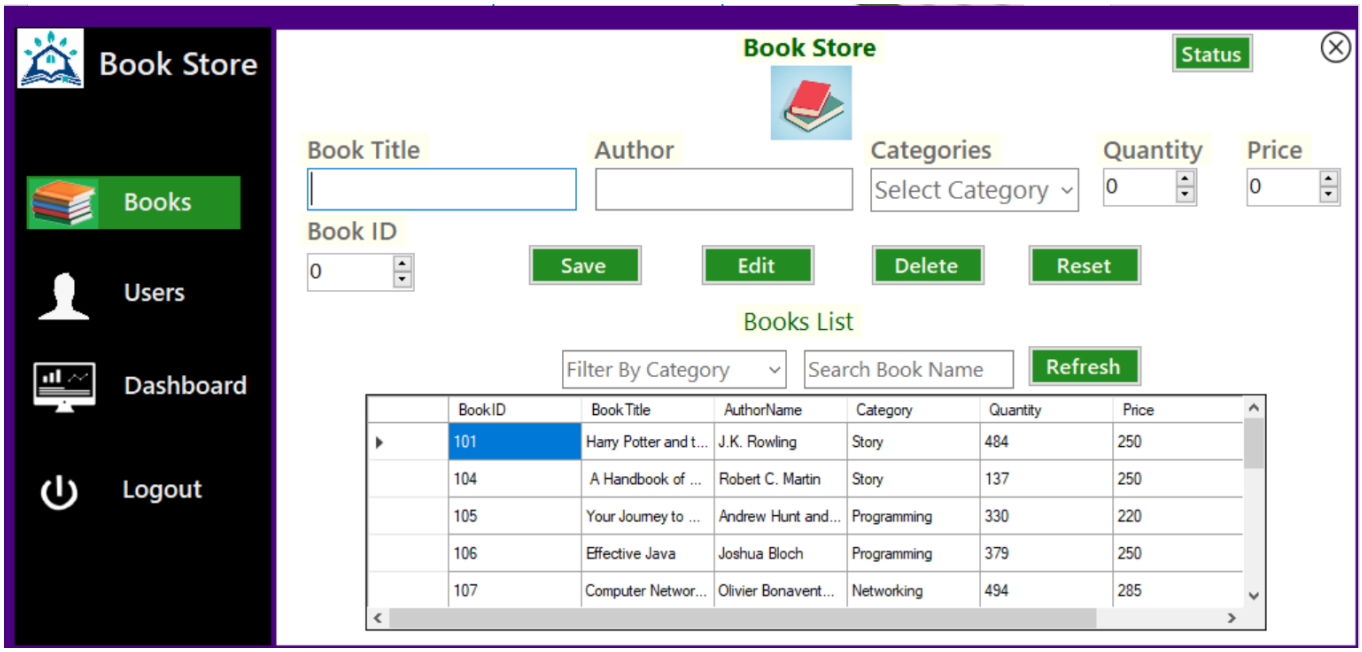


Fig 5 : Admin Menu Booklists View Page

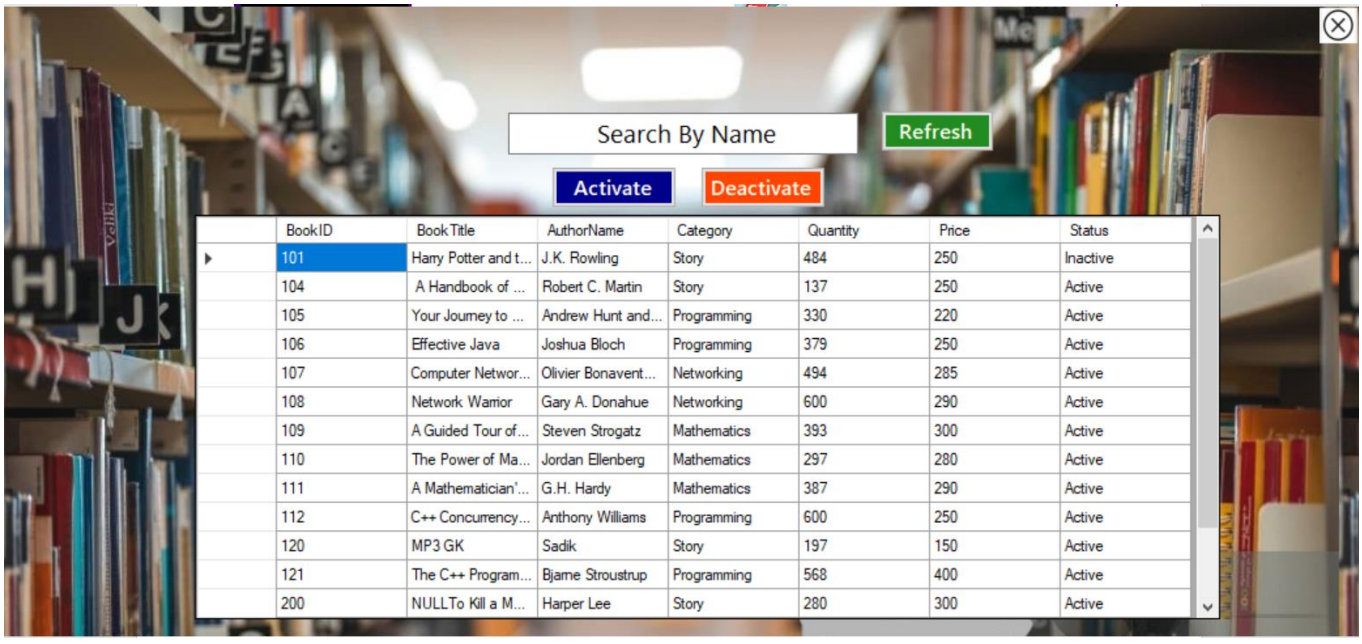


Fig 6 : Admin Menu Booklists Approve Page

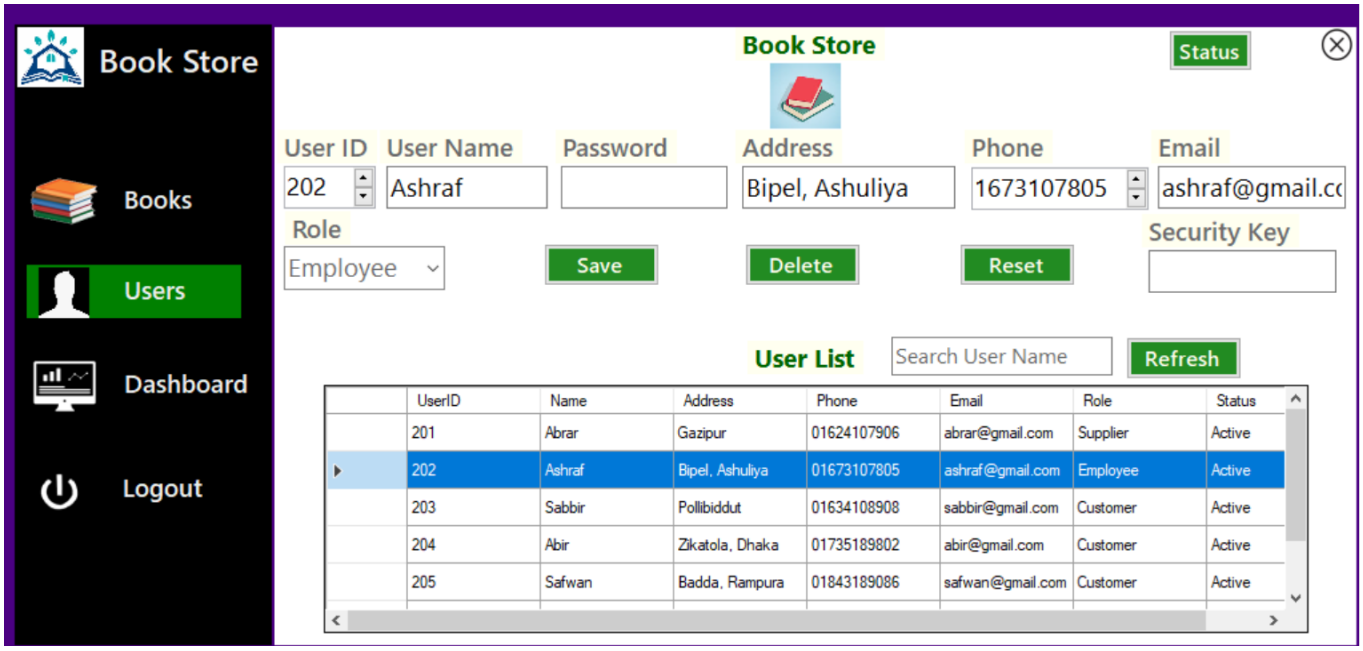


Fig 7 : Admin Menu User lists Oversee Page

Fig 8: Admin Menu User lists Approval Page

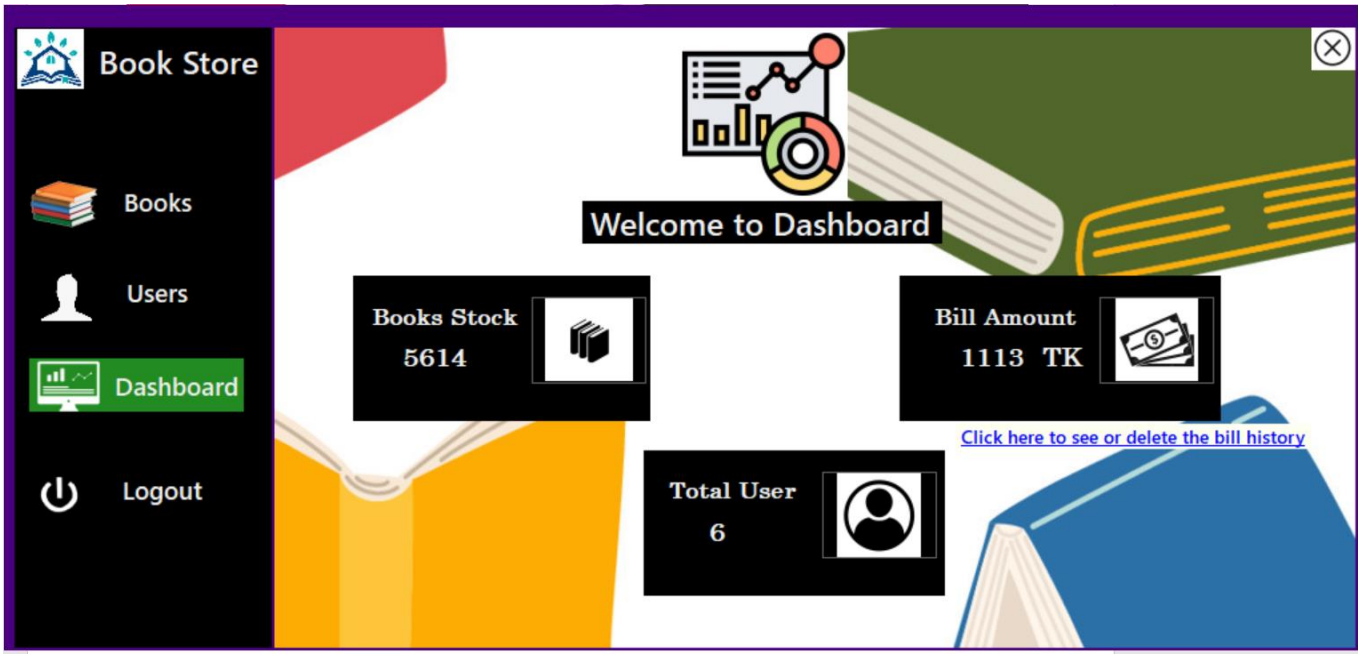


Fig 9: Admin Menu Dashboard Page

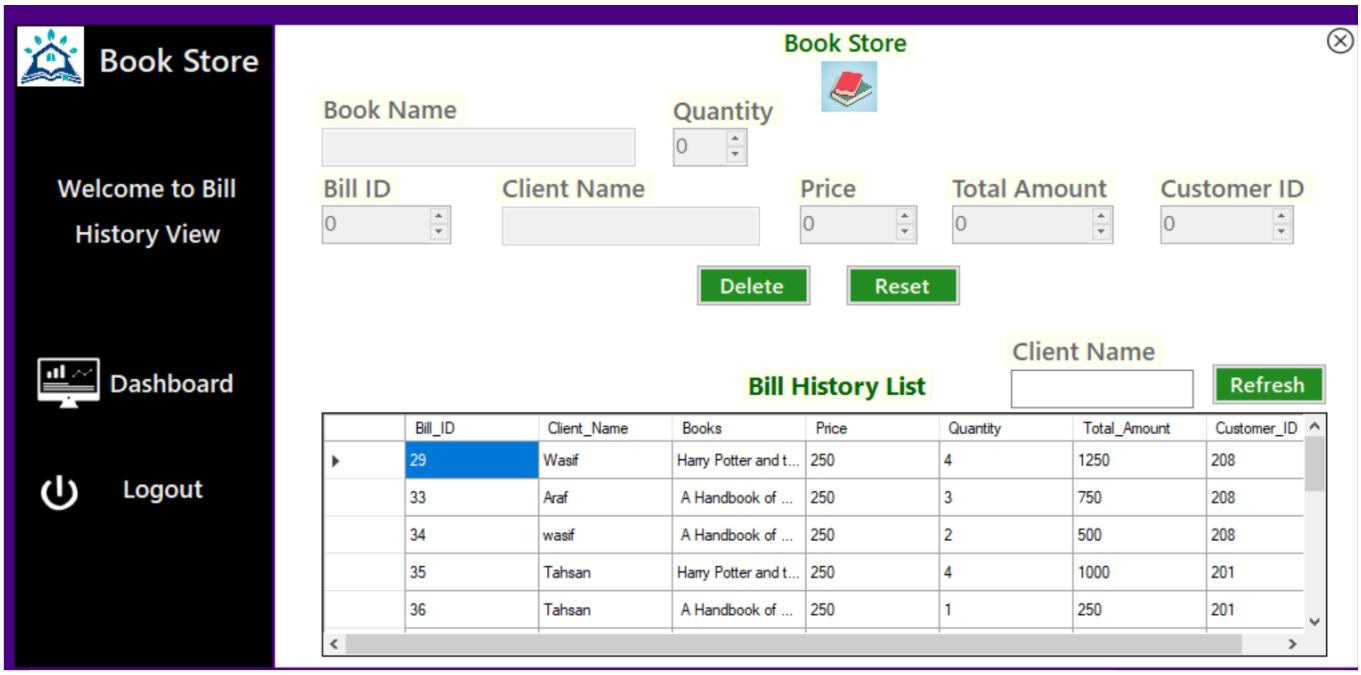


Fig 10: Admin Menu Bill History View Page

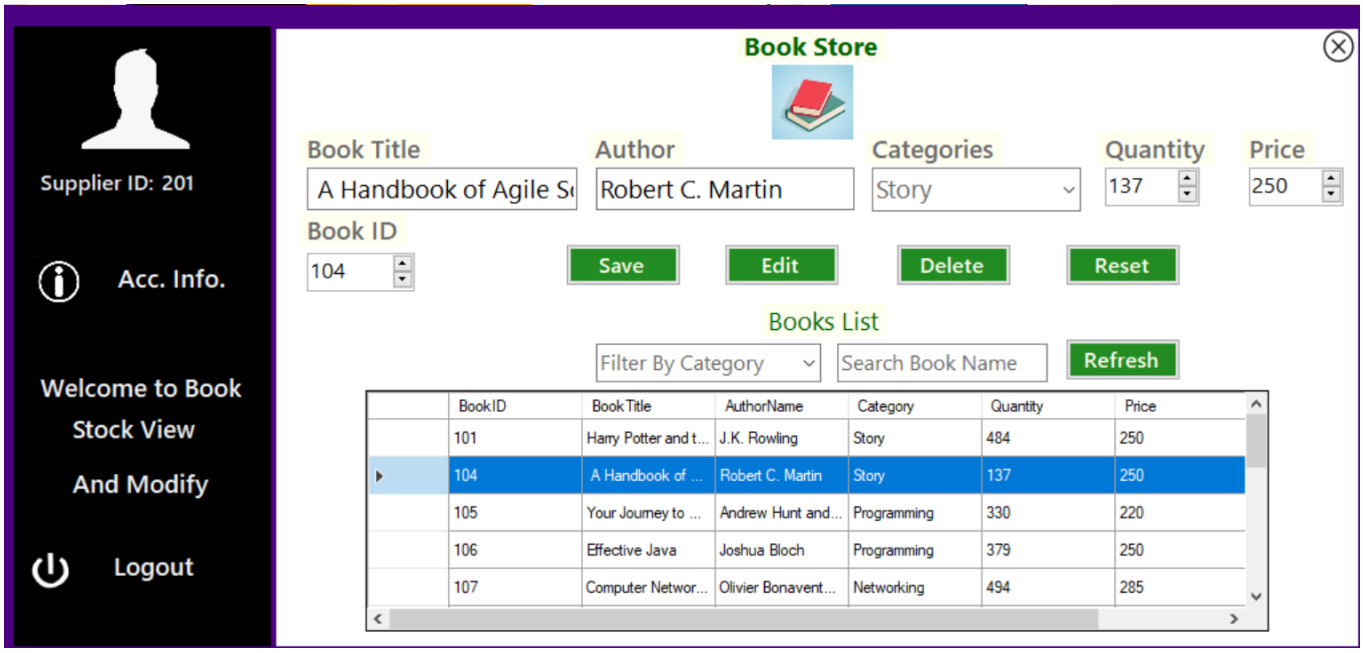


Fig 11: Supplier Menu Page

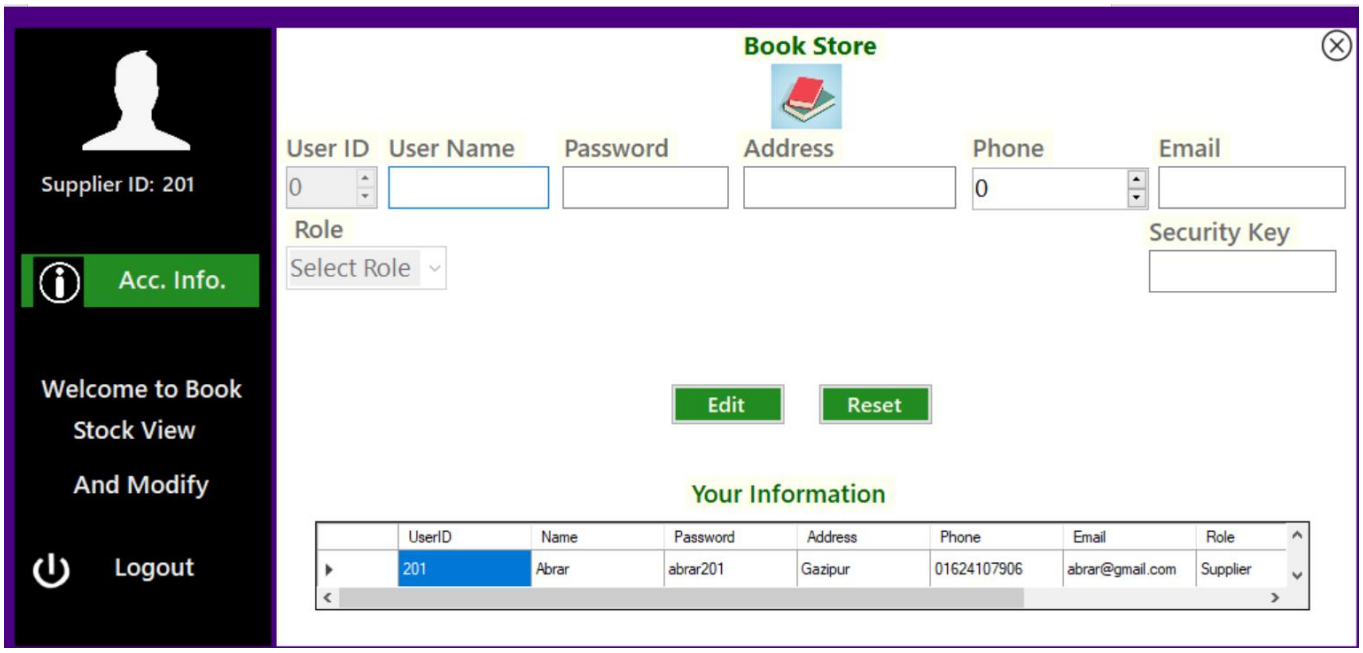


Fig 12: Supplier Menu Account Information Modification Page

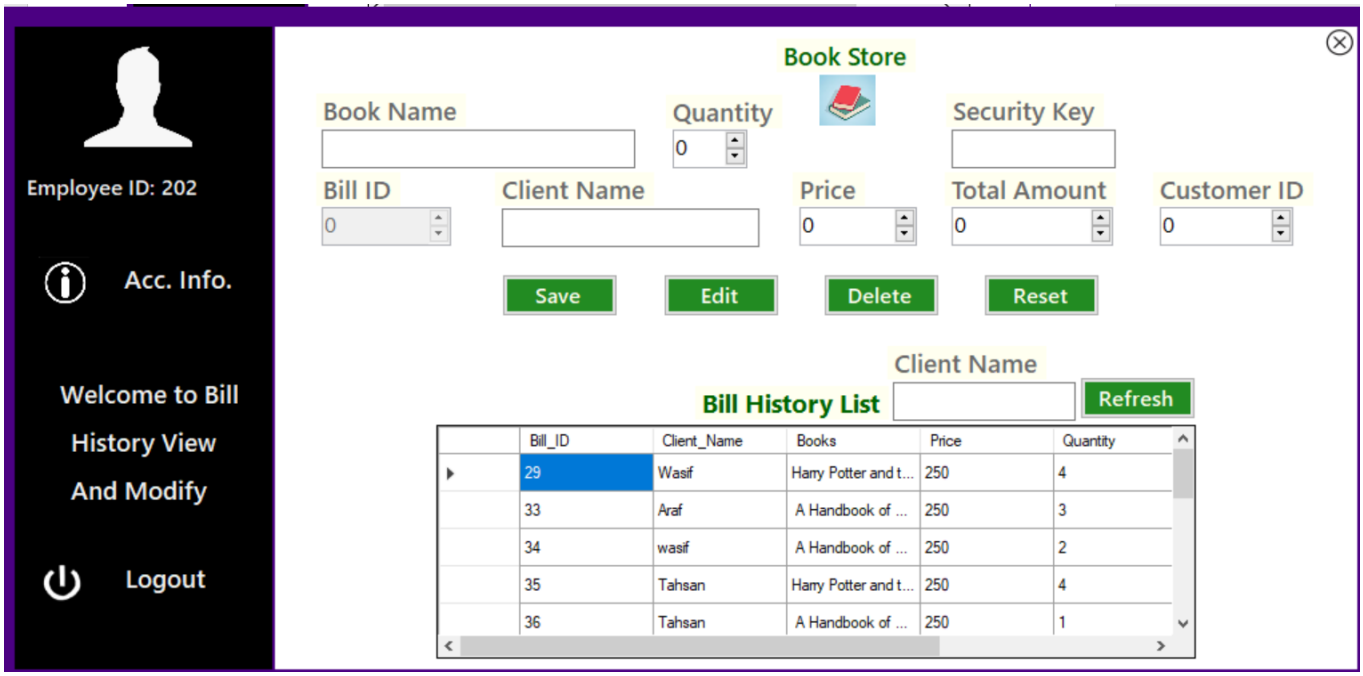


Fig 13: Employee Menu Page

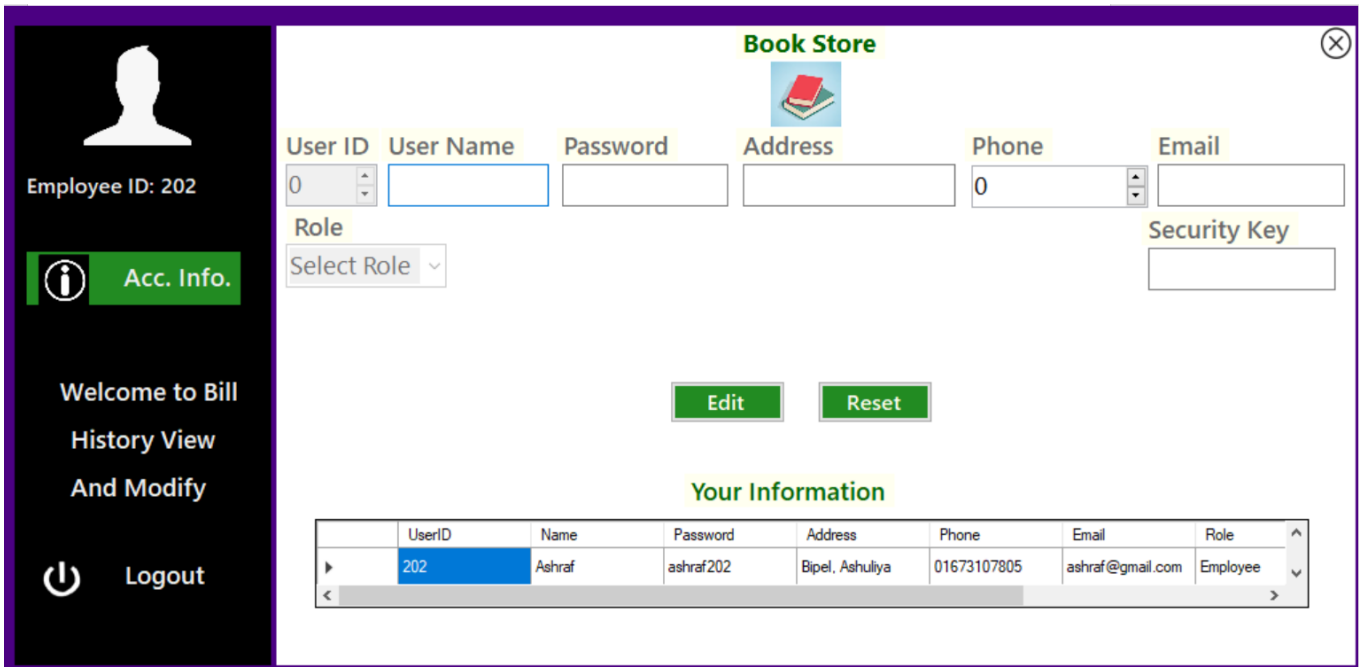


Fig 14: Employee Menu Account Information Modification Page

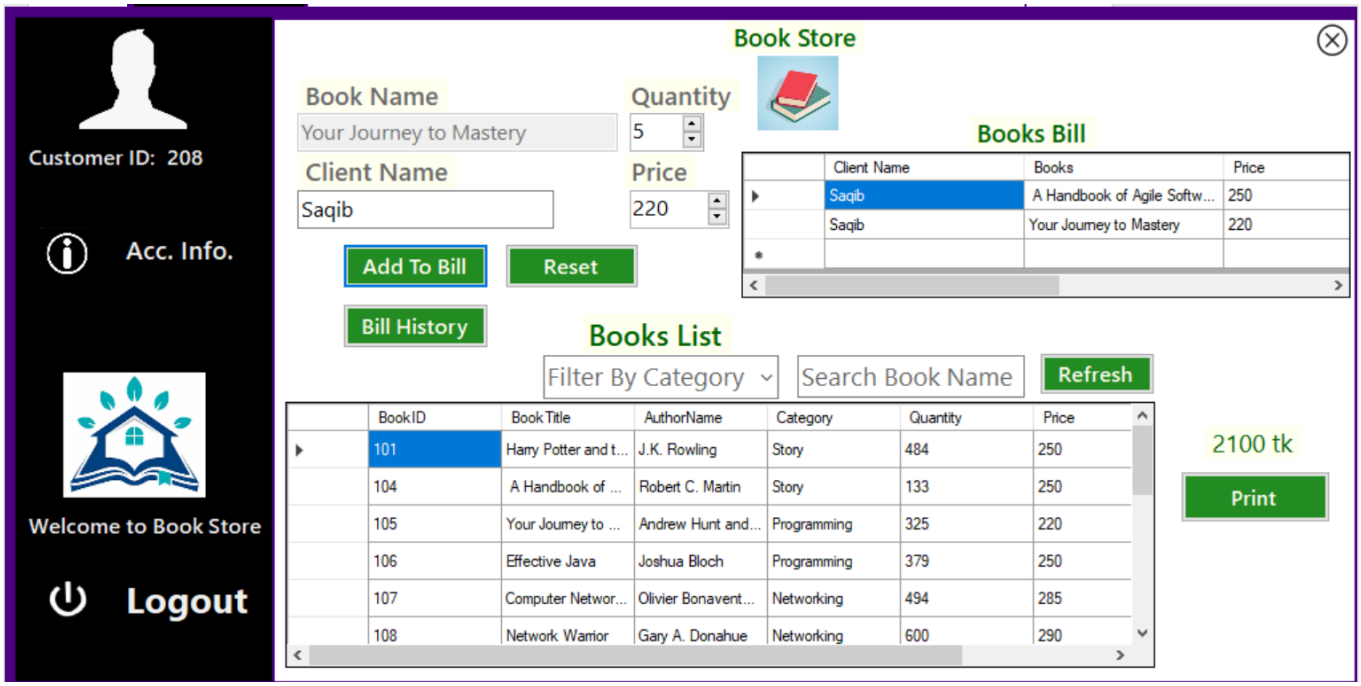


Fig 15: Customer Menu

Fig 16: Customer Menu Bill generated

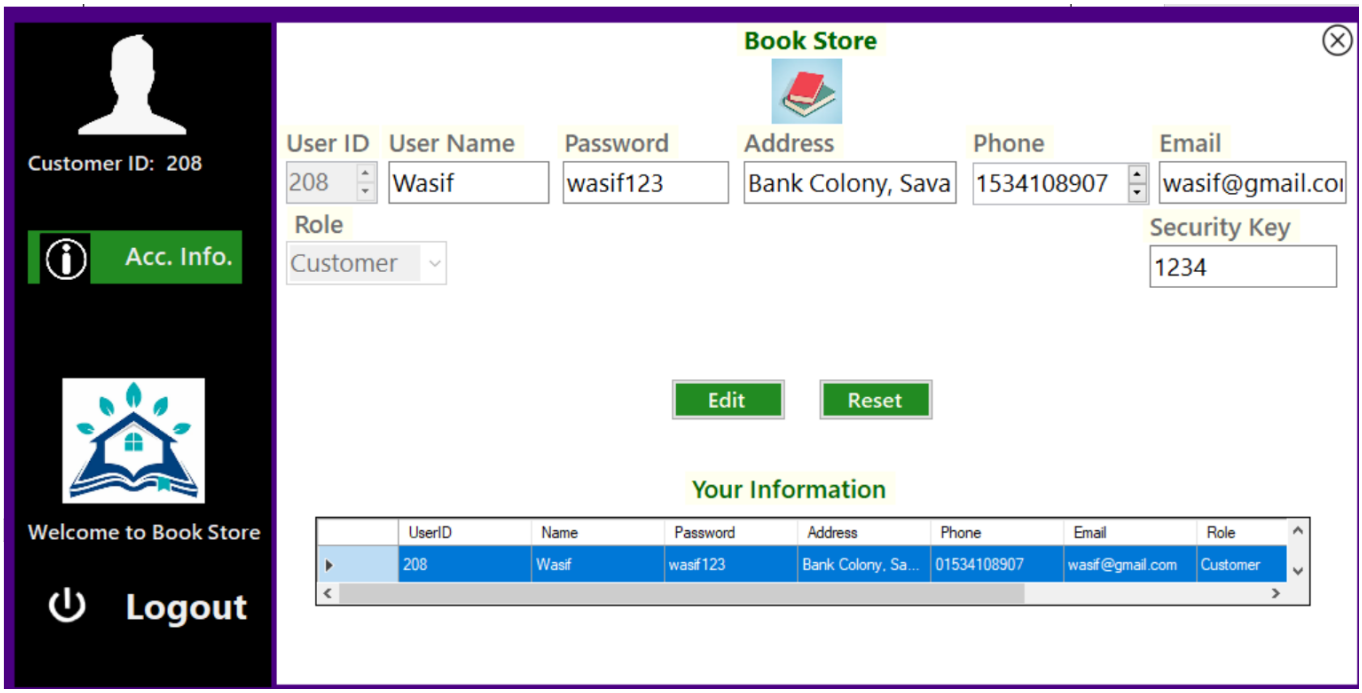


Fig 17: Customer Menu Account Information Modification Page

Data dictionary:

Login Table:

Column Name	Data Type	Allow Nulls
ID	int	☐
Name	varchar(50)	☐
Password	varchar(50)	☐
Role	varchar(50)	☐
SecurityKey	varchar(50)	☑
Status	varchar(50)	☐
		☐

User Table:

Column Name	Data Type	Allow Nulls
UserID	int	☐
Name	varchar(50)	☐
Password	varchar(50)	☐
Address	varchar(50)	☐
Phone	varchar(50)	☐
Email	varchar(50)	☐
Role	varchar(50)	☐
Status	varchar(50)	☐
SecurityKey	varchar(50)	☑

Book Table:

Column Name	Data Type	Allow Nulls
BookID	int	☐
BookTitle	varchar(50)	☐
AuthorName	varchar(50)	☐
Category	varchar(50)	☐
Quantity	int	☐
Price	int	☐
Status	varchar(50)	☑

Bill Table:

Column Name	Data Type	Allow Nulls
Bill_ID	int	☐
Client_Name	varchar(50)	☐
Books	varchar(50)	☐
Price	int	☐
Quantity	int	☐
Total_Amount	int	☐
Customer_ID	int	☑