

Final Report

(Online Grocery Retail Management System)

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Course Title: DBMS Lab

Section: S1

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1 Abstract

The project is a web based application aimed at providing an online platform for users to buy grocery items without actually going to the supermarket . It is targeted mainly for grocery stores which completely automate the end to end process of grocery purchase, inventory, sales and billing processes. There are 2 modules in the project - User Module and Admin Module. User can sign-up and login into the website to buy the products. They can see product details and add or remove the desired products to their cart. There are various payment options which one can use for making payment. User can see their order details from order history. They can also change their password and personal details whenever needed. Admin can add, update, delete products according to availability and requirement. Admin can also view the list of customers registered to the website. The admin pages cannot be accessed without admin login.

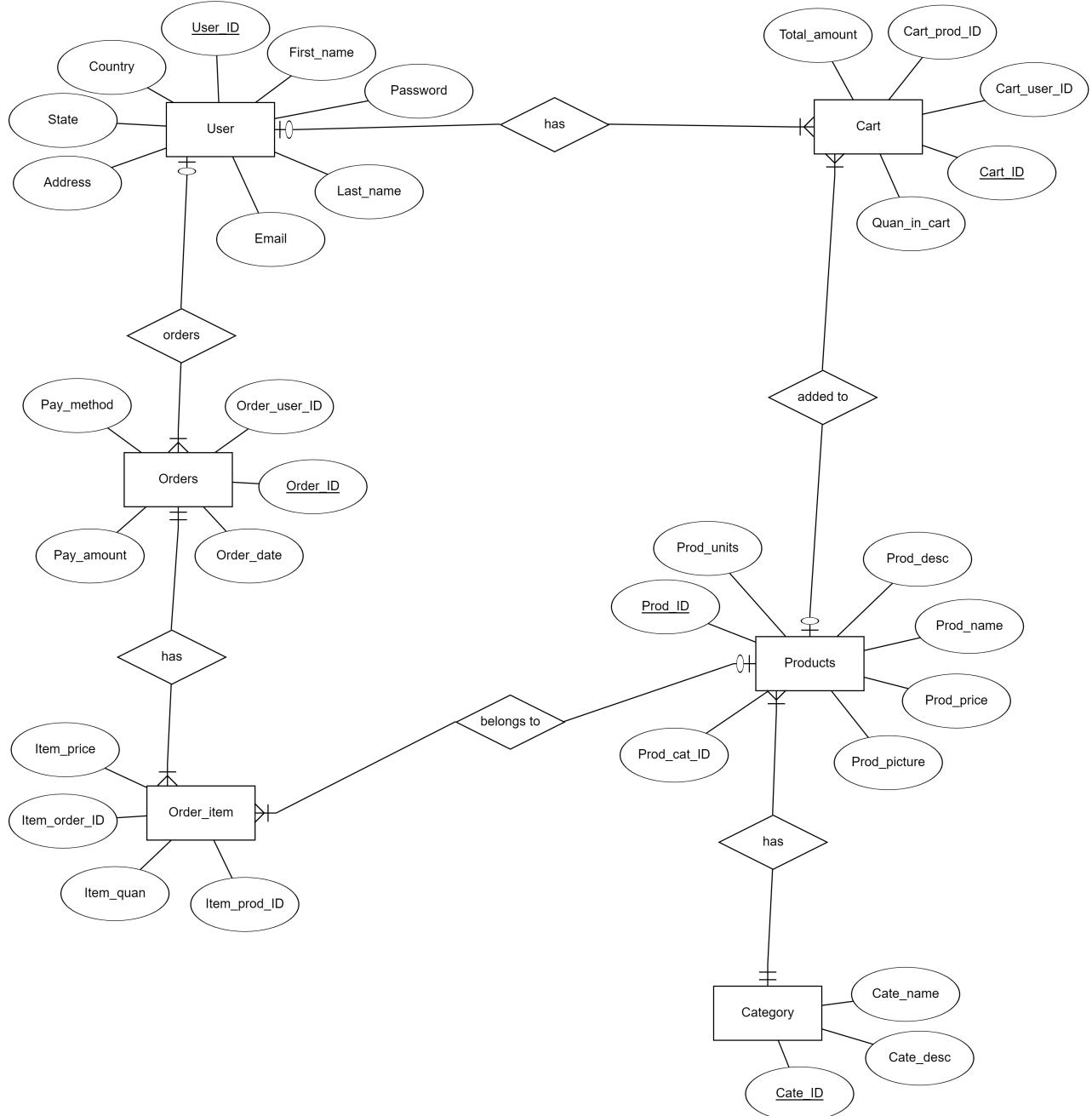
2 Introduction

Grocery Retail Management System, as its name implies, deals with the efficient management of a wide variety of grocery products belonging to 9 categories - Fruits, Vegetables, Beverages, Dairy products, Cleaning supplies, Personal care products, Paper goods, Dry Goods and Stationery. Database design for this system is to help automate the process of purchasing product and billing. It will avoid wasting of time just to write all the important information and data of the customer. The database of the system will store all information such as customers, categories, products, cart items and orders.

The project has two modules - User module and Admin module. The project provides key facilities like registration facility, login facility, cart facility, online payment facility, facility to see order history, facility to edit their password and personal details to the users. It provides the facility to insert, update, delete products and view customer list, their details to the admin. The system requirements for the project is a minimum of two GB of RAM to run all the options sleek and unforeseen. It wants a minimum 1.3 gigahertz processor to run sleek. Admin login is necessary to access admin pages.

Our project uses ASP.NET framework for front-end. We developed database using MySQL. We chose ASP.NET framework as it makes development, compilation and testing of code easier. Also, it is easy to rectify errors and the reusable code makes managing and modifying programs easy on ASP.NET.

3 ER Diagram



4 Source Code

The flow of adding products to the cart by the user is shown in the code snippet below:

```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
    <link rel="stylesheet" href="UserProdList.css" type="text/css" />
</head>
<body>
    <form id="form1" runat="server">
        <div class="first">
            <h1 class="name">Groceteria</h1>
            <asp:ImageButton ID="imgbtnprofile2" runat="server" class="profile" Height="21px"
Width="21px" padding-top="1px" ImageUrl="~/profile.png"
OnClick="imgbtnprofile2_Click" />
            <asp:ImageButton ID="imgbtncart2" runat="server" class="profile" Height="21px"
Width="21px" padding-top="1px" ImageUrl="~/cart.png" OnClick="imgbtncart2_Click"
/>
            <asp:ImageButton ID="imgbtnlogout2" runat="server" class="profile" Height="21px"
Width="21px" padding-top="1px" ImageUrl="~/logout.png"
OnClick="imgbtnlogout2_Click" />
        </div>
        <br /><br />
        <div>
            <asp:GridView runat="server" ID="gdImage" HeaderStyle-BackColor="Tomato"
height="100px" AutoGenerateColumns="false" HorizontalAlign="Center"
CssClass="mydatagrid" PagerStyle-CssClass="pager" HeaderStyle-
CssClass="header"
RowStyle-CssClass="rows" >
                <Columns>
                    <asp:BoundField DataField="Prod_id" HeaderText="ProductID" />
                    <asp:BoundField DataField="Prod_name" HeaderText="ProductName" />
                    <asp:BoundField DataField="Prod_price" HeaderText="ProductPrice" />
                    <asp:ImageField DataImageUrlField="Prod_picture"
HeaderText="ProductPicture"></asp:ImageField>
                    <asp:BoundField DataField="Prod_desc" HeaderText="ProductDescription"
/>
                    <asp:BoundField DataField="Prod_units" HeaderText="ProductUnits" />
                    <asp:TemplateField HeaderText="Quantity">
                        <ItemTemplate>
                            <asp:TextBox ID="txtuserquantity" runat="server"></asp:TextBox>
                        </ItemTemplate>
                    </asp:TemplateField>
                    <asp:TemplateField HeaderText="">
                        <ItemTemplate>
```

```

<asp:Button ID="btnaddusercart" runat="server" type="button" Text="Add
To Cart" CommandName="Add To Cart" onclick="btnaddusercart_Click" />
</ItemTemplate>
</asp:TemplateField>
</Columns>
</asp:GridView>
</div>
</form>
</body>
</html>

```

Figure 1: User Product list page – Frontend

```

namespace Online_Grocery_Store
{
    public partial class UserProductList : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            string str = Request.QueryString["name"].ToString();
            MySqlConnection con = new
MySqlConnection(ConfigurationManager.ConnectionStrings["dbconnection"].ConnectionString);
            con.Open();
            string query = "select Prod_id, Prod_name, Prod_price, Prod_picture, Prod_desc,
Prod_units from products, category where category.cate_name= " + "" + str + ""+ " and
category.cat_id=products.prod_cat_id";
            MySqlCommand cmd = new MySqlCommand(query, con);
            cmd.CommandType = CommandType.Text;
            MySqlDataAdapter da = new MySqlDataAdapter(cmd);
            DataTable dt = new DataTable();
            da.Fill(dt);
            gdImage.DataSource = dt;
            gdImage.DataBind();
        }
        protected void btnaddusercart_Click(object sender, EventArgs e)
        {
            string useremailid = Request.QueryString["sessionid"].ToString();
            GridViewRow gvRow = (GridViewRow)(sender as Control).Parent.Parent;
            int rowindex = gvRow.RowIndex;
            GridViewRow row = gdImage.Rows[rowindex];
            int productid = Convert.ToInt32(row.Cells[0].Text);
            TextBox txtuserquantity = (TextBox)gvRow.FindControl("txtuserquantity");
            int productquantityincart = Convert.ToInt32(txtuserquantity.Text);
            int prodprice= Convert.ToInt32(row.Cells[2].Text);
            double totalamount = productquantityincart * Convert.ToDouble(prodprice);
            MySqlConnection con = new
MySqlConnection(ConfigurationManager.ConnectionStrings["dbconnection"].ConnectionString);
            con.Open();

```

```

MySqlCommand cmd = new MySqlCommand("select user_id from user where
Email = '" + useremailid + "'", con);
int userID = (int)cmd.ExecuteScalar();
int cartprodid = 0;
int quantityincart = 0;
double total_amount = 0.00;
DataTable dt = new DataTable();
bool flag = false;
string strcmd1 = "select Cart_prod_id,Quan_in_cart,Total_amount from CART
where Cart_user_id = " + userID + "";
MySqlCommand cmd1 = new MySqlCommand(strcmd1, con);
MySqlDataAdapter da = new MySqlDataAdapter(cmd1);
da.Fill(dt);

if(dt.Rows.Count>0)
{
    foreach (DataRow dtrow in dt.Rows)
    {
        cartprodid = Convert.ToInt32(dtrow["Cart_prod_id"]);
        quantityincart = Convert.ToInt32(dtrow["Quan_in_cart"]);
        total_amount = Convert.ToDouble(dtrow["Total_amount"]);
        if(productid == cartprodid)
        {
            flag = true;
            break;
        }
    }
    if (productid == cartprodid && flag==true)
    {
        MySqlCommand cmd2 = new MySqlCommand("Update CART set
Quan_in_cart=@quantityincart, Total_amount=@totalamount where
Cart_prod_id=@productid and Cart_user_id= @userID ", con);
        cmd2.Parameters.AddWithValue("@quantityincart", quantityincart +
productquantityincart);
        cmd2.Parameters.AddWithValue("@totalamount", totalamount +
total_amount);
        cmd2.Parameters.AddWithValue("@productid", productid);
        cmd2.Parameters.AddWithValue("@userID", userID);
        cmd2.Connection = con;
        cmd2.ExecuteNonQuery();
        con.Close();
    }
    else
    {
        string str = "INSERT INTO CART
(Cart_user_id,Cart_prod_id,Quan_in_cart,Total_amount) VALUES
(@cartuserid,@cartprodid,@quantityincart,@Totalamount)";
        MySqlCommand cmd3 = new MySqlCommand(str, con);
        cmd3.Parameters.AddWithValue("@cartuserid", userID);

```

```

        cmd3.Parameters.AddWithValue("@cartprodid", productid);
        cmd3.Parameters.AddWithValue("@quantityincart",
productquantityincart);
        cmd3.Parameters.AddWithValue("@Totalamount", totalamount);
        cmd3.ExecuteNonQuery();
    }
}
else
{
    string str = "INSERT INTO CART
(Cart_user_id,Cart_prod_id,Quan_in_cart,Total_amount) VALUES
(@cartuserid,@cartprodid,@quantityincart,@Totalamount)";
    MySqlCommand cmd3 = new MySqlCommand(str, con);
    cmd3.Parameters.AddWithValue("@cartuserid", userID);
    cmd3.Parameters.AddWithValue("@cartprodid", productid);
    cmd3.Parameters.AddWithValue("@quantityincart", productquantityincart);
    cmd3.Parameters.AddWithValue("@Totalamount", totalamount);
    cmd3.ExecuteNonQuery();
}
}
protected void imgbtnlogout2_Click(object sender, ImageClickEventArgs e)
{
    Response.Redirect("Home.aspx");
}
protected void imgbtncart2_Click(object sender, ImageClickEventArgs e)
{
    string useremailid = Request.QueryString["sessionid"].ToString();
    Response.Redirect("UserCartView.aspx?sessionid=" + useremailid);
}
protected void imgbtnprofile2_Click(object sender, ImageClickEventArgs e)
{
    string useremailid = Request.QueryString["sessionid"].ToString();
    Response.Redirect("UserProfilePage.aspx?sessionid=" + useremailid);
}
protected void lblstorename1_Click(object sender, EventArgs e)
{
    Response.Redirect("afterLogin.aspx");
}
}

```

Figure 2: User Product list page – Backend

GitHub repo link for full project code: https://github.com/Himanshu307/Online_Grocery_Store

5 Results

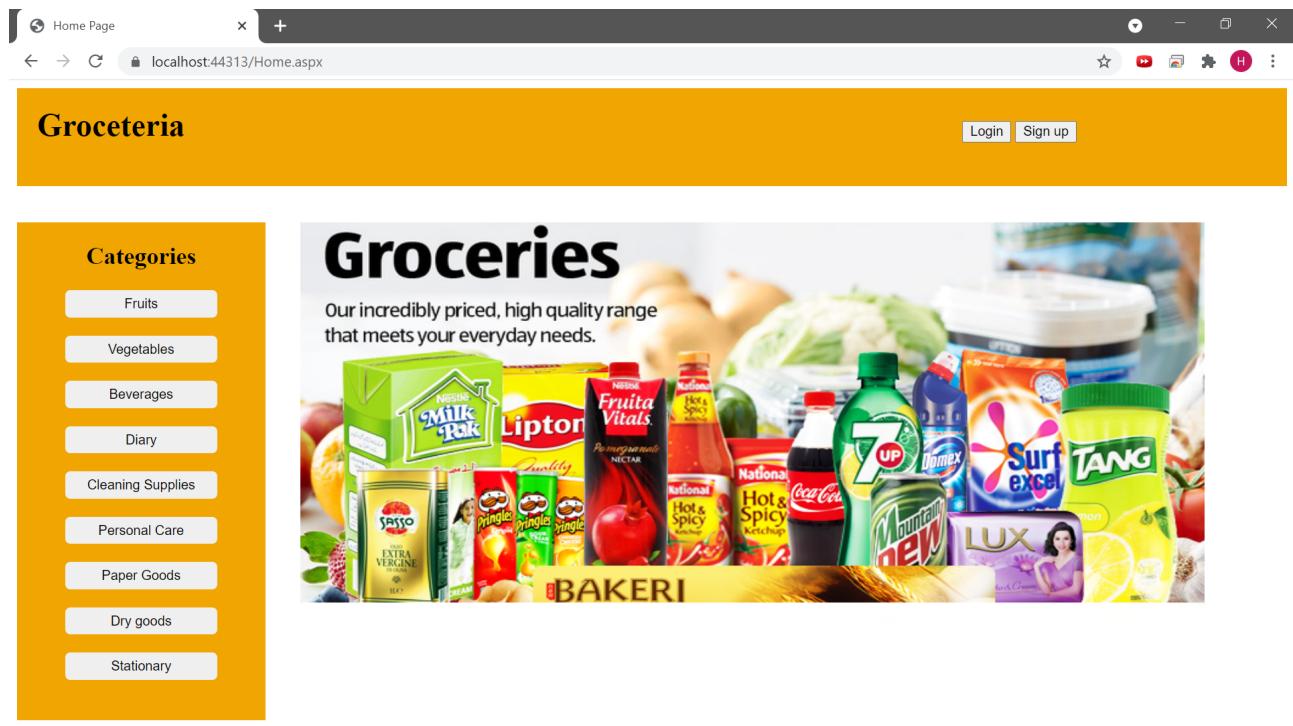


Figure 3: Home Page before login

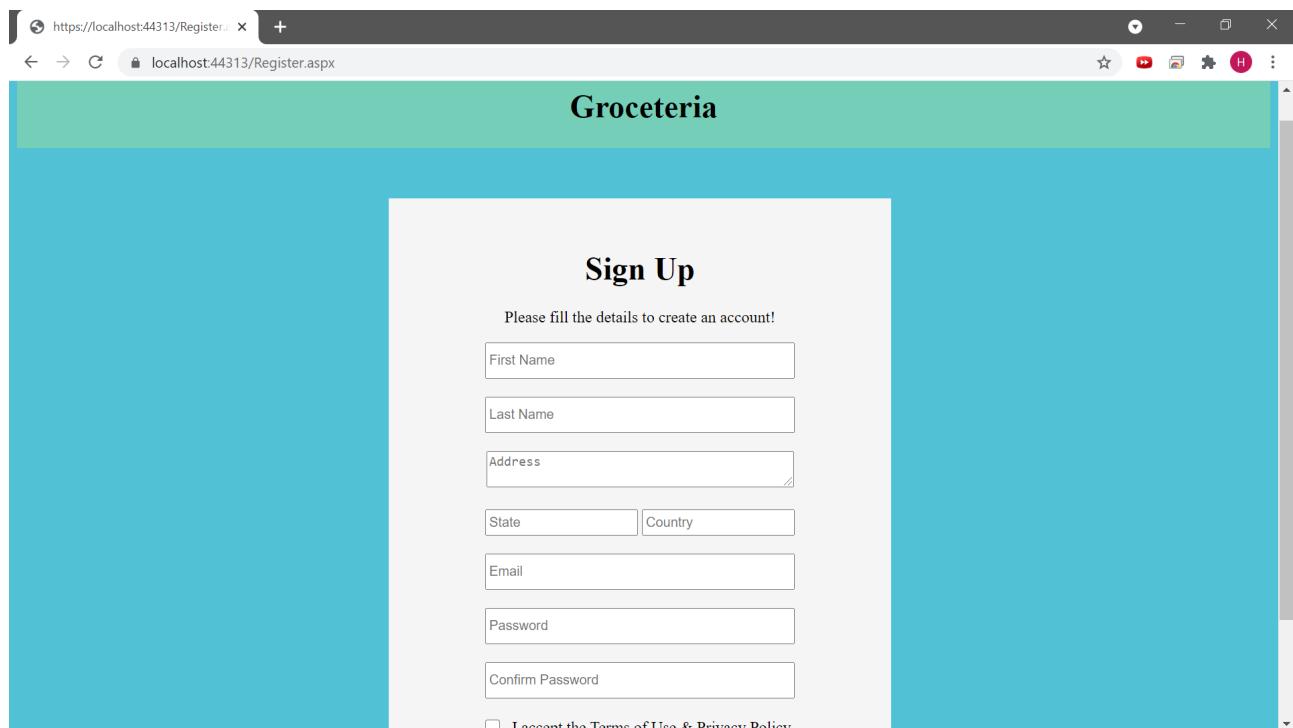


Figure 4: Registration Page

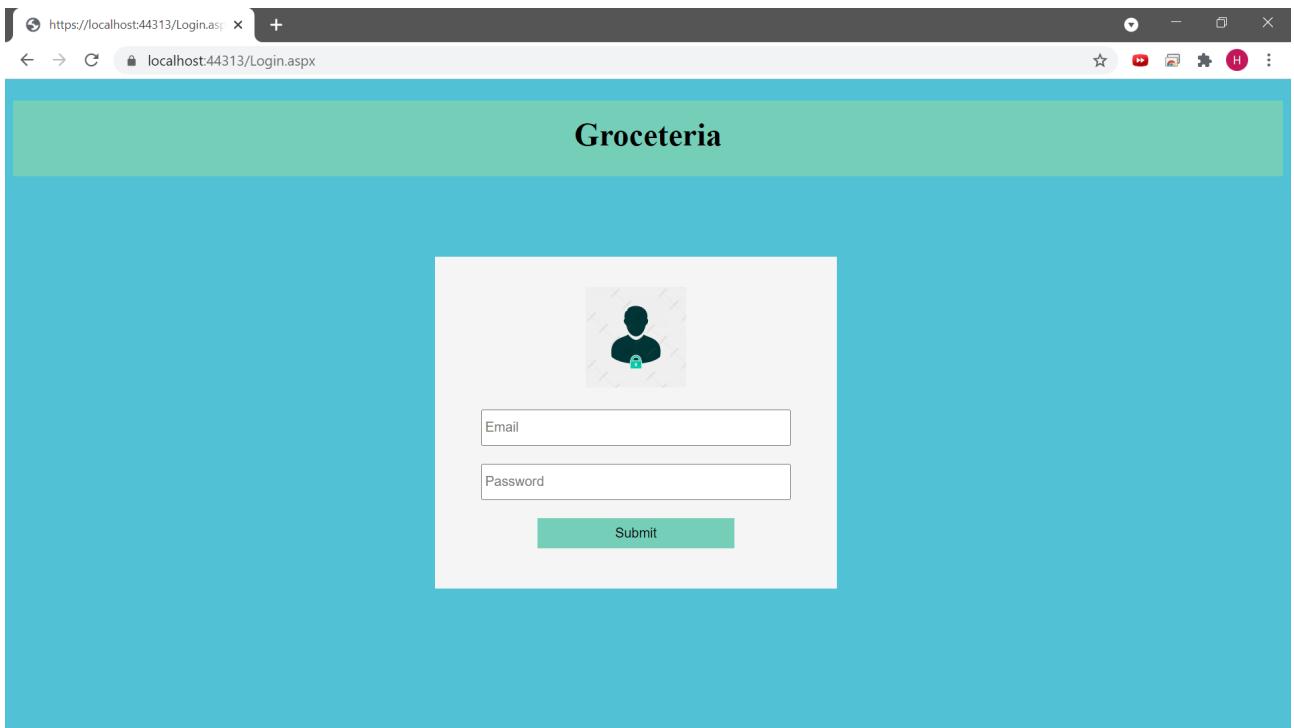


Figure 5: Login Page

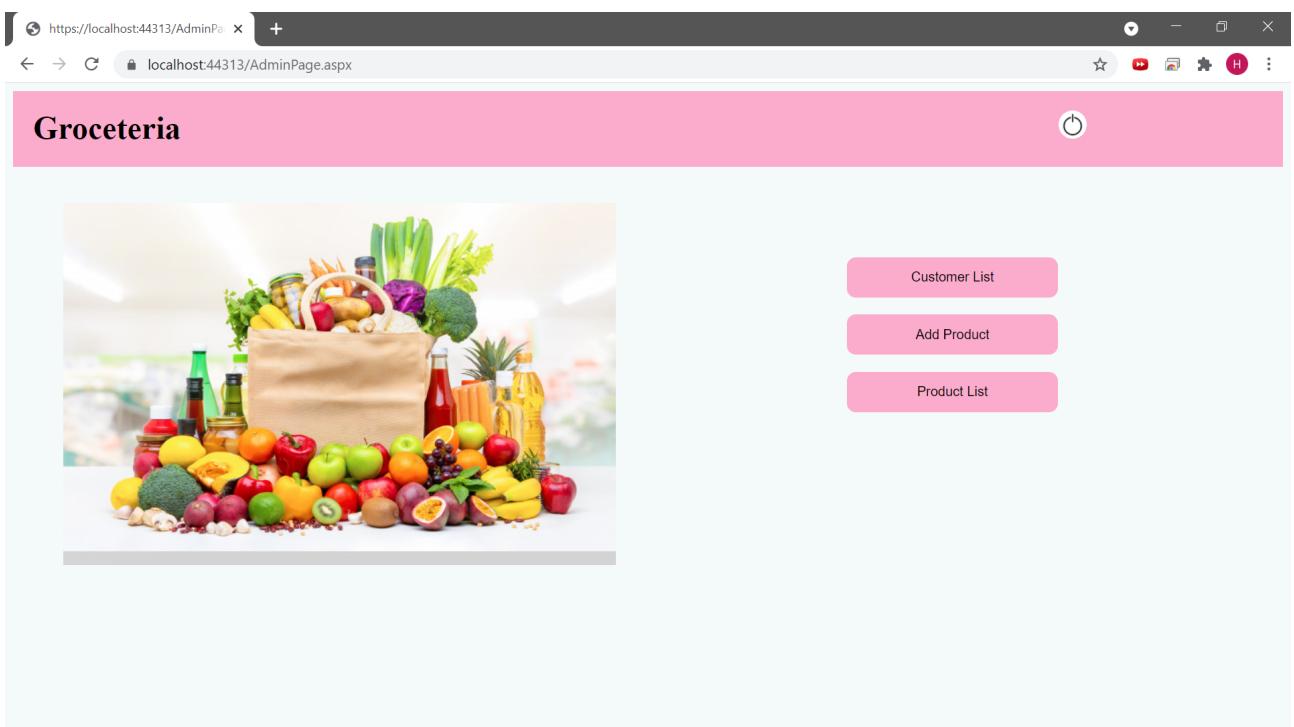


Figure 6: Admin Page

The screenshot shows a web browser window with the URL <https://localhost:44313/ViewUserList.aspx>. The page title is "Groceteria". Below the title is a table with the following data:

User_ID	First_name	Last_name	Email	Address	State	Country
100	Himanshu	Kumar	him123@gmail.com	Bokaro Steel city	jhar	india
101	Navneet	Gupta	nav@gmail.com	Chas	Bangalore	India
103	Niharika	Seth	chhoti@yahoo.in	Bokaro	Jharkhand	India
104	Prachi	Singh	prachi@gmail.com	Gujarat	Gujarat	India
106	Rajveer	Kumar	raj@gmail.com	Dumka	Jharkhand	India
107	Himanshu	Kumar	himanshu@gmail.com	Bokaro Steel City	Jharkhand	India

Figure 7: Customer list as seen by Admin

The screenshot shows a web browser window with the URL <https://localhost:44313/AddProduct.aspx>. The page title is "Groceteria". The main content is a form titled "Add product" with the following fields:

- Please fill the details of new product!
- Select Category Name--
- Category id:
- Product name:
- Price: Units:
- Upload Product Picture
Choose File | No file chosen
- Description:
- Add

Figure 8: Add product page as seen by Admin

https://localhost:44313/ViewProc x + localhost:44313/ViewProductList.aspx

Groceteria

Prod_id	Prod_name	Prod_price	Prod_desc	Prod_units	
17	Apple Juice	25	Enjoy the refreshing and delicious taste of apples! A special 6-layer protection gives you the goodness of tasty, ready to serve fruit beverage in every glass.	495	
18	Mango Juice	45	Enjoy the deliciously thick, sweet and purely indulgent mango experience with a chilled glass of Mango juice. The drink is universally loved for its taste, colour, thickness and wholesome properties	489	
19	Orange Juice	45	With no added preservatives, color or artificial flavouring, it puts the good in morning. Its 9 nutrients revitalize your body and awaken your senses	500	
20	Guava juice	45	Since childhood, we have enjoyed guava with a dash of mouth watering chatpata masala. So we decided to take the same old guava magic and bring in a way you will love	500	
21	Hot chocolate milkshake	80	This hot chocolate blend grew up to be a tall dark and handsome mocha	400	
Edit	Delete	22	Milk	Amul brings in pure products that are also filled with flavour and good health. Amul Taazas Toned Milk is one such product that is made for the health conscious consumer. 500 ml	196
23	Cheese	71	Chesdale brings in pure products that are also filled with flavour and good health. Chesdale cheese is one such product that is made for the health conscious consumer.	87	
24	Farm eggs	69	These are one of natures most wholesome and cost-effective foods. An egg can give you a health kick in no time at all. Pack of 6	585	
25	Yogurt	50	Our curd is arranged using the best quality standards making it disinfected. It is regularly thick, reliable and natural lacking the use of any preservatives. 400g	250	
26	Butter	45	Pasteurized butter is a delicious bread spread, an essential ingredient of baking and a known enhancer for many food items. 100g	150	
27	Vanilla Icecream	160	Amul Real milk vanilla ice cream now in a tub that enough for all your friends. The classics never go out of the fashion. 1L	98	
		70	Baby Apples are the mini blush red apples with slight yellow streaks and has a smooth texture. The apple flesh is greenish white and grained, and it tastes sweet and juicy. 1kg	60	

Figure 9: List of Product can be edited by Admin

afterLogin page x + localhost:44313/afterLogin.aspx

Groceteria

Welcome, himanshu@gmail.com

Categories

- [Fruits](#)
- [Vegetables](#)
- [Beverages](#)
- [Dairy](#)
- [Cleaning Supplies](#)
- [Personal Care](#)
- [Paper goods](#)
- [Dry goods](#)
- [Stationary](#)



GROCERY & STAPLES

[SHOP NOW](#)

Figure 10: Home page after User Login

ProductID	ProductName	ProductPrice	ProductPicture	ProductDescription	ProductUnits	Quantity	
22	Milk	25		Amul brings in pure products that are also filled with flavour and good health. Amul Taazas Toned Milk is one such product that is made for the health conscious consumer. 500 ml	196	<input type="text"/>	<button>Add To Cart</button>
23	Cheese	71		Chesdale brings in pure products that are also filled with flavour and good health. Chesdale cheese is one such product that is made for the health conscious consumer.	87	<input type="text"/>	<button>Add To Cart</button>

Figure 11: Product list seen by user where she/he can add them to cart

Product ID	Product Name	Price	Quantity	Total Amount
28	Apple	70	2	140
30	Banana	52	2	104
22	Milk	25	<input type="text" value="2"/>	50
17	Apple Juice	25	2	50
26	Butter	45	1	45
33	Tomato	18	2	36
32	Potato	22	5	110

Payble Amount : 535 Buy

Figure 12: Cart Page of User

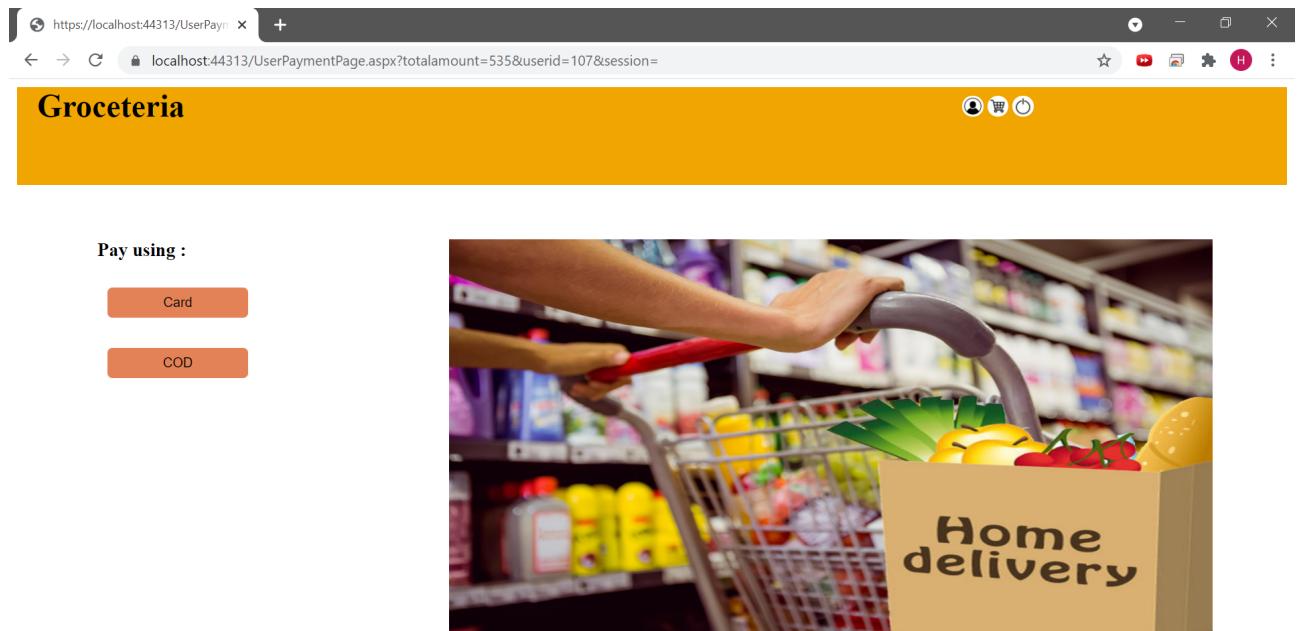


Figure 13: Payment page

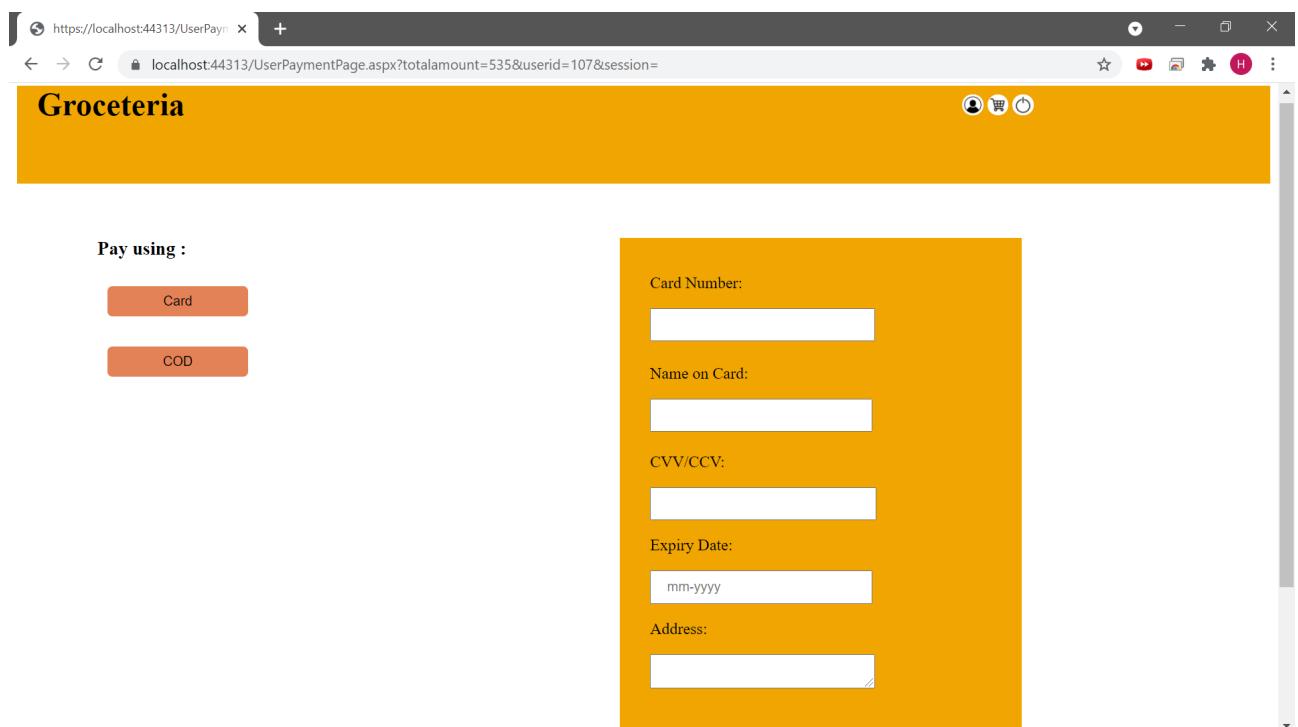


Figure 14: Card Payment Option

The screenshot shows a web browser window for the URL <https://localhost:44313/UserProfilePage.aspx?sessionid=himanshu@gmail.com>. The page title is "Groceteria". At the top, there is a navigation bar with icons for search, user profile, and power. Below the title, a table displays user information:

	User_ID	First_name	Last_name	Email	Password	Address	State	Country
Edit	107	Himanshu	Kumar	himanshu@gmail.com	him123	Bokaro Steel City	Jharkhand	India

Below the table, a green button labeled "Order History" is visible.

Figure 15: User Profile Page

The screenshot shows a web browser window for the URL <https://localhost:44313/UserOrderPage.aspx?sessionid=himanshu@gmail.com>. The page title is "Groceteria". At the top, there is a navigation bar with icons for search, user profile, and power. Below the title, a table displays a list of past orders:

Order_date	Order_id	pay_method	Prod_name	Item_Quan	Item_price	Pay_amount
27-03-2021 12:00:00 AM	27	COD	Apple Juice	2	50	535
27-03-2021 12:00:00 AM	27	COD	Milk	2	50	535
27-03-2021 12:00:00 AM	27	COD	Butter	1	45	535
27-03-2021 12:00:00 AM	27	COD	Apple	2	140	535
27-03-2021 12:00:00 AM	27	COD	Banana	2	104	535
27-03-2021 12:00:00 AM	27	COD	Potato	5	110	535
27-03-2021 12:00:00 AM	27	COD	Tomato	2	36	535

Figure 16: Order history Page of User

6 References:

1. ASP.NET tutorial for beginners by Kudvenkat
2. <https://nptel.ac.in/courses/106/105/106105175/>

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