



**AMERICAN INTERNATIONAL UNIVERSITY–BANGLADESH (AIUB)**

**Dept. of Computer Science  
Faculty of Science and Technology**

**CSC2210: OBJECT ORIENTED PROGRAMMING 2**

**Spring 2023-2024**

**Section:**

**Group No: 06**

**Project Report On**

**Grocery Shop Management System**

**Supervised By**

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**Submitted By:**

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**CO2:** Display and verify the mean of a real-life Project using the concepts of C# Graphical User Interface based environment with database integration to depict a desktop-based application.

Assessment Criteria	Not Attended/ Incorrect (0)	Inadequate (1-2)	Average (3)	Good (4)	Excellent (5)
Evaluation Criteria	Evaluation Definition				Total = 15
Requirement fulfillment	Properly demonstrate a real-life scenario-based project with proper functional requirement identification for the Object-Oriented Programming project development activities.				5
Validation	Ensuring the ability of students' proper demonstration on validation forms in their system in terms of dealing with the data.				5
Verification	Identifying if the students can verify the system data along with proper functional requirements in terms of data flow.				5

**CO3:** Prepare and Explain a real life desktop based application synthesizing several component of C# along with development tools to adhere the given requirements.

Assessment Criteria	Not Attended/ Incorrect (0)	Inadequate (1-2)	Average (3)	Good (4)	Excellent (5)
Evaluation Criteria	Evaluation Definition				
Organization of the application	Fails to identify any suitable real time application or requirements for project development activities related to OOP.	Limited understanding about the project scopes and scenarios or identification of functional requirements .	Lacks depth or relevance to OOP project development activities and may contain inaccuracies. Real-life scenarios are mentioned, but the discussion lacks depth or clarity.	Consider and integrate the idea of several core aspects of the project along with relevance to real-life scenarios. Demonstrating a solid understanding of the application presentation.	Generalize and exhibits an exceptional understanding of project preparation according to a to real-life scenarios. Also contains proper and insightful identification of the system which is comprehensive and precise.
Representation and Integration of Database	Fails to identify and present any understanding or implementation of database. Also failed to integrate the data with the project itself.	Limited understanding of the database concepts or their proper way of using in a real time project. While some attempt may be made to implement but it is incomplete or poorly	Lacks depth or relevance to database integration with the application. Shows a basic understanding but some aspects may be missing or incorrectly implemented, resulting in partial or	Integrate the database with the forms properly and implements it with proper validation which is mostly accurate and comprehensive, ensuring the proper handling of data input and verification	Exhibits an exceptional understanding and implementation of database ensuring attention to detail, and robust data manipulation procedures and contributing to the overall clarity.

		executed, leading to inadequate design.	inconsistency . May lack proper normalization .	along with general normalization.	
Graphical User Interface	Fails to present or prepare GUI based application interfaces. There is no evidence of creating or integrating such things according to their usefulness.	Limited understanding of graphical user interfaces. Lack of design knowledge. Very poor attempt to make such things which are currently obsolete or can't be identified as coherent.	Shows a basic understanding of creating user interfaces. Most of them are interconnected but maybe some of them lack it. However, most of it can be described as user friendly.	Effectively identifies and meet the consider the simplicity. Design related works are mostly accurate and taken proper attention to ensuring a user-friendly coherent system.	Exhibits an exceptional work design following a high standard of simple and elegant work. Several controls and mechanism has been organized in a preferred way according to the coherent usage.

## **Chapter 1: Introduction:**

“Grocery Shop Management System” project is an object-oriented programming-based software designed using Microsoft visual studios with .NET framework in windows form and SQL server for storing different databases. A customer can create an account to sign in and buy their necessary grocery products from home or anywhere else without going to a shop.

The Grocery Shop Management System provides products with the prices a certain product. **Customers** can add their required products in cart and show the total prices and can pay in different digital payment system with a printed cash memo and get a pdf of it. This project also includes a fixed-installation shop where customers can buy those products.

**Seller** can add, remove, or update products in the system with a fixed category and category will be added, remove, or updated by the **Manager**. The **admin** of the system can log in to show the details of the customer and seller, also can update them anytime.

In conclusion, the grocery shop management system updates operations, increasing efficiency and customer satisfaction. By integrating inventory control, sales tracking, and customer management, it ensures a seamless shopping experience and robust business growth.

## **Chapter 2: User stories**

### **Admin Stories:**

#### User Management:

- As an admin, I want to manage customer and seller accounts so that I can maintain the integrity and security of the system.

#### System Monitoring:

- As an admin, I want to monitor system performance and usage so that I can ensure the platform runs smoothly and efficiently.

#### Data Access and Update:

- As an admin, I want to access and update system data, including user details, so that I can keep the system accurate and current.

### **Manager Stories:**

#### Category Management:

- As a manager, I want to add, remove, or update product categories so that the product catalog is organized and up to date.

#### Seller Supervision:

- As a manager, I want to oversee and support sellers, ensuring they adhere to store policies and manage their products effectively.

#### Report Generation:

- As a manager, I want to generate reports on sales, inventory, and seller performance so that I can make informed business decisions.

### **Seller Stories:**

#### Account Creation and Login:

- As a seller, I want to create an account and log in so that I can securely access and manage my profile.

#### Product Management:

- As a seller, I want to add, remove, or update products and their details so that I can keep the product inventory current and accurate.

#### Order Processing:

- As a seller, I want to view and process customer orders so that I can fulfill them efficiently.

### **Customer Stories:**

#### Account Creation and Login:

- As a customer, I want to create an account and log in so that I can securely access and manage my profile.

#### Product Browsing and Purchasing:

- As a customer, I want to browse and search for products so that I can easily find and purchase the groceries I need.

### Shopping Cart Management:

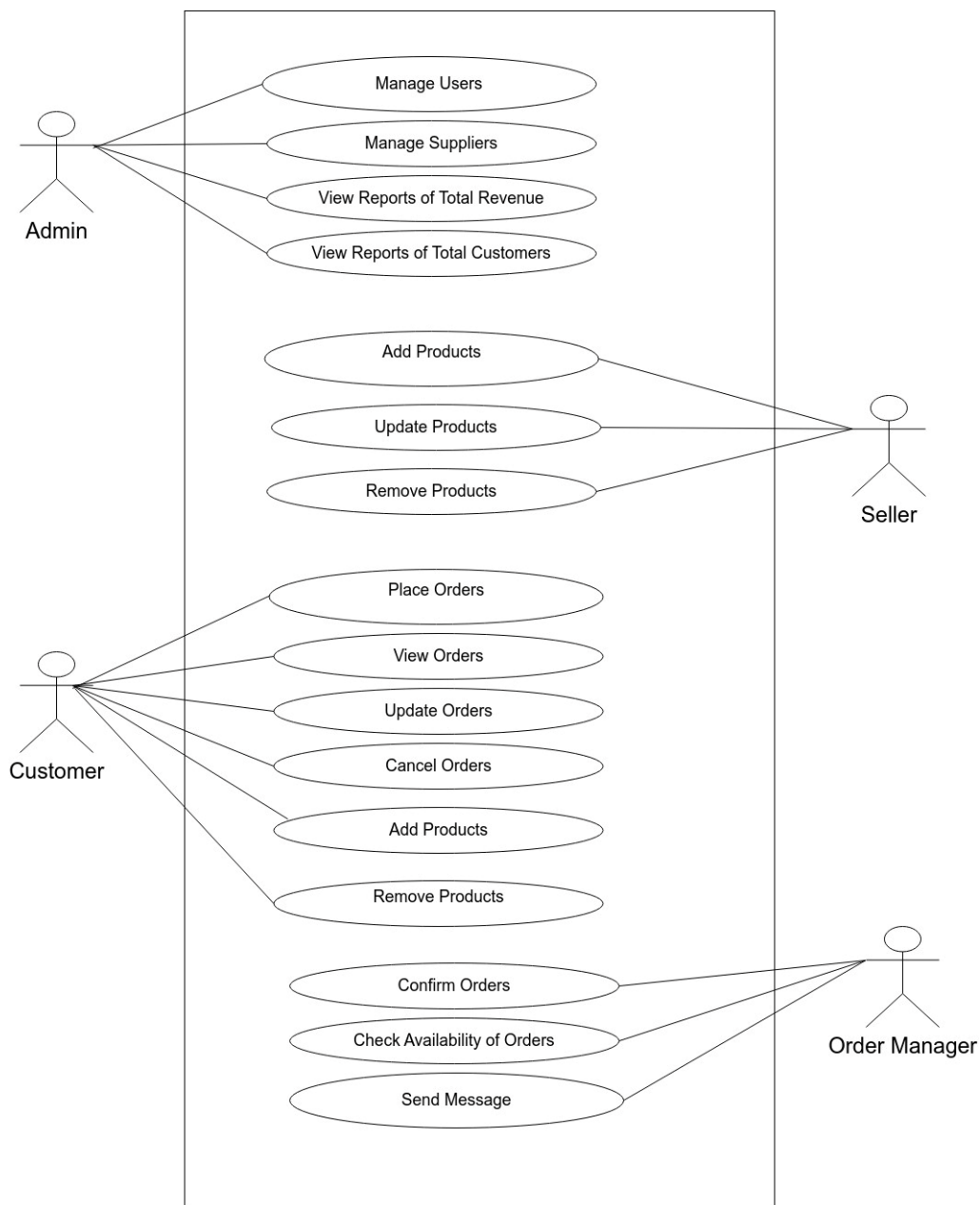
- As a customer, I want to add, remove, and update products in my shopping cart so that I can manage my purchases before checkout.

### Digital Payment and Receipt:

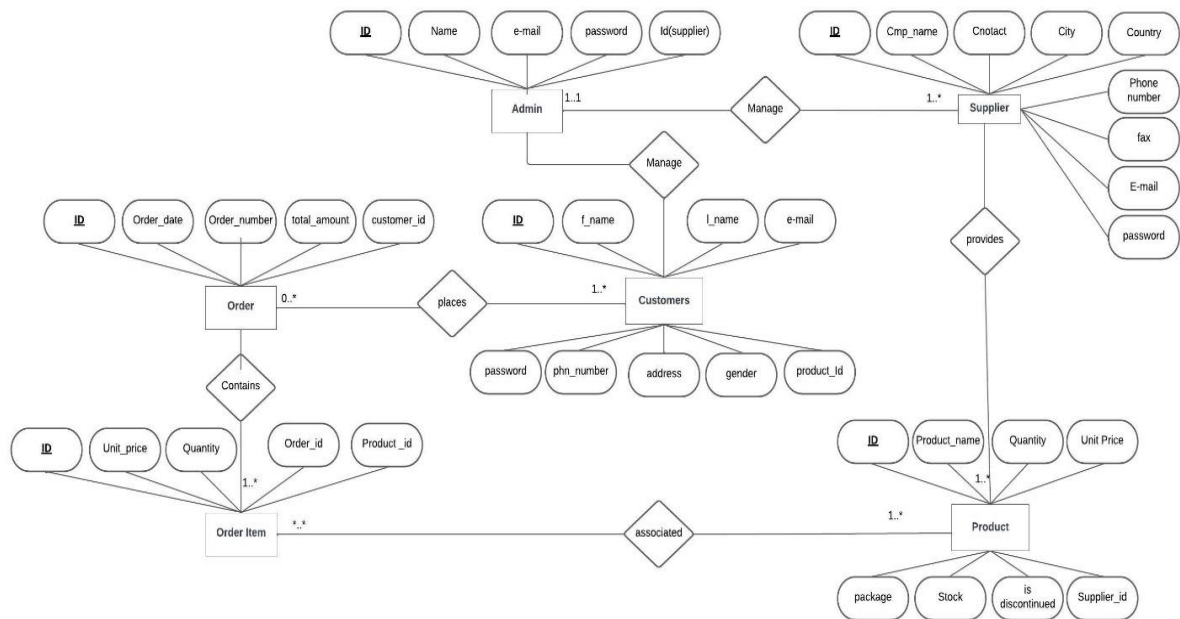
- As a customer, I want to choose from various digital payment options and receive a printed and PDF receipt so that I can complete my purchase conveniently and keep a record of it.

## **Chapter 3: Database:**

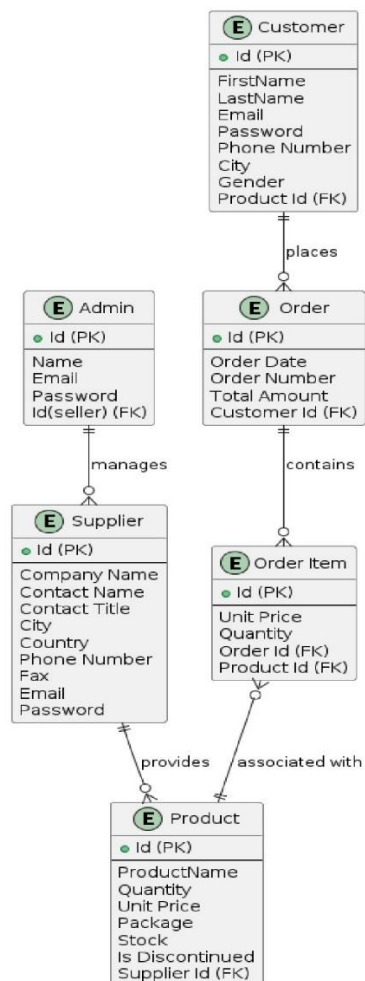
- **Use case diagram.**




- **ER- Diagram:**





- **Class diagram**




- Data dictionary

SQLQuery2.sql - LE...Tbl (Lenovo\L (59))			
Column Name		Data Type	Allow Nulls
	Email	nvarchar(50)	<input type="checkbox"/>
	Password	nvarchar(50)	<input checked="" type="checkbox"/>
	UserType	nvarchar(50)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>


**Fig -1:Login Table**

Lenovo.LoginTbl - dbo.CRegTbl			
Column Name		Data Type	Allow Nulls
	FName	nvarchar(50)	<input checked="" type="checkbox"/>
	LName	nvarchar(50)	<input checked="" type="checkbox"/>
	Email	nvarchar(50)	<input type="checkbox"/>
	Phone	nvarchar(50)	<input checked="" type="checkbox"/>
	Password	nvarchar(50)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

**Fig -2:Customer Registration Table**

Name		Data Type	Allow Nulls
	Catid	int	<input type="checkbox"/>
	CatName	nvarchar(50)	<input type="checkbox"/>
	CatDesc	nvarchar(50)	<input type="checkbox"/>
			<input type="checkbox"/>

**Fig 3:Category Table**

Name		Data Type	Allow Nulls
	ProdId	int	<input type="checkbox"/>
	ProdName	nvarchar(50)	<input type="checkbox"/>
	ProdQty	nvarchar(50)	<input type="checkbox"/>
	ProdPrice	int	<input type="checkbox"/>
	ProdCat	nchar(10)	<input type="checkbox"/>
			<input type="checkbox"/>

**Fig 4:Product Table**



	Name	Data Type	Allow Nulls
1	Sellerid	int	<input type="checkbox"/>
	SellerName	nvarchar(50)	<input checked="" type="checkbox"/>
	SellerAge	int	<input checked="" type="checkbox"/>
	SellerPhone	nvarchar(50)	<input checked="" type="checkbox"/>
	SellerPass	nvarchar(50)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

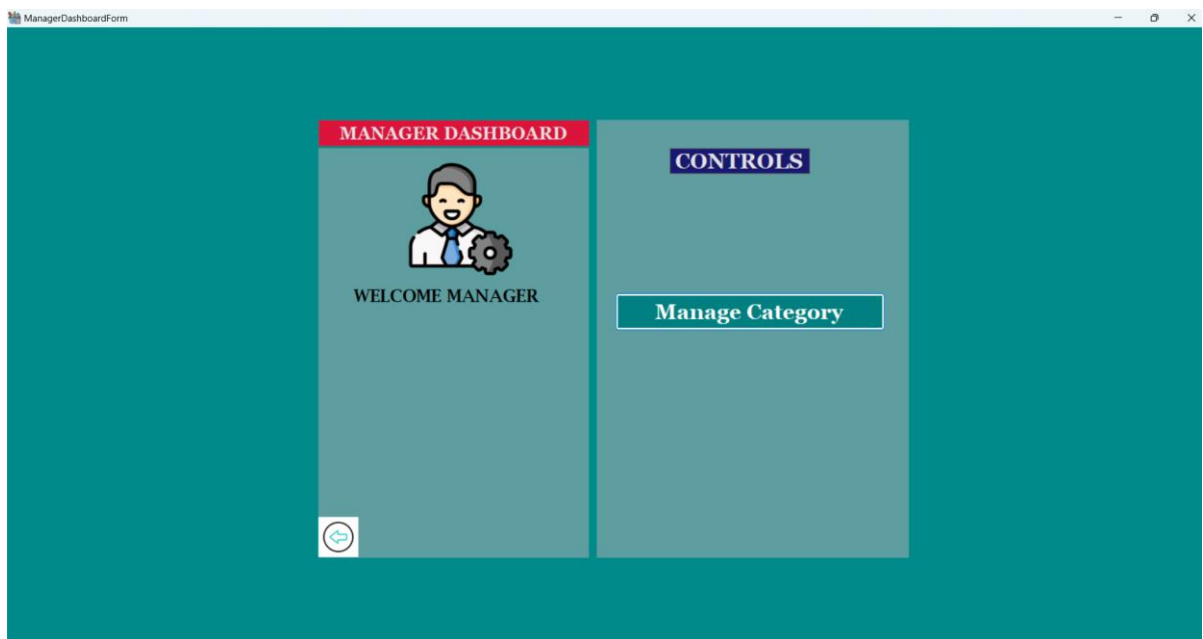
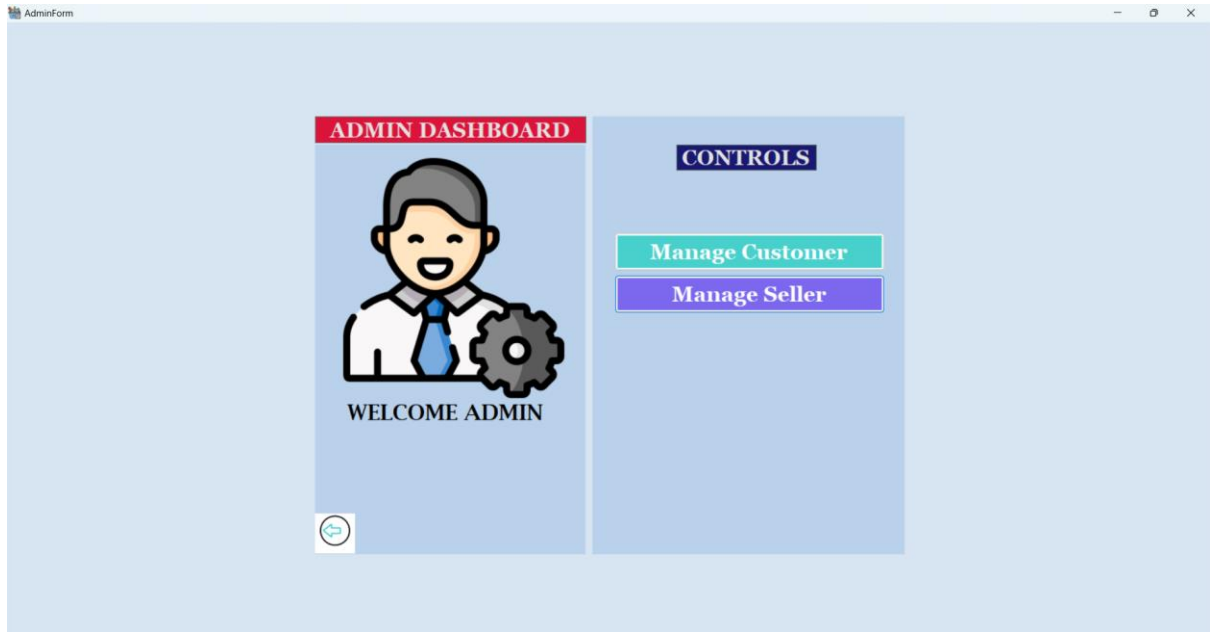
**Fig 5: Seller Table**

- **User Interface design**

The screenshot displays the user interface for the 'GROCERY SHOP MANAGEMENT' system. The central banner features the title 'GROCERY SHOP MANAGEMENT' in a stylized font, accompanied by illustrations of a smartphone, a shopping cart, and various grocery items like carrots and tomatoes. Below the banner is an 'About Us' button.

On the left side, there is a 'Seller Login' form. It includes a gear icon with a person inside, a 'Select User' dropdown menu, and input fields for 'Email' and 'Password'. A 'Show Password' checkbox is located below the password field. A green 'Login' button is at the bottom of the form.

On the right side, there is a 'Customer Login' form. It features a shopping bag icon with a person inside, and input fields for 'Email' and 'Password'. A 'Show Password' checkbox is also present. A green 'Login' button is at the bottom. Below the login button, there are links for 'Don't have an account?' and 'Register Here'.



## Chapter 4: Screenshot of forms:


### Splash:



### LOGIN & REGISTRATION FORM:

The screenshot shows a web browser window titled "Login". The page is divided into three main sections. On the left, there is a "Select User" dropdown menu, followed by "Email" and "Password" input fields, a "Show Password" checkbox, and a green "Login" button. In the center, there is a large illustration of a smartphone with a grocery list, surrounded by various grocery items and icons, with the text "GROCERY SHOP MANAGEMENT" above it. Below the illustration is a green "About Us" button. On the right, there is a "Customer Login" section with "Email" and "Password" input fields, a "Show Password" checkbox, and a green "Login" button. At the bottom right, there are links for "Don't have an account?" and "Register Here".

Registration



First Name

Last Name

Email

Phone Number

Password

☐ Show Password


Register

Already have an account? [Log in](#)


## Admin Dashboard:

AdminForm

ADMIN DASHBOARD



WELCOME ADMIN



CONTROLS

Manage Customer

Manage Seller

CustomerForm

Customer

First Name

Mahdi

Last Name

Kabir

Email

mahdi@gmail.com

Phone

01864759405

Password

123mahdi

Add

Clear

Update

Delete

Customer Information

Flname	LName	Email	Phone	Password
Dipon	Bismas	dpom@gmail.com	0178354535436	dpom
Safkat	Kalam	kalam@gmail.com	018535752676	kalam
Karim	Khan	karim@gmail.com	019835446432	karim
Riyad	Khan	khan@gmail.com	01654368654	1234
Mahdi	Kabir	mahdi@gmail.com	01864759405	123mahdi
Nura	Khan	nura@gmail.com	019734356625	nura
Shahriar	Reza	reza@gmail.com	01854256422	reza
spashaw	khan	spashaw	01956346576	spashaw123
Prithib	Spashaw	spashaw10@gmail.com	01784474690	spashaw123

SellerForm

SELLER

Seller ID

89

Name

Jim

Age

24

Phone

01947583684

Password

dmy

Add

Clear

Update

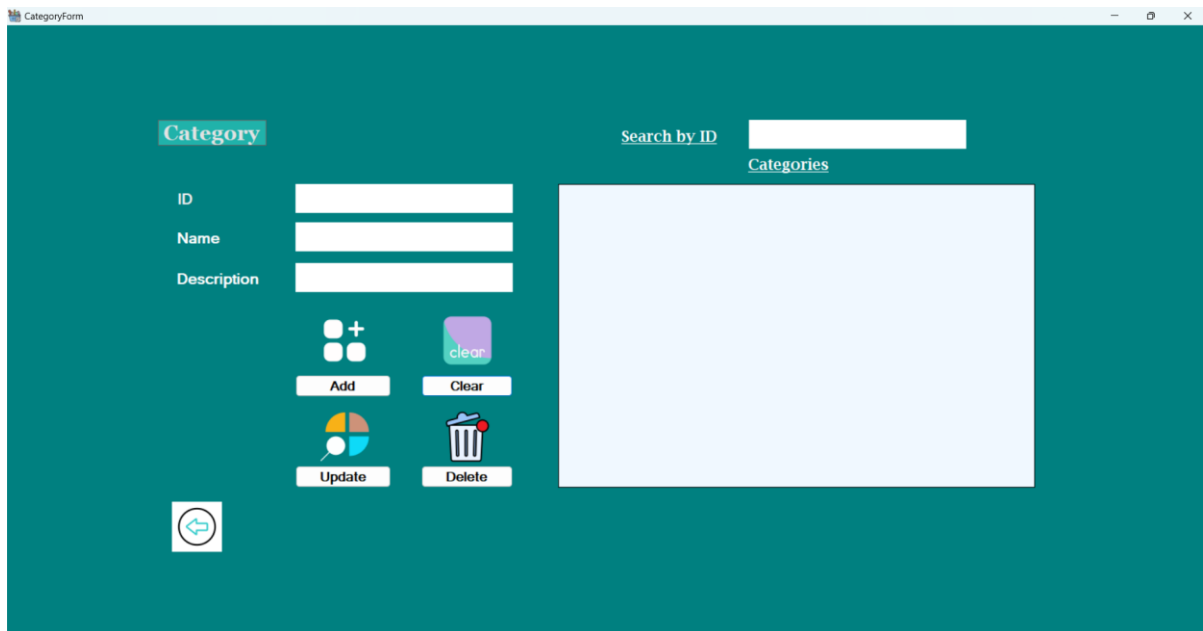
Delete

Seller Information

Search by ID

SellerId	SellerName	SellerAge	SellerPhone	SellerPass
1	mahdi	23	01864759405	123789
2	nurdhed	34	01712344232	678
55	Habb	24	014875965562	12345
56	hasib	54	0193255435624	1223
89	Jim	24	01947583684	dmy
100	Safkat Kalam	23	01567888560	1221
121	Rahmanul Islam	23	0198673246253	R
534	Mahdi	223	0193675336673	eDWIE
576	Rahim	37	01978637623	123qd
1232	hira	24	01947663673	eevq
2321	Jim	23	0193264363	jh
3234	riyad	4645	01973665633	ddrive
12121	Himel	32	01984875498	asq

## Manager Dashboard:



ProductForm

MANAGE PRODUCTS

ID

Name

Quantity

Price

Category

Beverages

Beverages

Snacks

Bakery

Fruits

Vegetable

Meat

Bangladesh

Meat

Update

Remove

Product Informations



	Prodd	ProdName	ProdQty	ProdPrice	ProdCat
▶	1	Apple	5	1002	Fruits
	2	apple	5	100	Beverages
	7	Lays	25	1500	Snacks
	10	apple	5	100	Beverages
*					



←



ProductSellForm



Shopping Cart



ITEM LIST

☒  Beef 
☐  Bananas

☐  Apples 
☐  Cheese

☐  Milk 
☐  Yogurt

☒  Rice 
☒  Onions

☐  Tomatoes 
☐  Chicken

RESET

ADD

Print

More Product

12:30:55 PM


Sri er Dua Grocery Shop

12:30:46 PM

Beef: 2975 Tk  
Rice: 225 Tk  
Onion: 380 Tk

TOTAL Tk4002

VAT Tk522



ProductShowForm

Available Products From Database

Click To see Available Products

Prodid	ProdName	ProdPrice
1	Apple	1002
2	apple	100
7	Lays	1500
10	apple	100
*		

Your Selected Products :

Prodid: 2 ProdName: apple ProdPrice: 100

Prodid: 7 ProdName: Lays ProdPrice: 1500

Prodid: 2 ProdName: apple ProdPrice: 100

Confirm

Home



Payment

### PAYMENT GATEWAY






Name:

Address:

Phone Number:










Total Amount:

Payment Method:



☐ Visa/ Mastercard ☐ Nagad ☐ bKash ☐ Rocket

Pay With



FeedbackForm

### Feedback Form

Send us your feedback:

