

## **Dairy Delights**



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### **Course:**

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CSC-102 Programming Fundamentals

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## 1. Introduction:

Dairy Delights Business Application is designed to manage operations for a dairy products business. This application provides functionalities for four types of users: Admin, Employees, Delivery Boy and Customers. The application offers a user-friendly interface allowing efficient management of tasks related to inventory, sales, and customer interactions.

## Design

The whole project consists of 3 sub-projects:

1. **Project Library:** It contains all the classes of the entities in the Business Layer and a Data Layer to manage all entities' data. The Data Base folder in the Data Layer handles all data using Database connection and SQL queries. Likewise, The File Handling folder handles only the User data. The Data Layer Interfaces folder contains all the Interfaces of the Data Layer Classes. The use of C# language is in full effect in the back-end. This Library makes the base of the Application.
2. **Window Forms Project:** It contains the Front-End of the Application. User-Friendly Window Forms are linked with the Project Library for smooth running of the Application.
3. **Console Application:** It contains a Console App in which the CRUD of the User entity has been performed.

## OOP Pillars

1. **Encapsulation:** The Class Attributes have been made private and accessed through Getters & Setters. The Class Behaviors are public. The Parent Class Attributes are protected.
2. **Association:** The Customer Class has a Ticket Object to show Aggregation between Customer and Ticket classes so that when a customer buys a ticket, it is saved as an object in the customer class. The Ticket Class has an Object of Match class to show which match the ticket is of.

## 2. User Roles and Functionalities:

Dairy Delights supports four user roles: Admin, Employees, Delivery Boy and Customers. Each role has distinct functionalities tailored to their specific needs.

### I) Admin:

- 1) Add new User to the system.

- 2) Remove User from the system.
- 3) View Orders
- 4) Add More Products
- 5) Remove Product
- 6) Update Products
- 7) Check Review about Products from Customers
- 8) See Complains/ Suggestions from Worker.
- 9) Update Details About Worker.
- 10) Change Password

## **ii) Worker**

- 1) Add Products
- 2) Remove Products
- 3) Update Products
- 4) Check Reviews about Products
- 5) View Pending Orders
- 6) Write Complains / Suggestions to Admin
- 7) Update Details of Customer
- 8) View his details
- 9) Change Password

## **iii) Delivery Boy:**

- (1) View Pending Orders
- (2) View Order Details
- (3) Deliver Orders
- (4) View Personal Details
- (5) Change Password

## **iv) Customer:**

- (1) View Products
- (2) View Details of Products
- (3) View Reviews of Products
- (4) Give Reviews
- (5) View Own Cart
- (6) Add Items in Cart
- (7) Edit Cart
- (8) Buy Cart

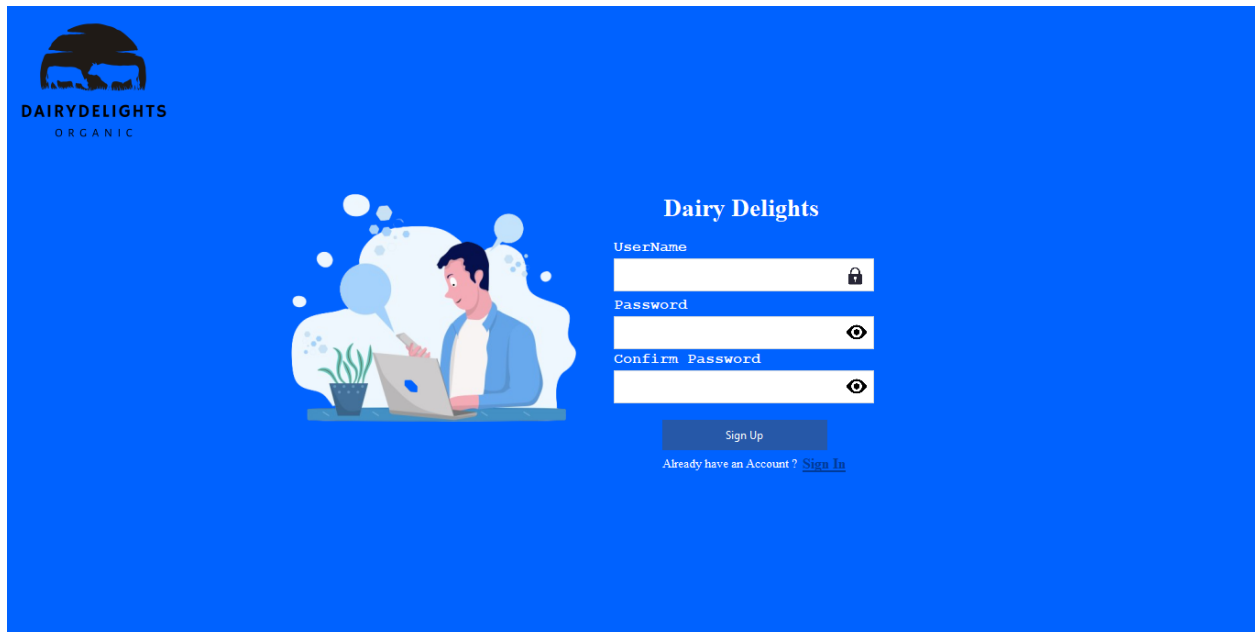
(9) View Orders.

(10) Change Password

As a	I want to perform	So that I can
Admin	Add new employee.	Add a new employee to the system.
	Remove employee.	Remove employee from the system.
	View Orders	See All The orders delivered or not
	Add Product	Add Product in the store
	Update Product	Update details quantity etc.
	Remove Products	Remove Products from Inventory
	Check Review	Check Reviews of Products
	See complains	See suggestion and problems of Worker
	Update Users	Update details of Users
	Change password.	Can change password of any username without even knowing old passwords.
Worker	Update Products	Update details of product
	Add products	Add new products for sale in inventory.
	Remove products	Remove products form the inventory
	View Orders	View Pending Orders
	Check Reviews About Products	Check Reviews form Customers.
	Remove discount.	Remove discount form the products.
	Update Customer	Change details of Customer
	Writes complain to Admin.	Writes the issues he is facing to the admin so that issues can be resolved.
	Change password.	He can change password but cannot change password of employee.
	View Orders	View Order from the Customers

Delivery Boy	Products Details	See products Details in Order
	Deliver Orders	Deliver orders to the Customer
	View His Own Details	See his details Bike number etc.
	Change Password	Change his own password
Customer	View products.	See products available for sale.
	View Reviews	See review of other Customers
	View Details	View the description and other details about products
	Give Feedback	Give review about products
	View Cart	View His Items
	Edit Cart	Change the cart add or remove things
	Buy	Buy the products
	Change password	Change login password
	Update Details	Update Address and phone number etc.

### 3. Wire Frames:



**DAIRYDELIGHTS**  
ORGANIC

**Dairy Delights**

UserName

Password

Confirm Password

Sign Up

Already have an Account ? [Sign In](#)

Figure 1 Sign Up Page

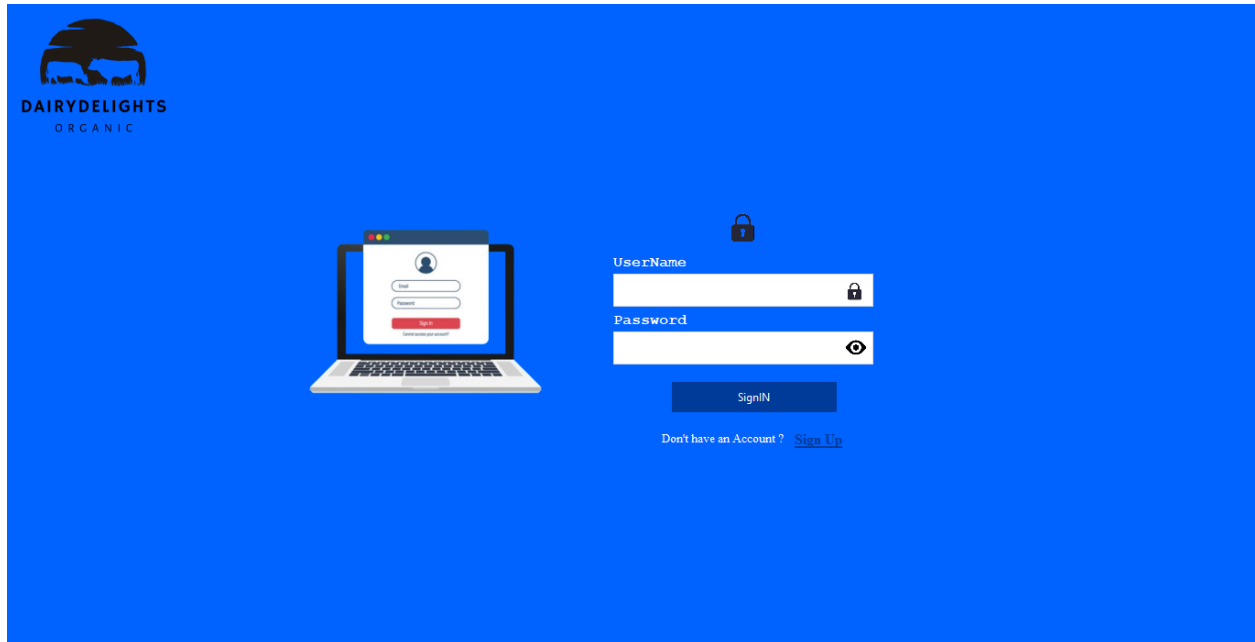



Figure 2 Sign In page



Figure 3 Admin Main Page





**Admin Menu**

Add User

Remove User

Orders

Add Product

Remove Product

Update Product

Check Review of Products

See Complains

Update Worker

Update Delivery Boy

Change Password

Logout

## Add User


UserName

Password

Role

Add

Figure 4Add User Admin



**Admin Menu**

Add User

Remove User

Orders

Add Product

Remove Product

Update Product

Check Review of Products

See Complains

Update Worker

Update Delivery Boy

Change Password

Logout

## Remove User

	UserName	Role
▶	Ahmad	Customer
	Ali	Worker
	Haji	Worker
	malik	Customer
	Muneeb	DeliveryBoy
	Sadi	Worker

UserName

Remove

Figure 5Remove User

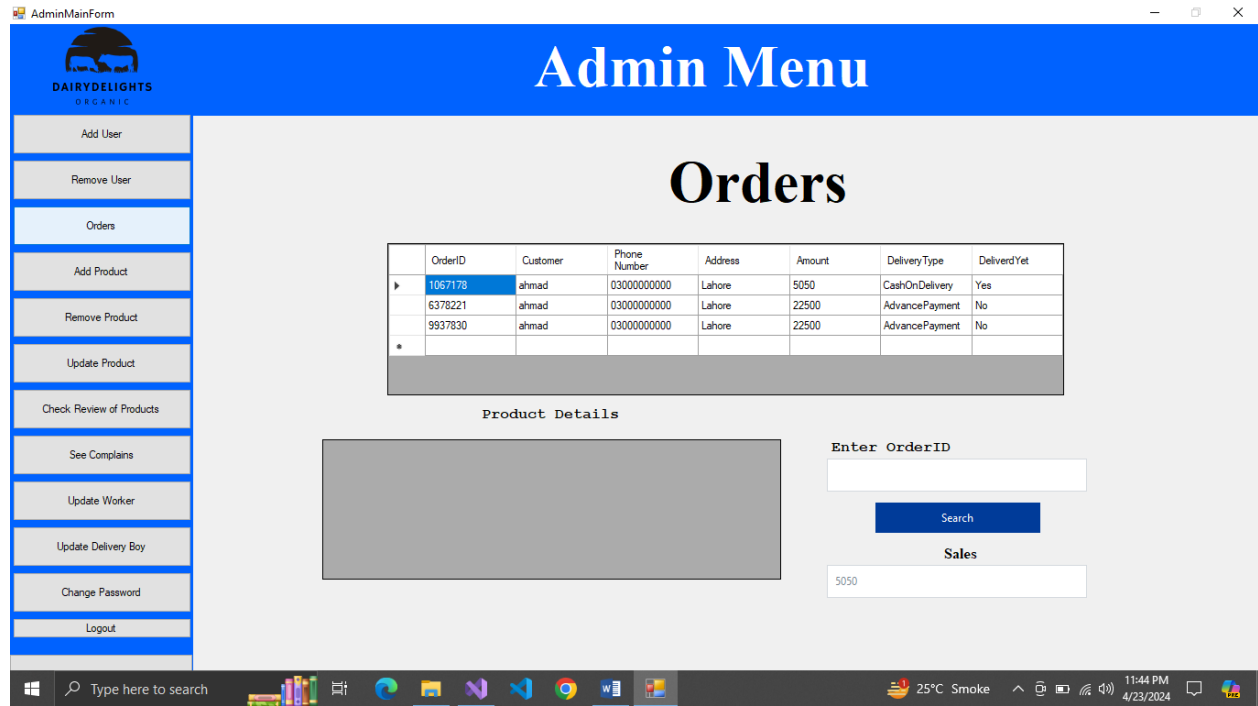


Figure 6orders

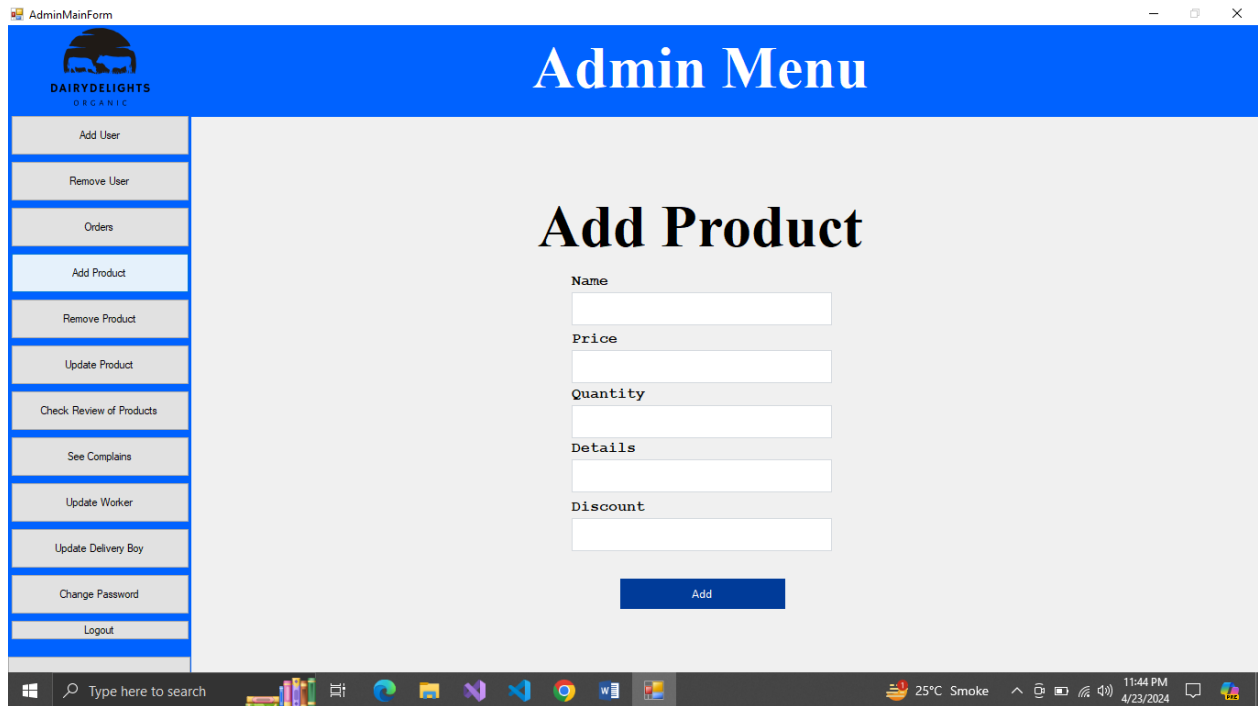


Figure 7Add Product

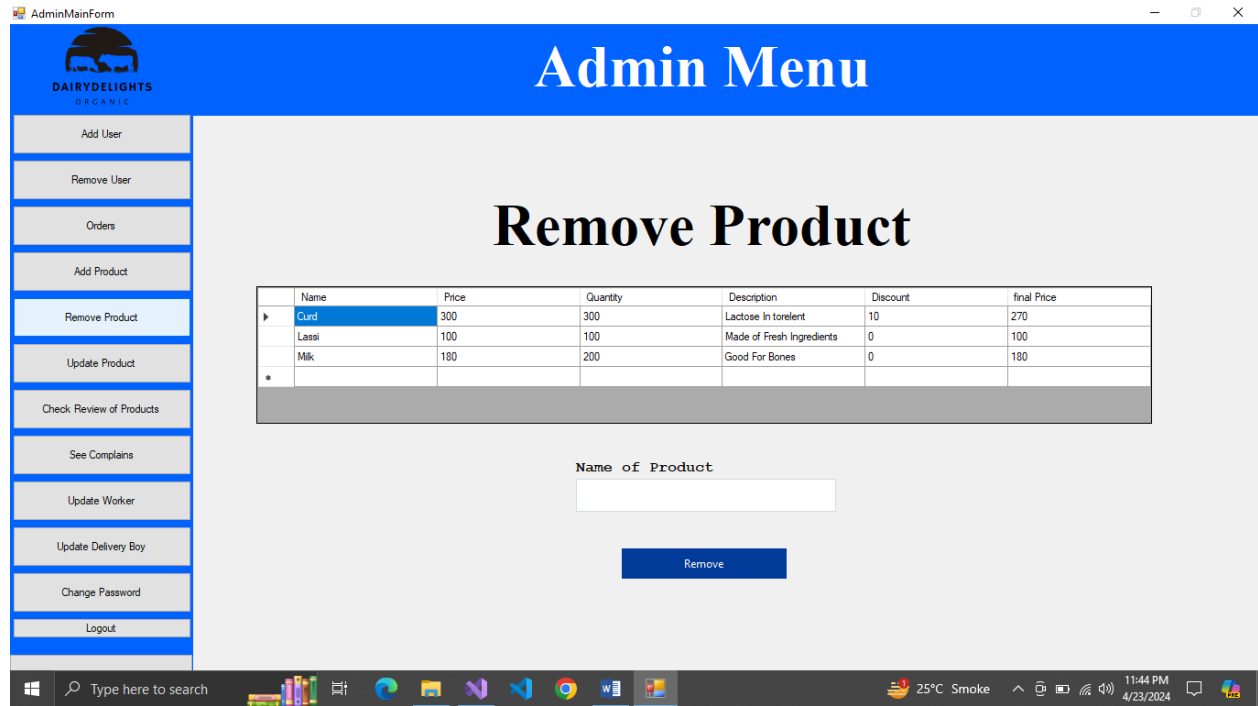


Figure 8 Remove Products

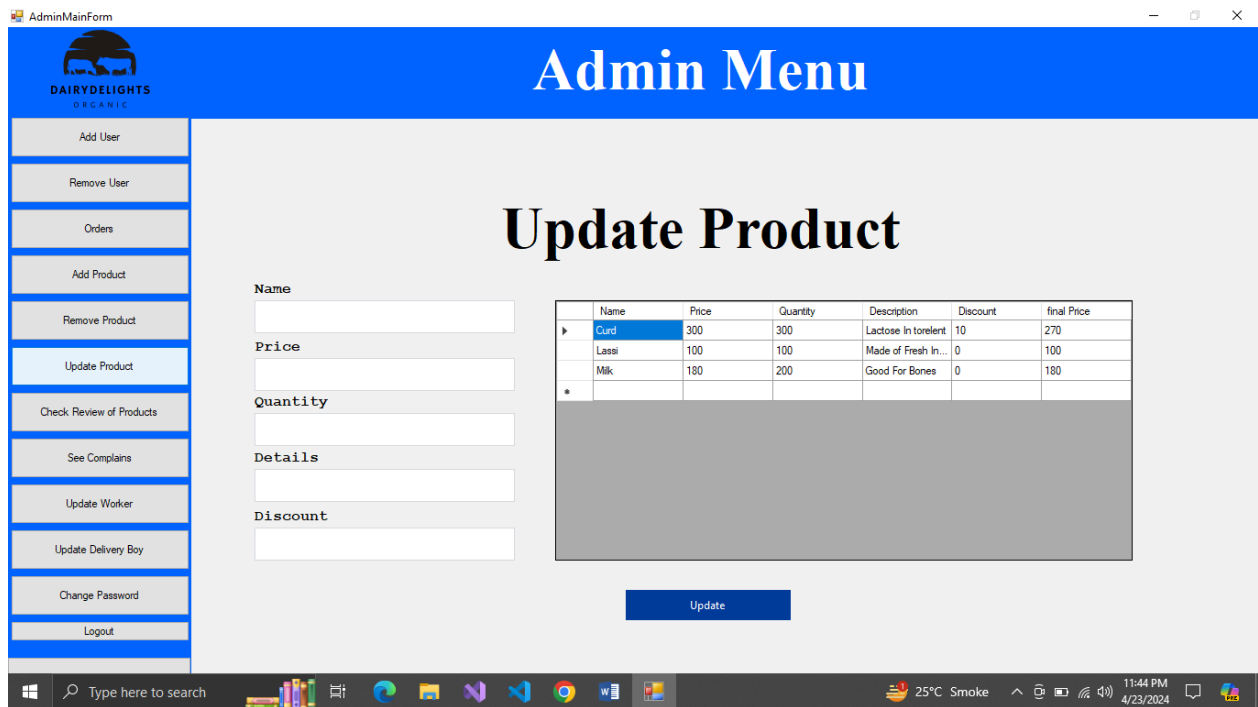


Figure 9 Update Products

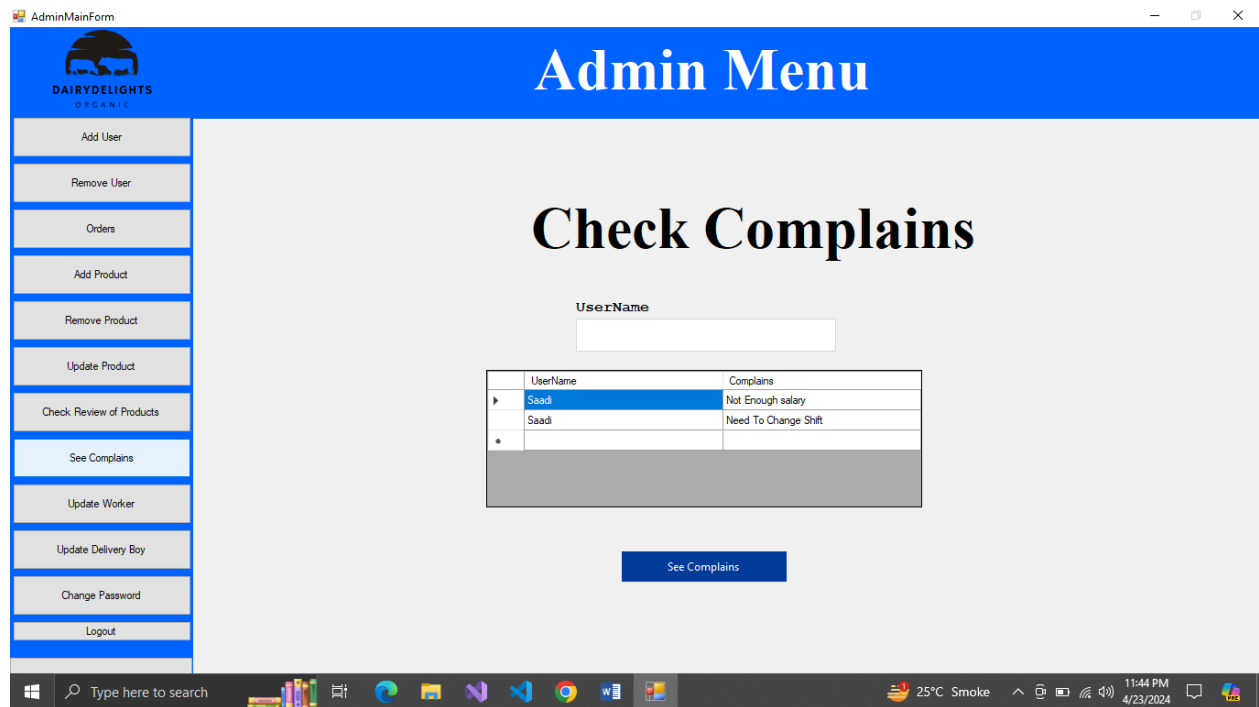
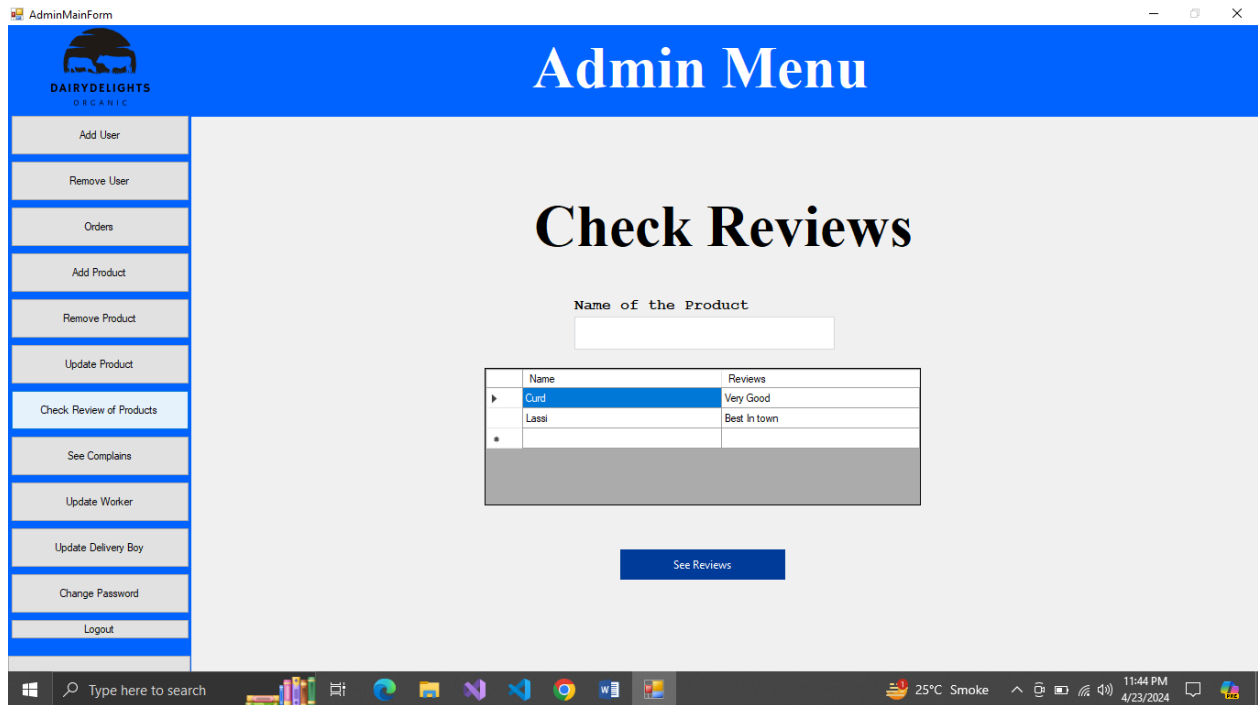


Figure 11 Check complains

AdminMainForm

# Admin Menu

Add User
Remove User
Orders
Add Product
Remove Product
Update Product
Check Review of Products
See Complains
Update Worker
Update Delivery Boy
Change Password
Logout

## Update Worker

Enter Username of which you wants to update information  
Only Enter Data In fields you want to update

UserName

Password

Bonus

Salary

	UserName	Password	salary	Bonus
▶	Ai	1234	100000	9500
	Haji	1234	0	0
	Saadi	1234	25000	10000
*				

Update

Type here to search
25°C Smoke
11:44 PM 4/23/2024

AdminMainForm

# Admin Menu

Add User
Remove User
Orders
Add Product
Remove Product
Update Product
Check Review of Products
See Complains
Update Worker
Update Delivery Boy
Change Password
Logout

## Update Delivery Man

Enter Username of which you wants to update information  
Only Enter Data In fields you want to update

UserName

Password

Phone Number

Bike Number

Salary

	UserName	Password	BikeNumbe	PhoneNum	salary
▶	saadi	1234	LEN 3487	0305459...	10000
	Muneeb	1234	LEN 1230	0316491...	30000
*					

Update

Type here to search
25°C Smoke
11:44 PM 4/23/2024

Figure 13 Update Delivery Boy

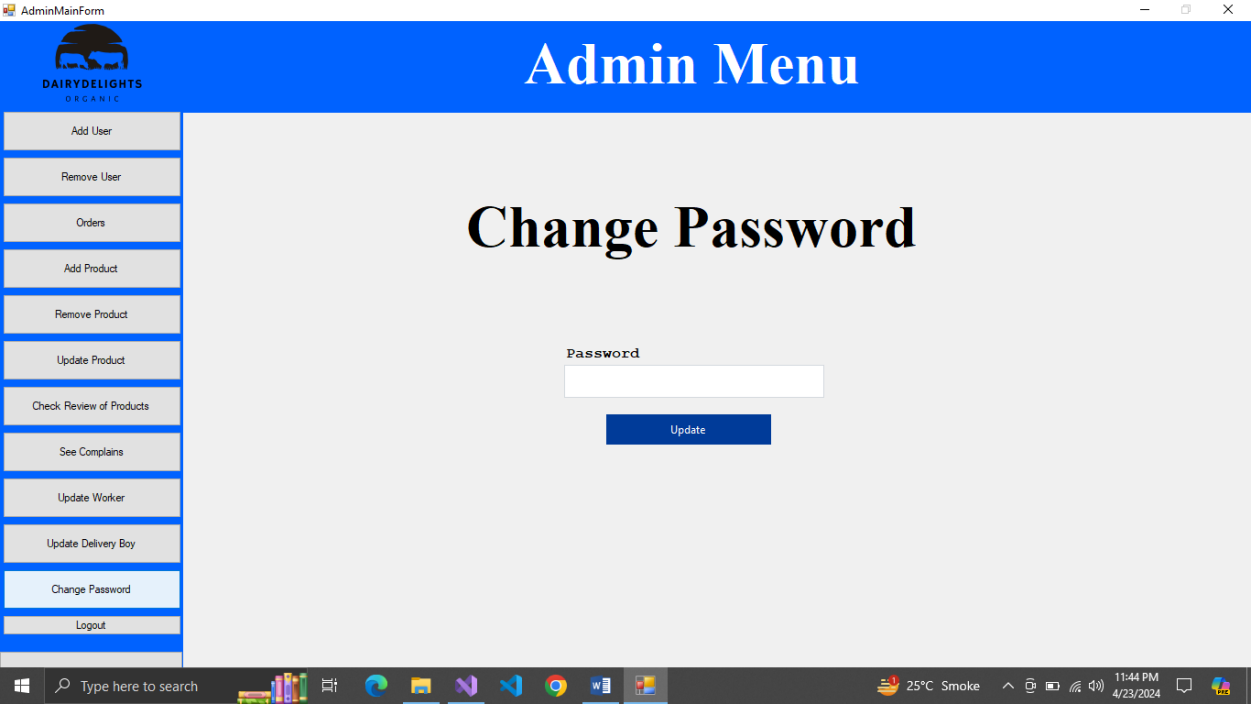


Figure 16Worker Main Menu

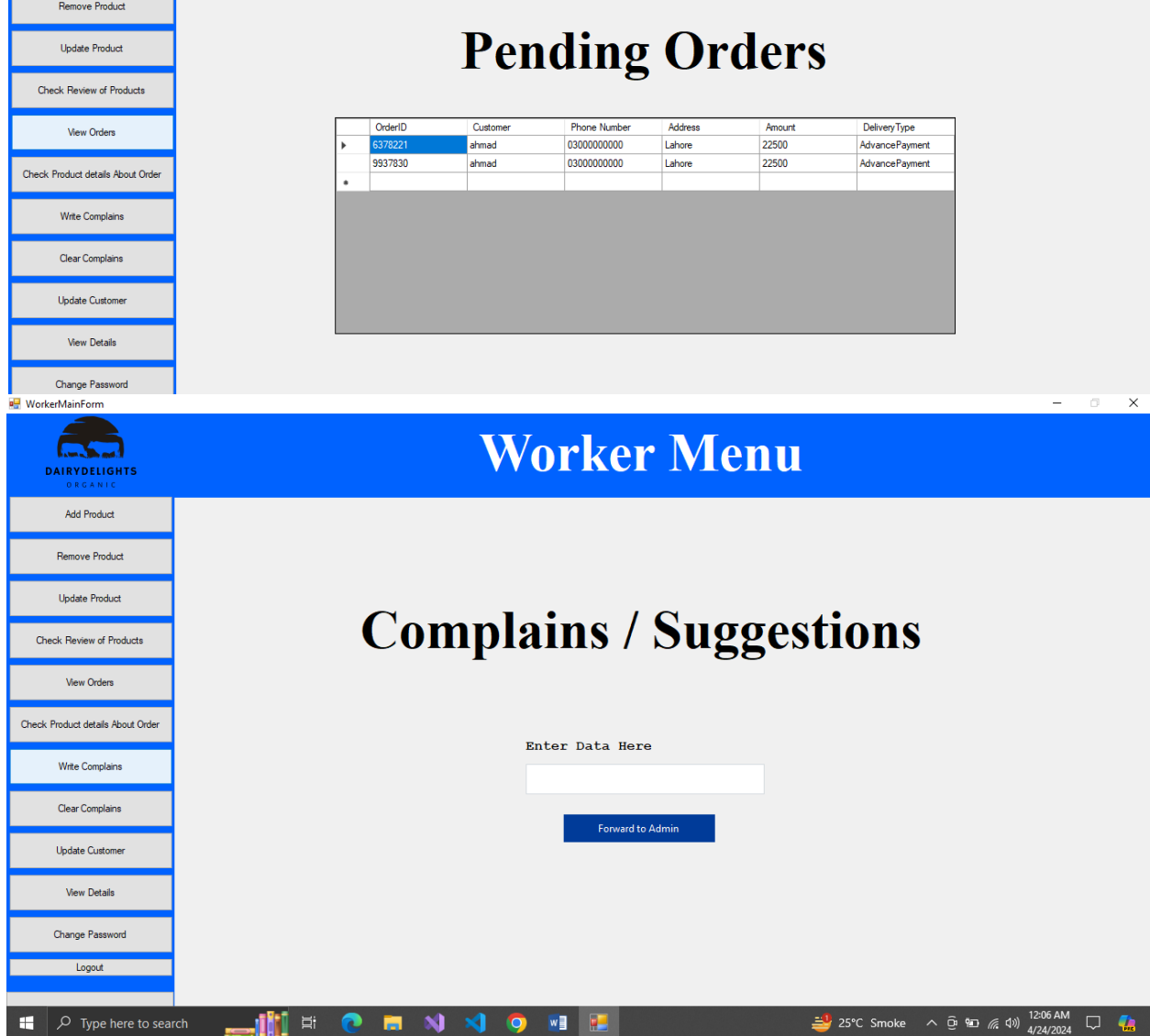


Figure 17Add Complains

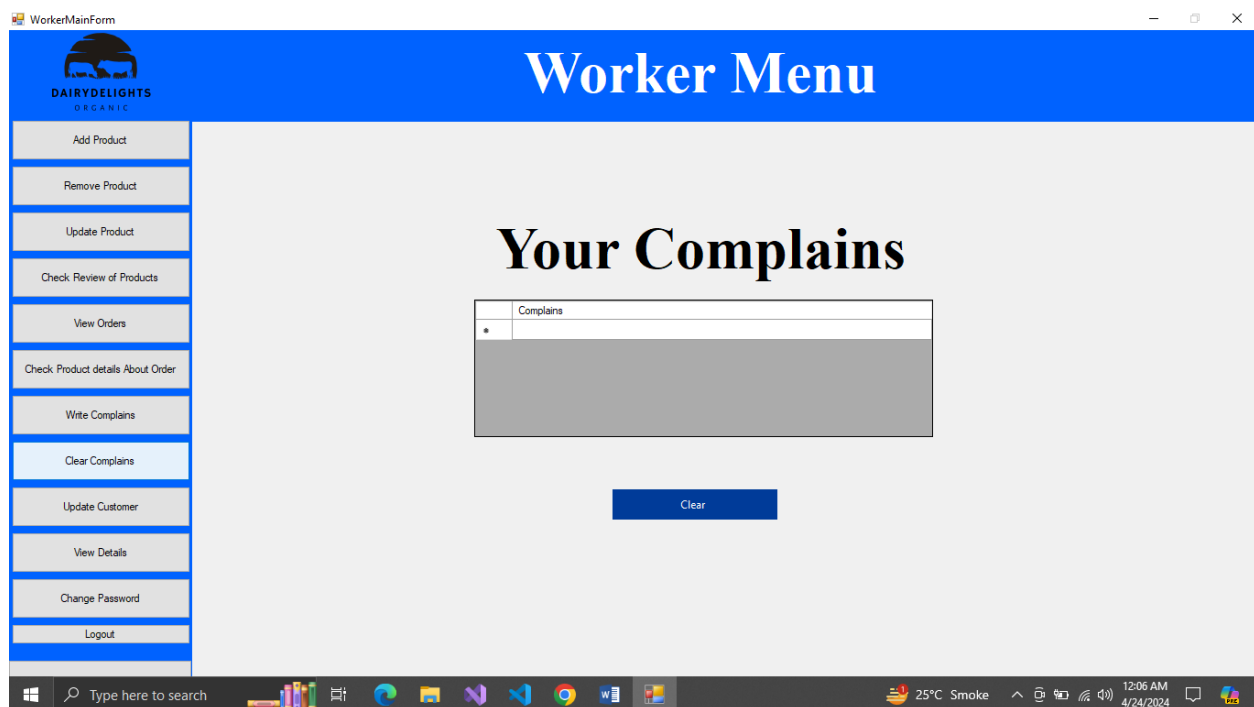


Figure 18view and Delete Complains

The screenshot shows a web application window titled "WorkerMainForm" with a blue header bar containing the "DAIRYDELIGHTS ORGANIC" logo and the text "Worker Menu". A vertical sidebar on the left contains a list of menu items: "Add Product", "Remove Product", "Update Product", "Check Review of Products", "View Orders", "Check Product details About Order", "Write Complains", "Clear Complains", "Update Customer", "View Details", "Change Password", and "Logout". The "Change Password" item is highlighted. The main content area has a light gray background and features the heading "Change Password" in large black font. Below the heading are two input fields: "UserName" and "New Password", followed by a blue "Update" button. The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray information including "25°C Smoke" and the date "4/24/2024".

Figure 19Update Customer

The screenshot shows the same web application window as Figure 19, but with the "View Details" menu item highlighted in the sidebar. The main content area displays the heading "Details" in large black font. Below the heading are two input fields: "Salary" with the value "9500" and "Bonus" with the value "100000". The Windows taskbar at the bottom is identical to the previous screenshot.

Figure 20View details Worker





Figure 21 Delivery Boy Main Menu

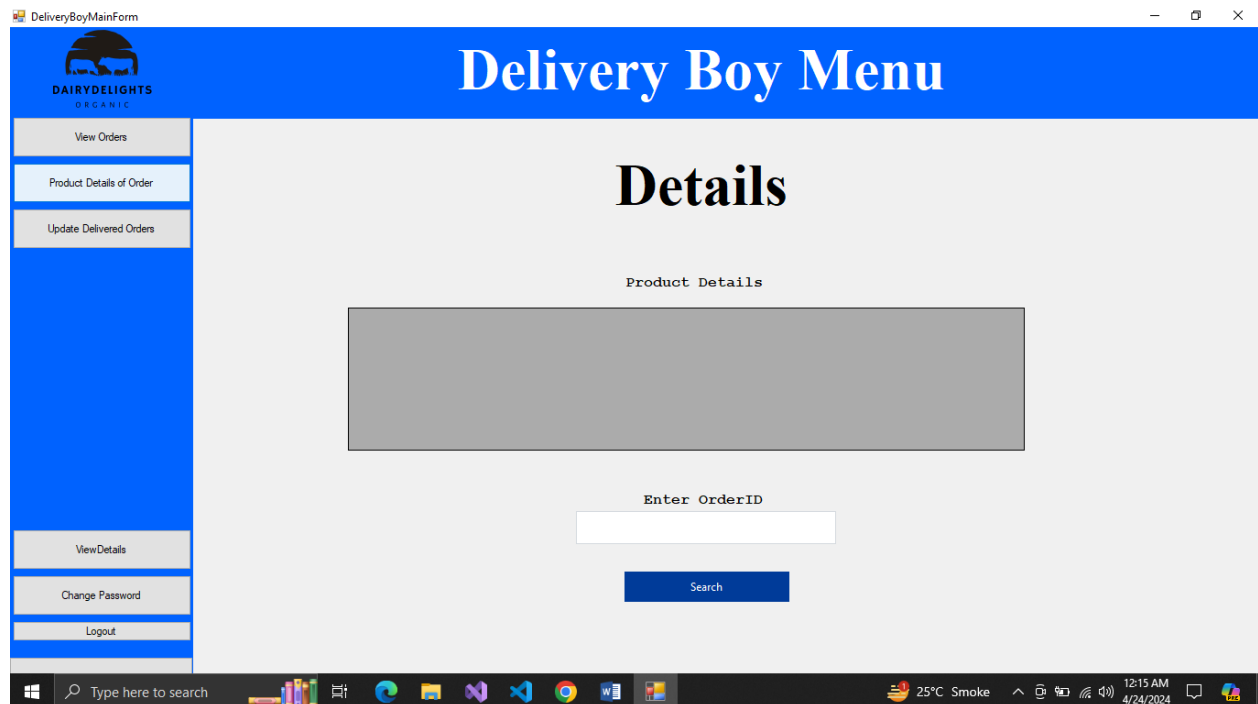


Figure 22 View Product details in Order

The screenshot shows a web application window titled "DeliveryBoyMainForm". The header is blue with the "DAIRYDELIGHTS ORGANIC" logo on the left and the title "Delivery Boy Menu" in white. A left sidebar contains three buttons: "View Orders", "Product Details of Order", and "Update Delivered Orders". The main content area has a large heading "Update Delivered Orders" and a form with a label "OrderId", a text input field, and an "Update" button. The Windows taskbar at the bottom shows the time as 12:15 AM on 4/24/2024.

DeliveryBoyMainForm

DAIRYDELIGHTS ORGANIC

Delivery Boy Menu

View Orders

Product Details of Order

Update Delivered Orders

Update Delivered Orders

OrderId

Update

ViewDetails

Change Password

Logout

Type here to search

25°C Smoke

12:15 AM 4/24/2024

Figure 23 Deliver Order

The screenshot shows the same web application window, but the main content area displays the heading "Details" and a form with three sections: "Salary" with a value of 30000, "Bike Number" with a value of LEN 1230, and "Phone Number" with a value of 03164913511. The sidebar and header are identical to the previous figure. The Windows taskbar at the bottom shows the time as 12:15 AM on 4/24/2024.

DeliveryBoyMainForm

DAIRYDELIGHTS ORGANIC

Delivery Boy Menu

View Orders

Product Details of Order

Update Delivered Orders

Details

Salary

30000

Bike Number

LEN 1230

Phone Number

03164913511

ViewDetails

Change Password

Logout

Type here to search

25°C Smoke

12:15 AM 4/24/2024

Figure 24 View Details Delivery Boy



Figure 25Customer Main Page

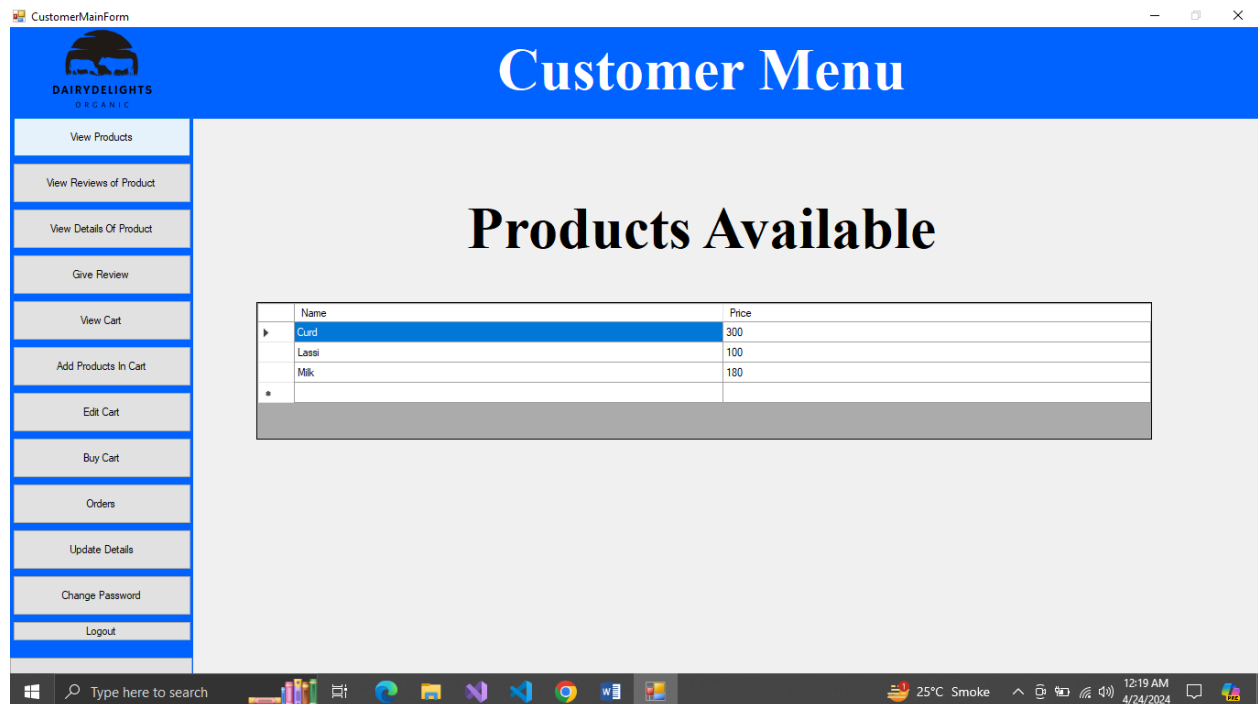


Figure 26View Products Available for Sale

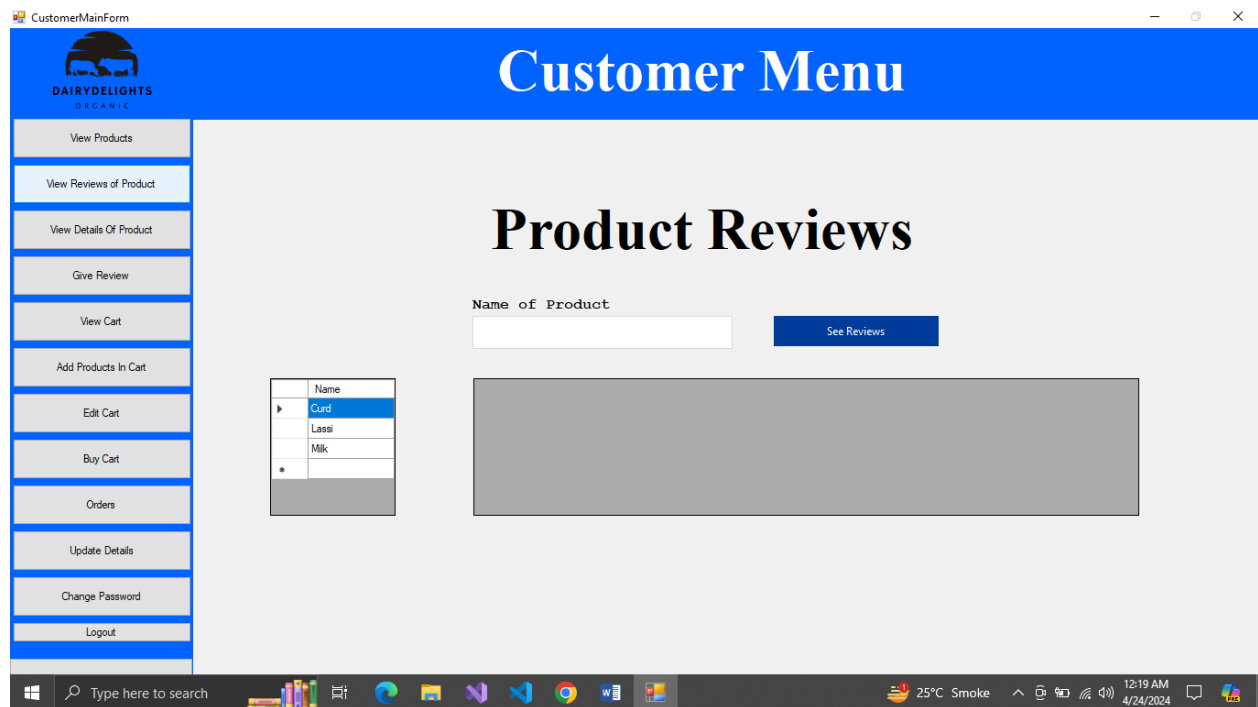


Figure 27View Reviews about Product

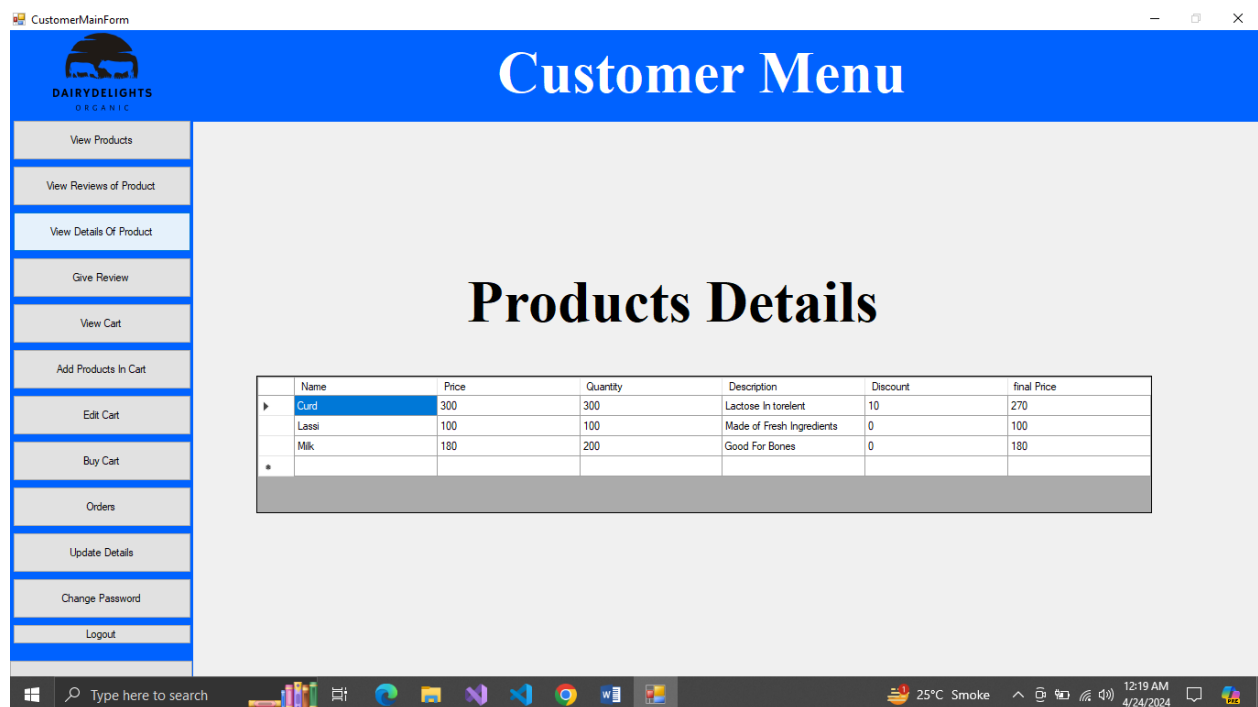


Figure 28View Product Details

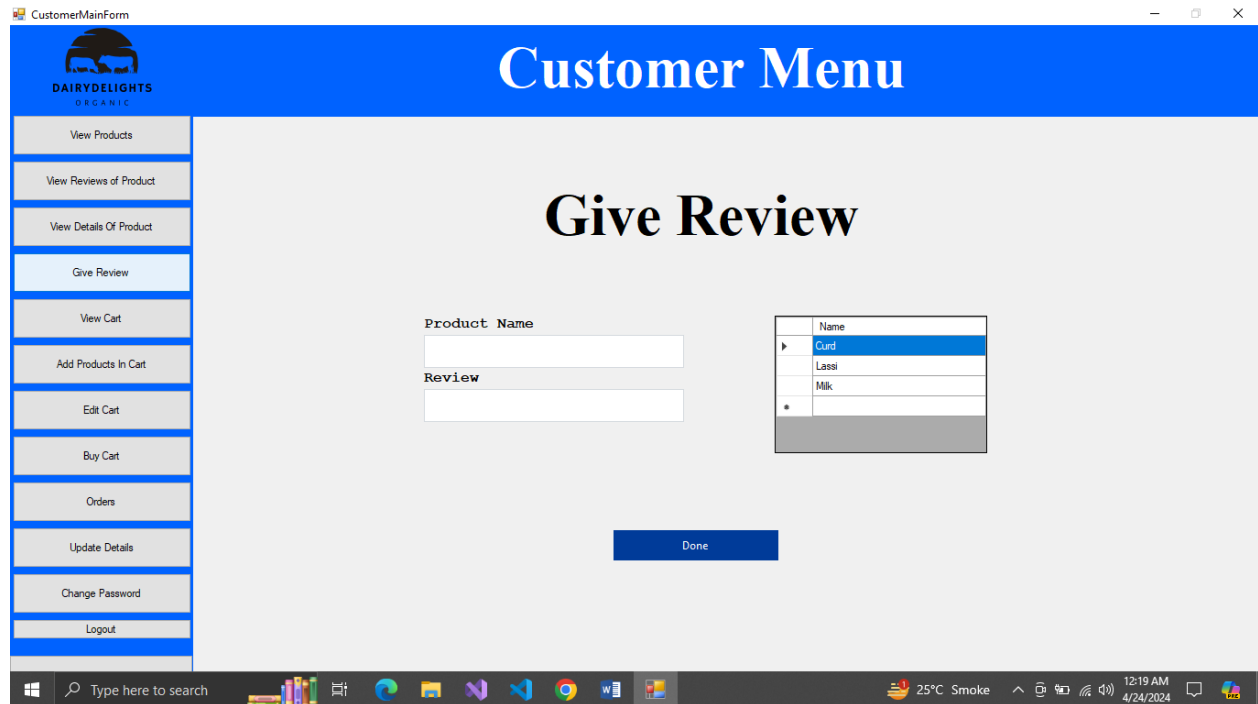


Figure 29 Give Review

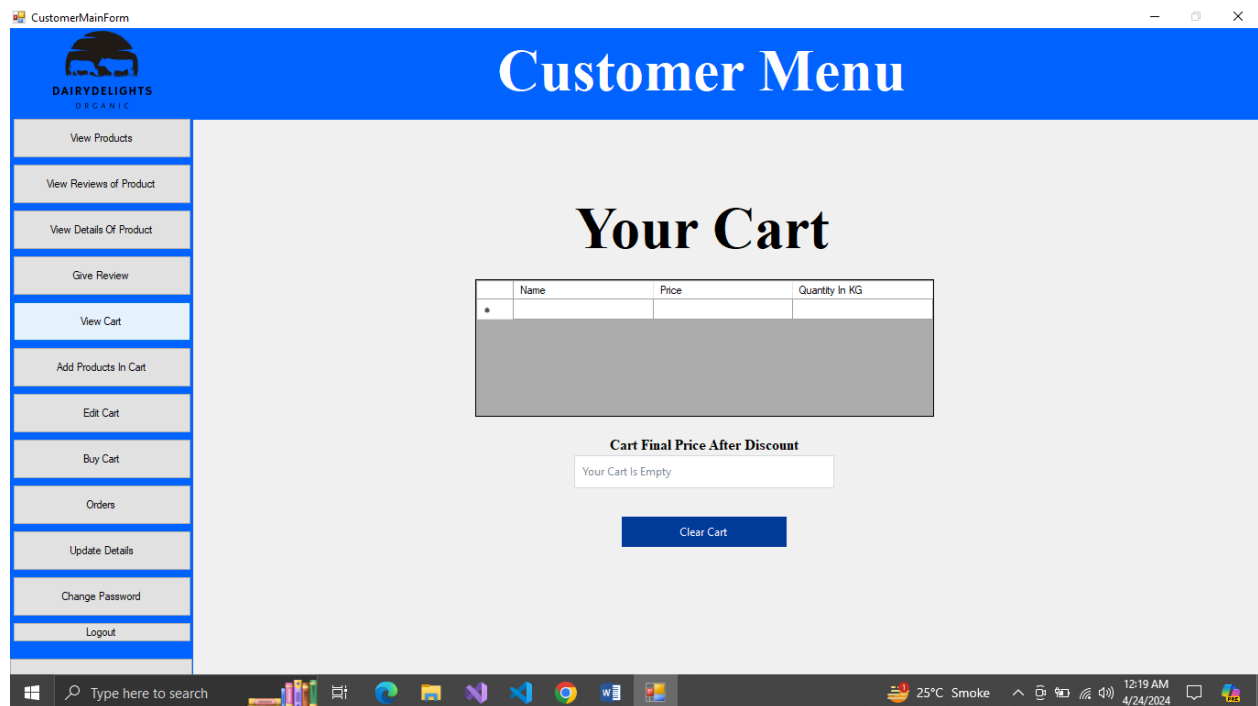


Figure 30 View Cart

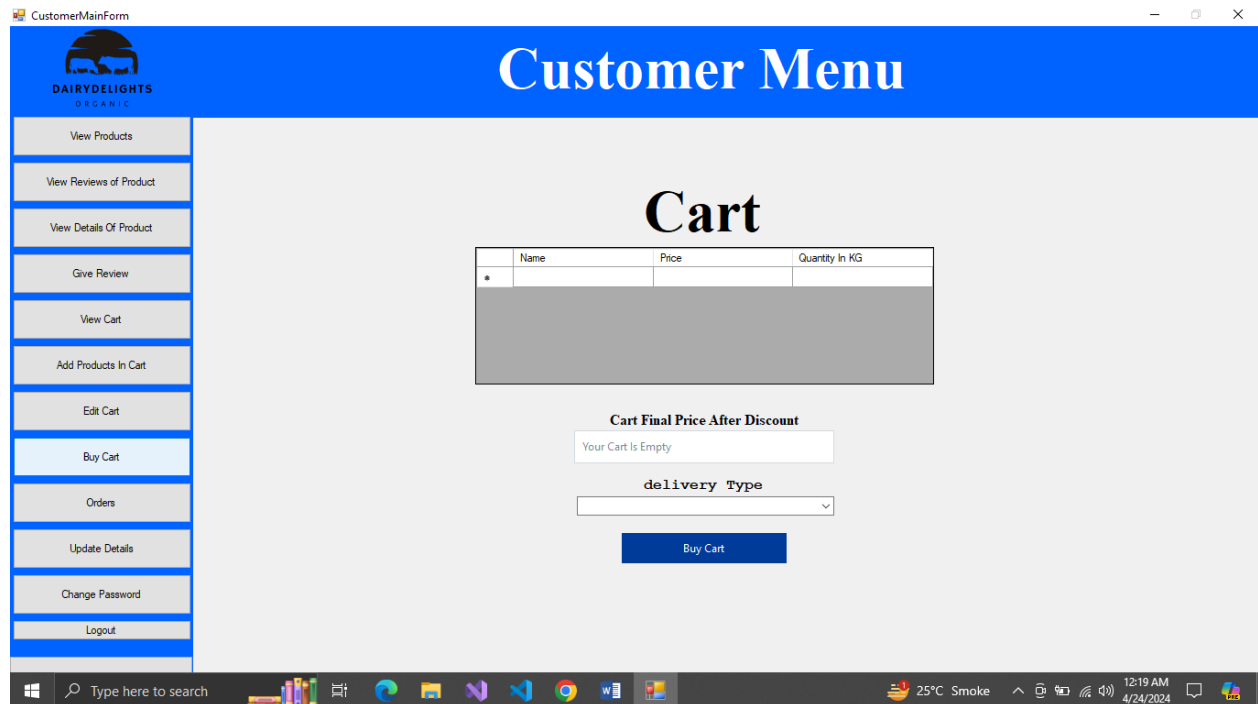


Figure 31Buy Cart

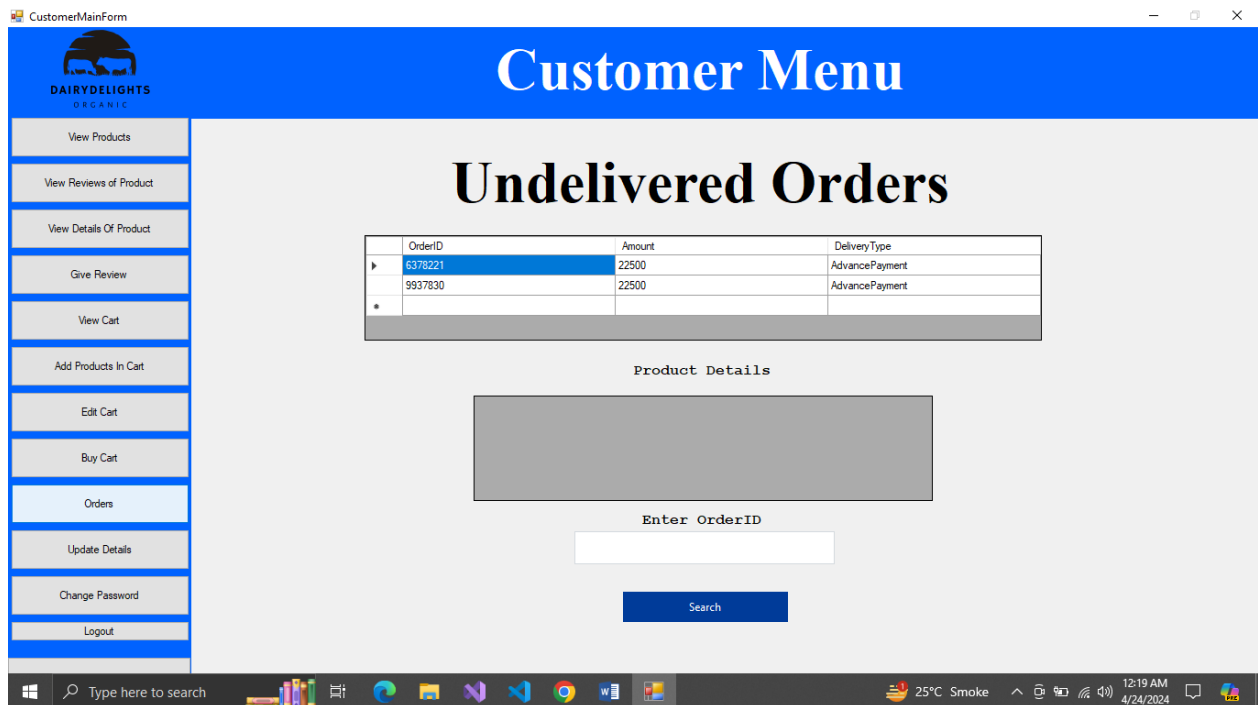


Figure 32View undelivered Orders

The screenshot shows a web application window titled 'CustomerMainForm'. The header is blue with the 'DAIRYDELIGHTS ORGANIC' logo on the left and the text 'Customer Menu' in the center. A vertical sidebar on the left contains buttons for: View Products, View Reviews of Product, View Details Of Product, Give Review, View Cart, Add Products In Cart, Edit Cart, Buy Cart, Orders, Update Details (highlighted in blue), Change Password, and Logout. The main content area has a large 'Details' heading. Below it, there are two input fields for 'Current Address' (containing 'Sabzazar Lahore pakistan') and 'Current Phone Number' (containing '03054593138'). Below these is a section titled 'Enter New Details Here' with two empty input fields for 'New Address' and 'New Phone Number'. At the bottom of this section is a blue 'Update' button. The Windows taskbar at the bottom shows the time as 12:19 AM on 4/24/2024.

Figure 33 Update Customer Details

## 4. CRC

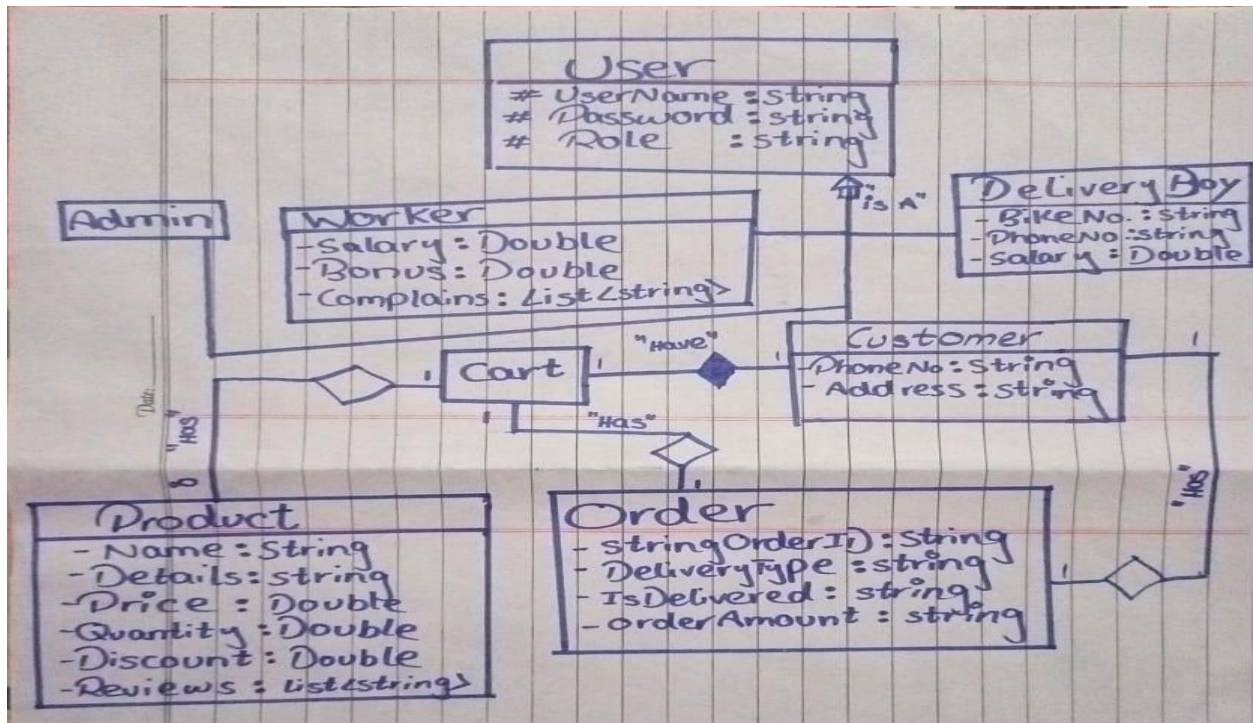


Figure 34 CRC

## **5. Complete Code:**

## **6. Weakness in Project:**

- a. The Delivery system is not Good the Customer do not know when will his order arrive and do not know anyone to contact for order
- b. There is no module of Refund if wrong order delivered
- c. Console App project is for just User not for other entities
- d. Window Forms are not Responsive
- e. Data base is not Normalize and one cell has more than one data

## **7. Future Directions**

- a. There will be a lot imprudent in which user will know who will deliver his order and when and he can also call him to comfit
- b. There will be Refund method in which you will get refund of order
- c. Console App and Windows Form Complete
- d. Data Layer complete with Data Base and file handling so Front-End Developer can use what he like
- e. Normalization of Data Base