

A PROJECT ON

“Grocery Management System”

SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE COURSE OF
DIPLOMA IN ADVANCED COMPUTING FROM CDAC



SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY
Hinjawadi

SUBMITTED BY:

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- 4) Pratik Satpute (62758)

UNDER THE GUIDENCE OF:

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Faculty Member

Sunbeam Institute of Information Technology, PUNE.

ACKNOWLEDGEMENT

A project usually falls short of its expectation unless aided and guided by the right persons at the right time. We avail this opportunity to express our deep sense of gratitude towards Mr. Nitin Kudale (Center Coordinator, SIIT, Pune) and Mr. Yogesh Kolhe (Course Coordinator, SIIT ,Pune) .

We are deeply indebted and grateful to them for their guidance, encouragement and deep concern for our project. Without their critical evaluation and suggestions at every stage of the project, this project could never have reached its present form.

Last but not the least we thank the entire faculty and the staff members of Sunbeam Institute of Information Technology, Pune for their support.

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PGDAC March, 2022 Batch,
SIIT Pune



CERTIFICATE

This is to certify that the project work under the title 'Grocery Management System' is done by Milind Shete, Kunal Salunke, Praveen Vaware, Pratik Satpute in partial fulfillment of the requirement for award of Diploma in Advanced Computing Course.

Mrs. Lalita Shinde
Project Guide

Mr.Yogesh Kolhe
Course Co-Coordinator

Date: 29/09/2022

1. INTRODUCTION TO PROJECT

Grocery is a part of everyone's day to day life. There is basic 5 needs of each human being like food, shelter, clothes, education and health. But the food is most essential out of these 5 needs. Grocery's major part contains food. And here we found the scope to make this system.

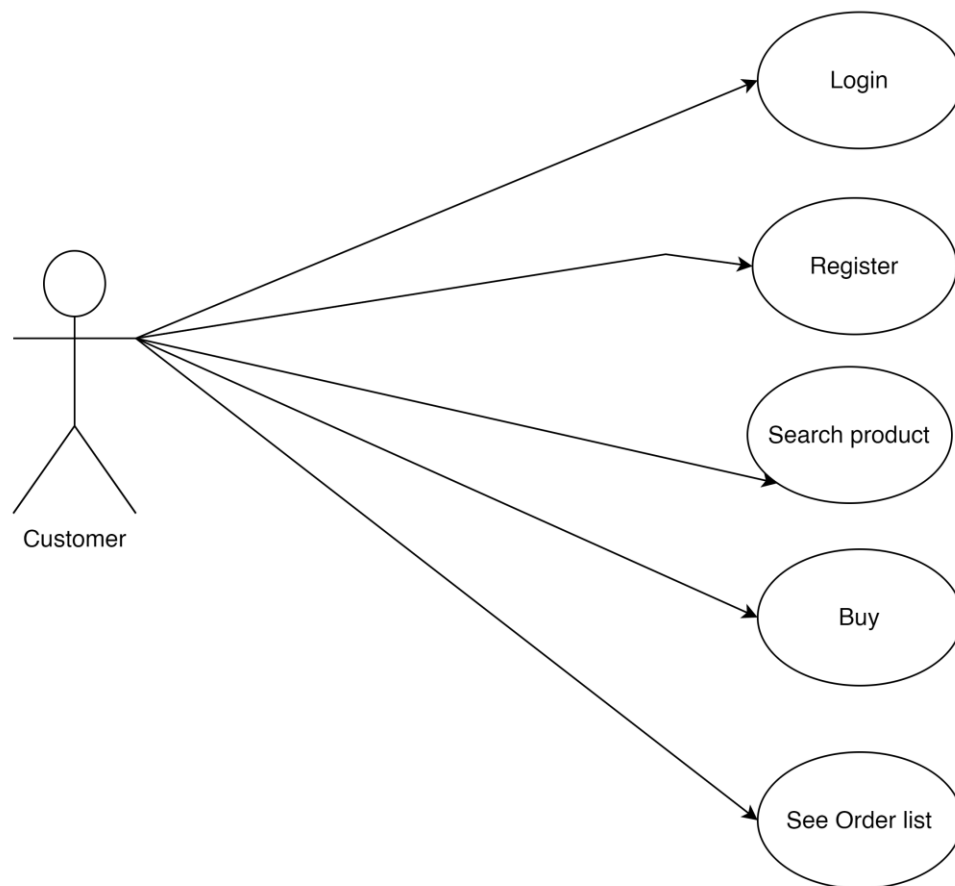
We have given thought to this grocery management system according to Indian market. In India due to heavy traffic in major cities, pollution, time concern, etc. many people prefer to buy online. Not only grocery but also nowadays people are buying clothes online which we used to think that we cannot buy without trial. Grocery for Indian families is fixed for month; it doesn't need any trial or anything else. There is so many checking has been already done by FSSAI (Food Safety and Standards Authority of India). So, Customer generally go to the supermarket or any grocery shop just to buy monthly grocery. The purpose of this system is to save the time of customer and also reduce the road traffic as well as it will reduce pollution.

In this system customer can place order online for their groceries. Customers will get their delivery at door step. Also, customer will get suggestions for grocery buying for next buying. It is basically grocery shopping website like other shopping websites like amazon, flipkart etc. But its focus is on only grocery. This idea has very huge market because it is daily necessity for survival as well as for comfortable lifestyle. People are unable to find time to household works like buying grocery. So, by this platform we provide grocery. This system can be used to search for all grocery and fresh vegetables which are available in the market.

Over all this system is very useful from customer perspective as well as seller perspective. This will save both time and money. After COVID-19 pandemic we realized that majority of the household work or even office work can be done online. By saving this time we can do what we love to do.

2. REQUIREMENTS

2.1 FUNCTIONAL REQUIREMENTS



2.1 Customer Account

The customer, who will henceforth be called the ‘user’, will be presented with 3 choices by the Grocery Management system, as the first step in the interaction between them. A user can choose one of these and his choice would be governed by whether he is a guest or a registered user and whether he wants to check the availability of products or also buy them. The terms ‘registered user’ and ‘guest’ are described below.

A user who has bought the products earlier would have been given a user id and a password. This ‘personal information’ would be henceforth referred to as ‘profile’. Such a user with a profile in DB-user shall be called a ‘registered user’. A registered user will be able to check the availability of products as well as buy a product by logging into the system.

A new user, on the other hand, would either have to register himself with the system by providing personal information. The new user becomes a registered user.

A guest can only check the products and cannot add products in to cart directly. GMS shall present the user with an option to exit from the system at any time during the following processes.

2.2 Registration and creation of user profile

The system shall require a user to register, in order to carry out any transactions with it except for checking out products. It will ask the user for the following information at the least –first name, last name, email address, address, pin code, city, state, phone number, and password.

2.3 Quick Search

Here we provided Quick Search facility for any user to search particular product without login into account .This will provide user an option for searching product.

After entering product name in the search bar, it compares the names of available products with the name entered by user. And the products with the matching names will be displayed.

2.4 Cart

Products can be added in to cart by two ways

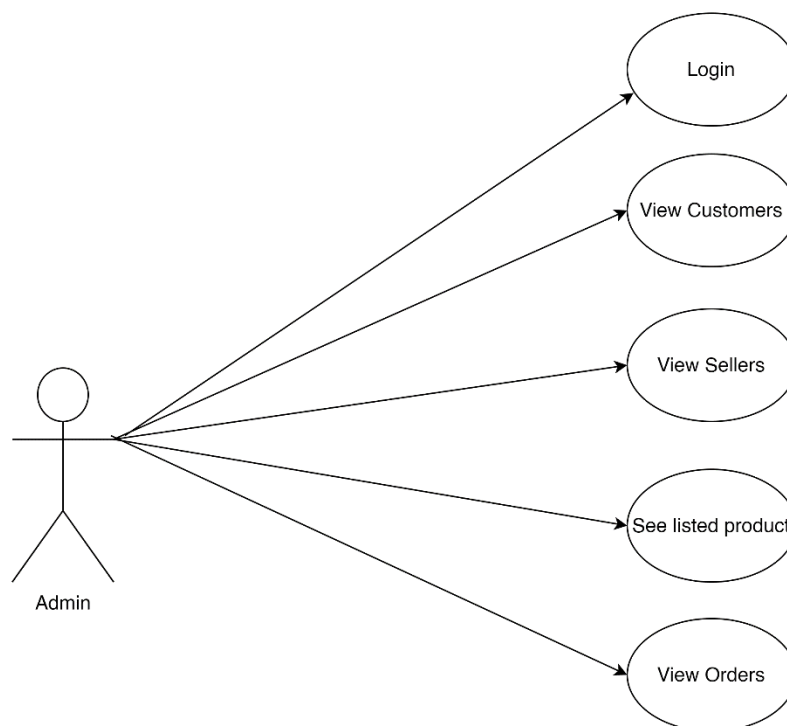
- i. From Home page user will be able to select the desired category. After clicking on the category user will be able to see all the products of selected category. After this user will be able to add any desired products by clicking on “add to cart”.
- ii. User can find products by searching in the search bar. After entering product name in the search bar, it compares the names of available products with the name entered by user. And the products with the matching names will be displayed. After this user will be able to add any desired products by clicking on “add to cart”.

After adding products in the cart user will be able to see all the products added under the cart section. Here user can set the quantity of selected products. Also user can delete unwanted products from the cart. User can see total cart value.

2.5 Checkout

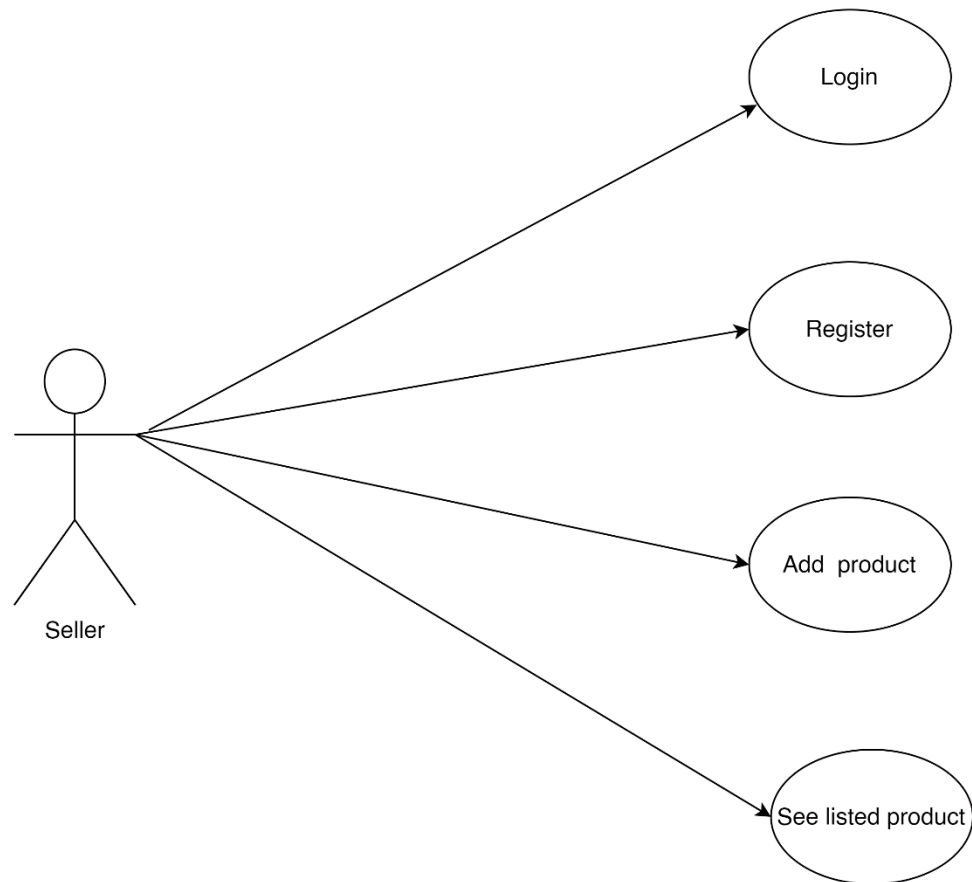
In checkout page, the system shall allow a user to view all information about cart and total cart amount. Here user will be able to choose a payment option from available payment methods.

Admin Account



Admin should be able to login, View customer information, View Seller information, View Product list, View Order list. Admin should also be able edit delete customer, seller and product.

Seller Account



Seller should be able to login, Sign Up, View his Product list, View his Order list. Seller should also be able edit and delete products.

2.2 NON FUNCTIONAL REQUIREMENTS

2.2.1 Interface

Go to Appendix B for user interfaces

2.2.2 Performance

- **Number of Concurrent Users:**
GMS shall be able to handle at least 1000 transactions per second

2.2.3 Constraint

GMS shall be able to handle at least 1000 transactions/inquiries per second

2.2.4 Other Requirements:

▪ Hardware Interfaces

The GMS is expected to function on Intel Pentium 4 Processor equivalent or above, 2 GB RAM, 20 GB HDD.

▪ Software Interfaces

The GMS shall work on MS Windows operating systems family (Windows 8 or later). It configures to work with MySQL database. This System works on Apache Tomcat server. It uses browser IE 5.0 & above. It uses IIS 5.0 server.

3. DESIGN

3.1 Database Design

The following table structures depict the database design.

Table 1: Customer Info :

Field	Type	Null	Key	Default	Extra
c_id	bigint	NO	PRI	NULL	auto_increment
c_address	varchar(200)	YES		NULL	
c_city	varchar(100)	YES		NULL	
c_email	varchar(100)	YES	UNI	NULL	
c_fname	varchar(50)	YES		NULL	
c_lname	varchar(50)	YES		NULL	
c_mobile	varchar(20)	YES	UNI	NULL	
c_password	varchar(300)	YES		NULL	
c_pincode	int	YES		NULL	
c_state	varchar(100)	YES		NULL	
is_deleted	tinyint(1)	YES		0	

Table 2: Seller Info:

Field	Type	Null	Key	Default	Extra
s_id	bigint	NO	PRI	NULL	auto_increment
is_deleted	tinyint(1)	YES		0	
s_city	varchar(100)	YES		NULL	
s_email	varchar(100)	YES	UNI	NULL	
s_mobile	varchar(20)	YES	UNI	NULL	
s_name	varchar(100)	YES		NULL	
s_password	varchar(300)	YES		NULL	
s_pincode	int	YES		NULL	
s_state	varchar(100)	YES		NULL	

Table 3: Category Info:

Field	Type	Null	Key	Default	Extra
cat_id	bigint	NO	PRI	NULL	auto_increment
cat_desc	varchar(800)	YES		NULL	
cat_image_path	varchar(500)	YES		NULL	
cat_name	varchar(100)	YES		NULL	

Table 4: Product Info :

Field	Type	Null	Key	Default	Extra
p_id	bigint	NO	PRI	NULL	auto_increment
is_deleted	tinyint(1)	YES		0	
p_details	varchar(800)	YES		NULL	
p_image_path	varchar(500)	YES		NULL	
p_name	varchar(100)	YES		NULL	
p_price	double	NO		NULL	
p_unit	varchar(20)	YES		NULL	
cat_id	bigint	YES	MUL	NULL	
s_id	bigint	YES	MUL	NULL	

Table 5: Orders Info:

Field	Type	Null	Key	Default	Extra
o_id	bigint	NO	PRI	NULL	auto_increment
o_date	date	YES		NULL	
c_id	bigint	YES	MUL	NULL	

Table 6: Order Details

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
p_qty	bigint	YES		NULL	
o_id	bigint	YES	MUL	NULL	
p_id	bigint	YES	MUL	NULL	
s_id	bigint	YES	MUL	NULL	

Table 7: Contact US

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
email	varchar(100)	YES		NULL	
message	varchar(1000)	YES		NULL	
mobile	varchar(20)	YES		NULL	
name	varchar(100)	YES		NULL	

E-R Diagram, Dataflow diagram and Class Diagram:

Go to Appendix A

4. CODING STANDARDS IMPLEMENTED

Naming and Capitalization

Below summarizes the naming recommendations for identifiers in Pascal casing is used mainly (i.e. capitalize first letter of each word) with camel casing (capitalize each word except for the first one) being used in certain circumstances.

Identifier	Case	Examples	Additional Notes
Class	Pascal	Customer, Seller, etc.	Class names should be based on "objects" or "real things" and should generally be nouns . No ‘_’ signs allowed. Do not use type prefixes like ‘C’ for class.
Method	Camel	saveProduct, addSeller,	Methods should use verbs or verb phrases.
Parameter	Camel	isDeleted	Use descriptive parameter names. Parameter names should be descriptive enough that the name of the parameter and its type can be used to determine its meaning in most scenarios.
Interface	Pascal with "I" prefix	ICustomerRepository	Do not use the ‘_’ sign
Property	Pascal		Use a noun or noun phrase to name properties.
Associated private member variable	_camelCase		Use underscore camel casing for the private member variables
Exception Class	Pascal with "Exception" suffix	ResourceNotFoundException,	

Comments

- Comment each type, each non-public type member, and each region declaration.
- Use end-line comments only on variable declaration lines. End-line comments are comments that follow code on a single line.
- Separate comments from comment delimiters (apostrophe) or // with one space.
- Begin the comment text with an uppercase letter.
- End the comment with a period.
- Explain the code; do not repeat it.

5. TEST REPORT

Another group called Linux did the testing and the report of the testing is given hereunder.

GENERAL TESTING:

SR-NO	TEST CASE	EXPECTED RESULT	ACTUAL RESULT	ERROR MESSAGE
1	Sign Up Page	Redirected to Next page	OK	Nothing
2	Login Page	Pop-up will come	Ok	Please enter username and password again .
3	Home page	Fetching All product's category	Ok	Nothing
4	Quick search product	Gives all matching products	Ok	Nothing
5	Add to Cart	Product added to cart	Ok	Nothing
6	Checking login or not	User is logged in or not	Ok	Nothing
7	Cart Total Amount	Gives total cart amount	Ok	Nothing
8	Go to payment page	Payment page	Ok	Nothing
9	Admin /Seller login page	Redirected to home page of admin/seller	Ok	Nothing
10	Seller details	Gives all the seller details in tabular form	Ok	Nothing
11	Product details	Gives all the product details in tabular form with edit and delete function	Ok	Nothing
12	Customer Details	Gives customer details to admin	Ok	Nothing
	STATIC TESTING			
SR-NO	Deviation	Program		
1	Commenting not followed	All Web Application		

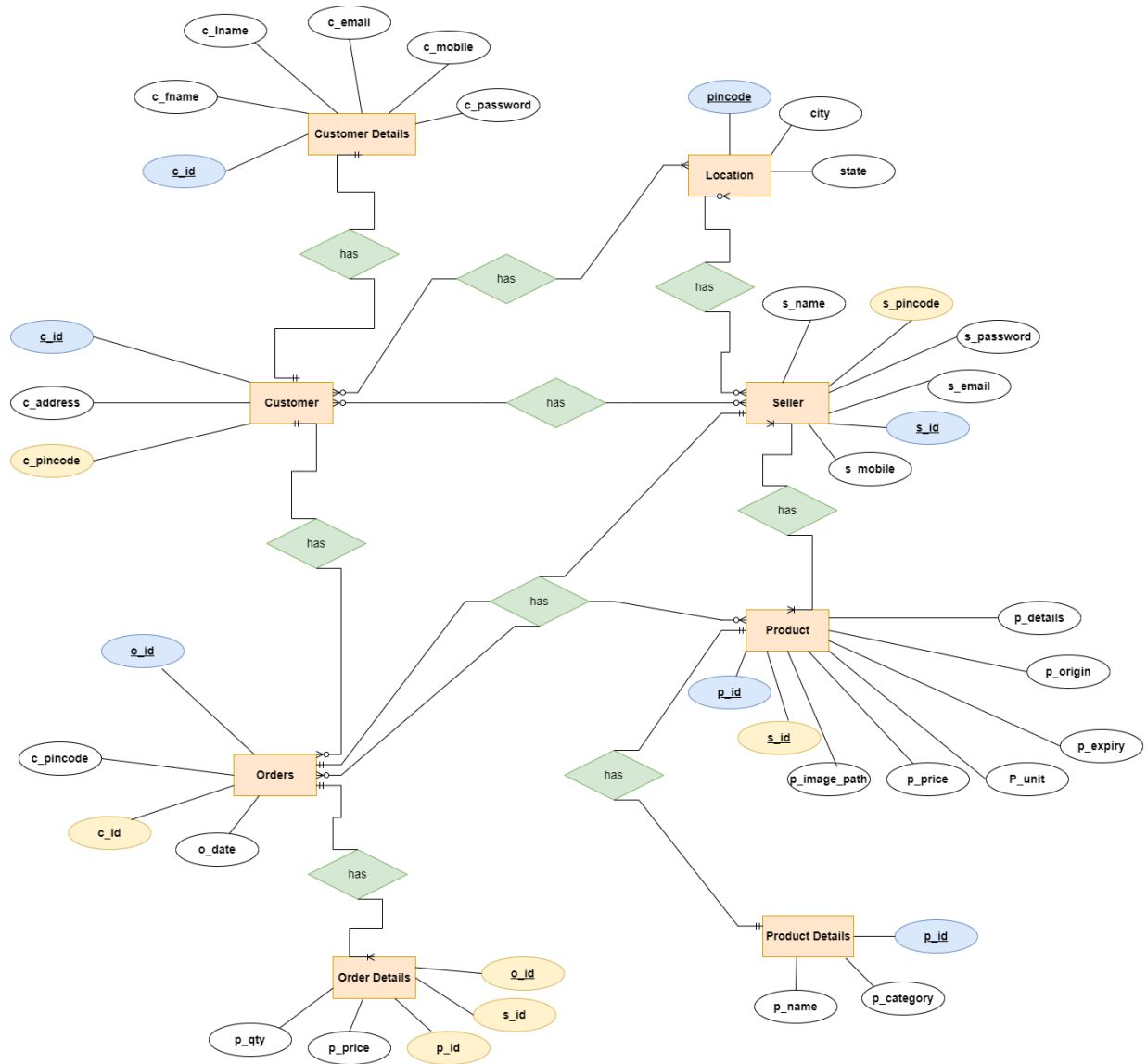
6. PROJECT MANAGEMENT RELATED STATISTICS

DATE	WORK PERFORMED	SLC Phase	Additional Notes
May 28,2022	Project Allotment and User Requirements Gathering	Feasibility Study	--
June 10,2022	Initial SRS Document Validation And Team Structure Decided	Requirement Analysis (Elicitation)	The initial SRS was presented to the client to understand his requirements better
June 16,2022	Designing the use-cases, Class Diagram, Collaboration Diagram, E-R Diagram and User Interfaces	Requirement Analysis & Design Phase	Database Design completed
July 5,2022	Business Logic Component design Started	Design Phase	-----
July 25,2022	Coding Phase Started	Coding Phase	Folder structure, coding conventions were finalized.
SEP 5,2022	Implementation of Backend for Web Application Started	Coding Phase	Express.js and Spring Boot API development started.
SEP 10,2022	Implementation of Backend completed	Coding Phase	Express.js and Spring Boot Backend API were completed.
SEP 12,2022	Evaluation done for backend API.	Evaluation Phase	--
SEP 15,2022	Customer login, signup, homepage and search products page were created.	Coding Phase and Unit Testing	--

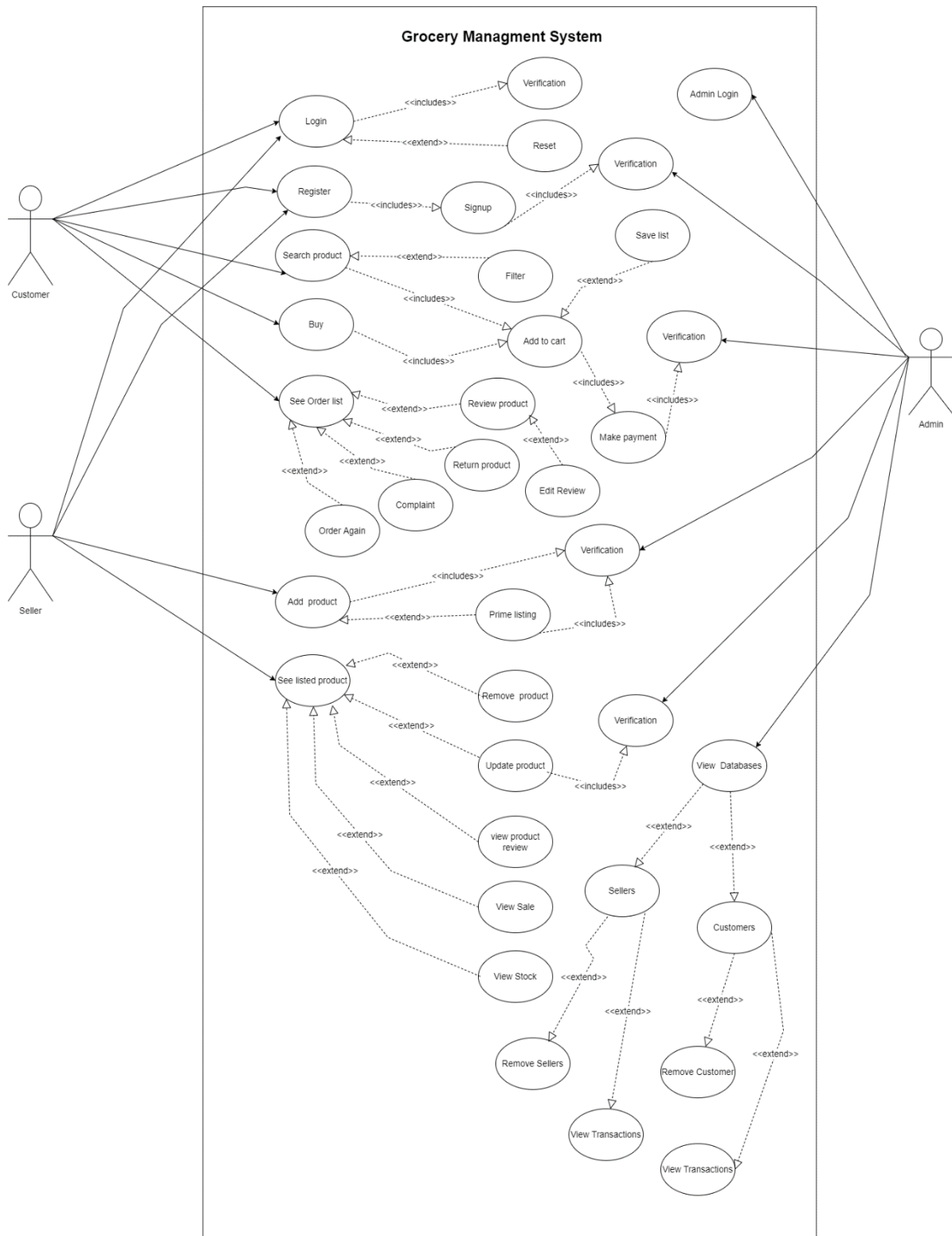
SEP 17,2022	Admin pages with API integration was completed.	Coding Phase and Unit Testing	Module Integration was done
SEP 19,2022	Seller pages with API integration was completed.	Testing Phase (Module Testing)	--
SEP 21,2022	Cart page implemented with the help of redux, checkout page was created.	Testing Phase (Acceptance Testing)	The Project of Other Team was Taken up by the Team for Testing
SEP 23,2022	The Errors Found were removed	Debugging	The Project was complete for submission
SEP 24,2022	Final Submission of Project		

Appendix A

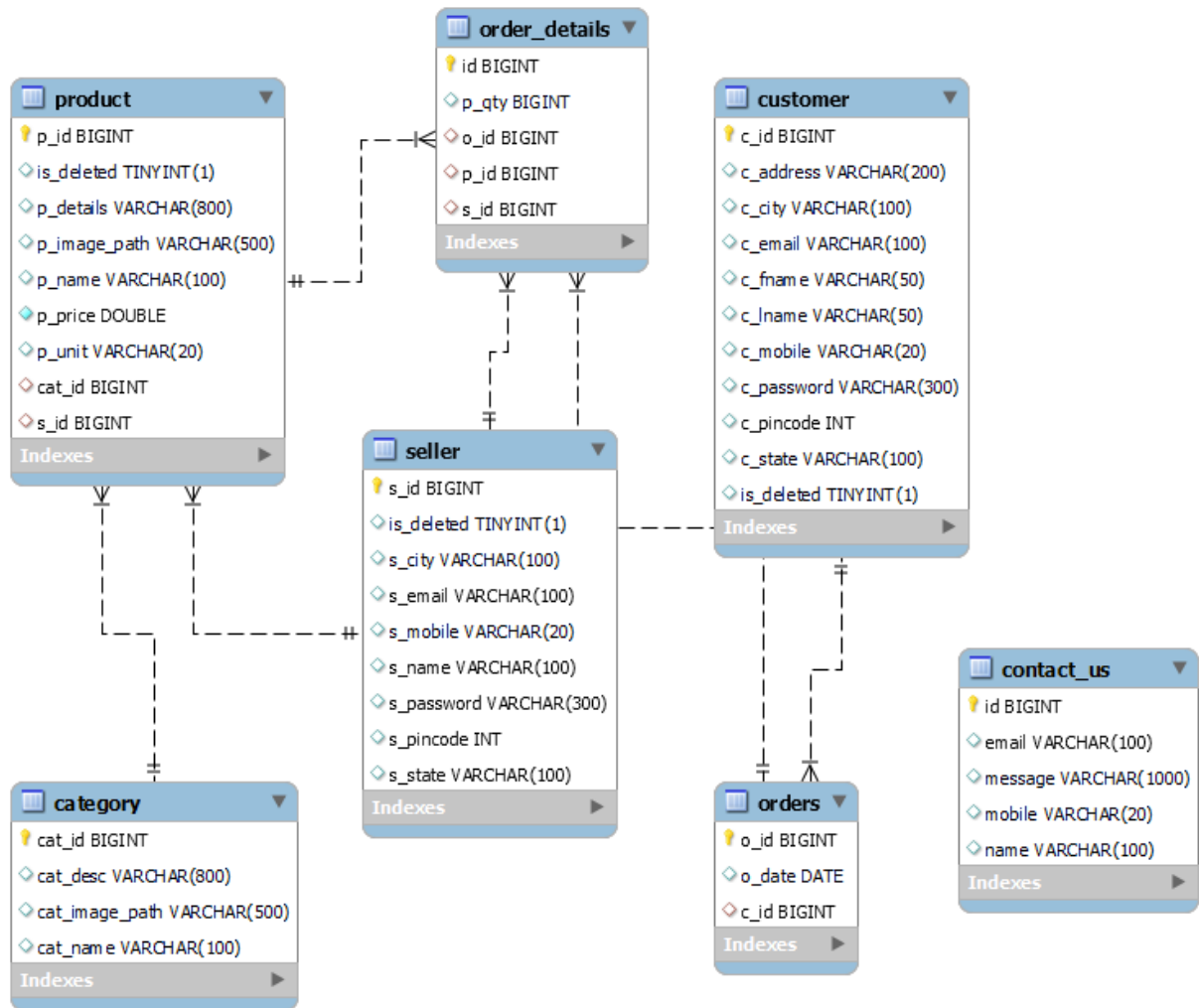
Entity Relationship Diagram



Use Case Diagram:

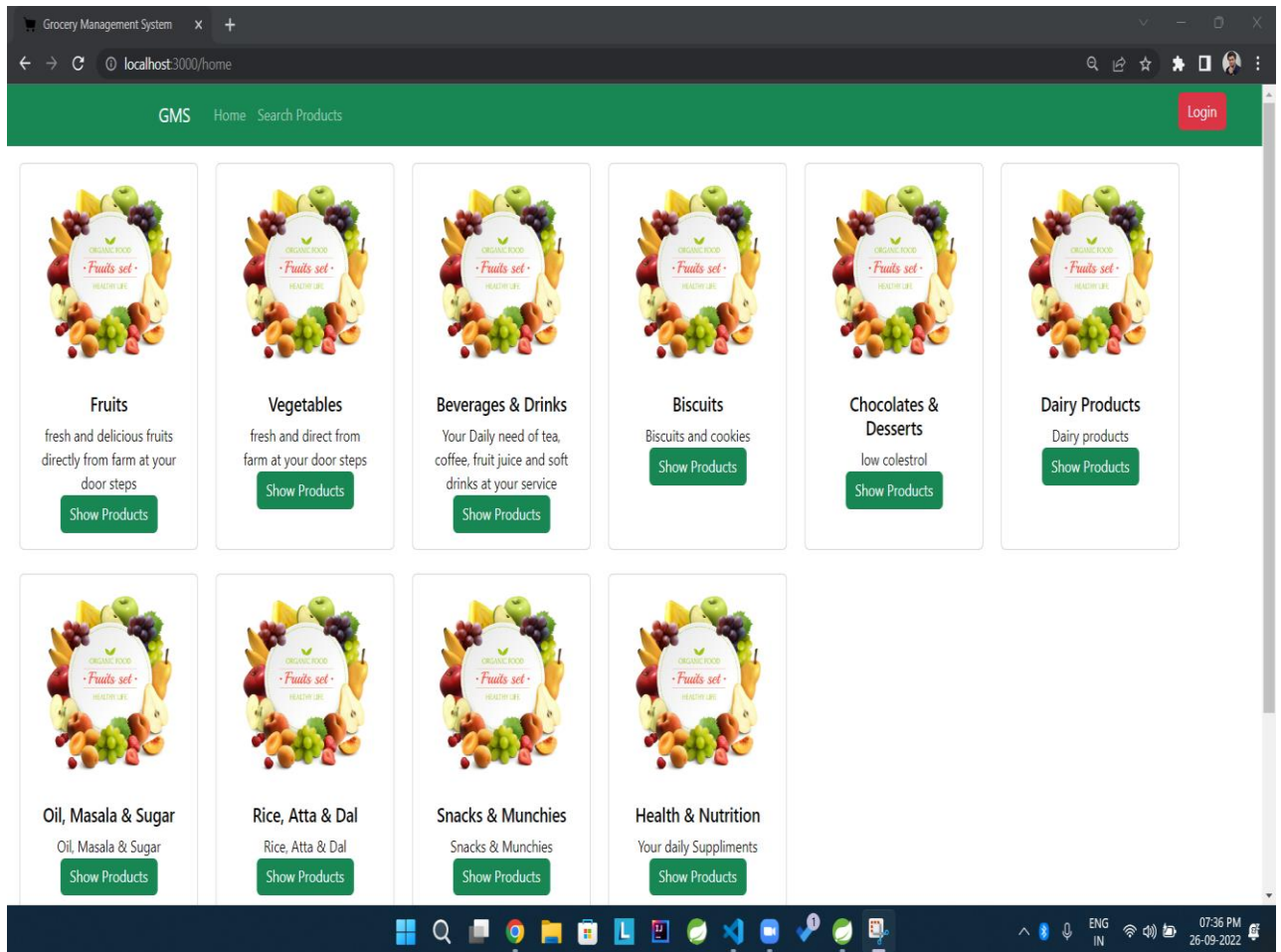


Class Diagram

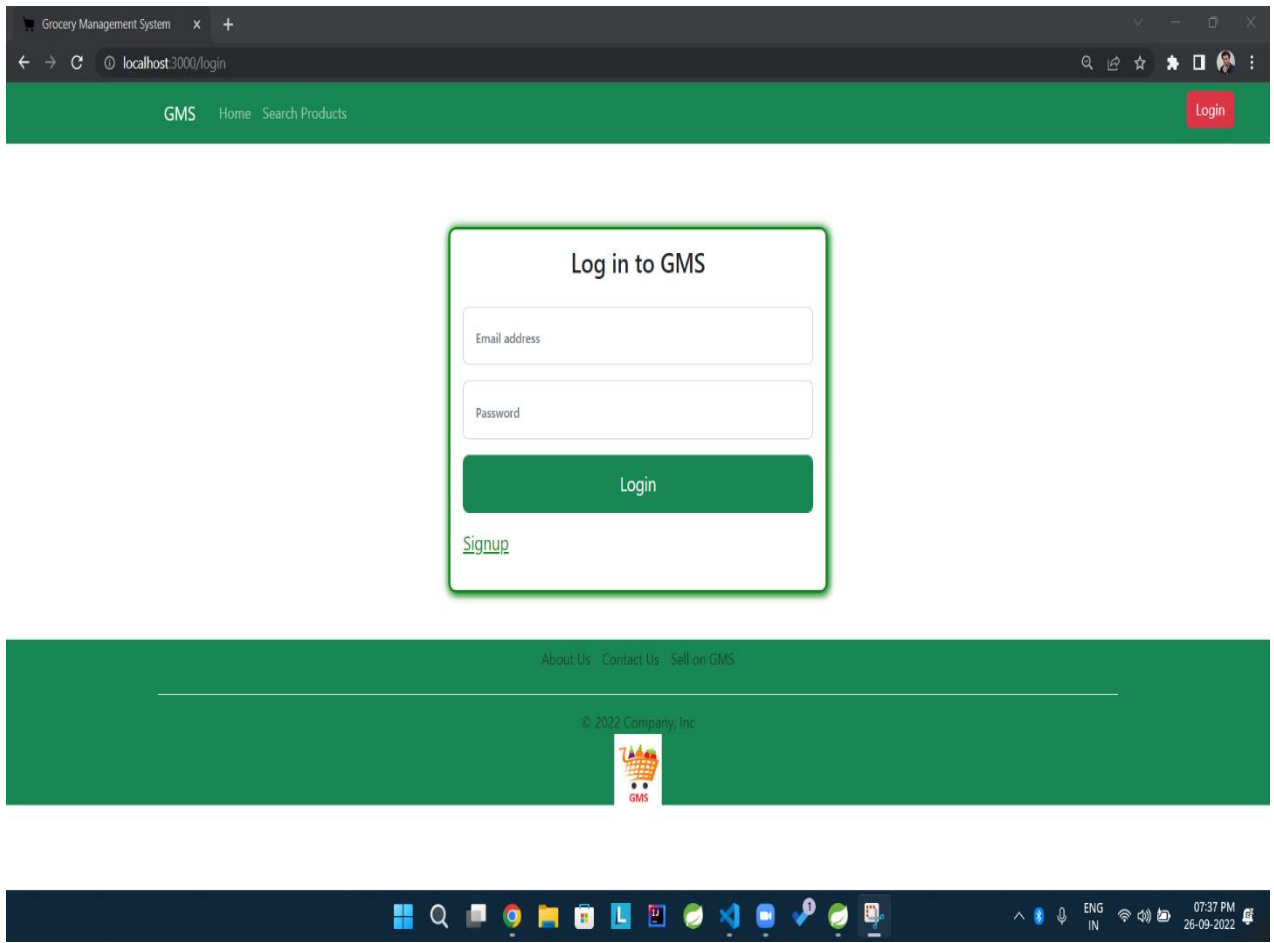


Appendix B

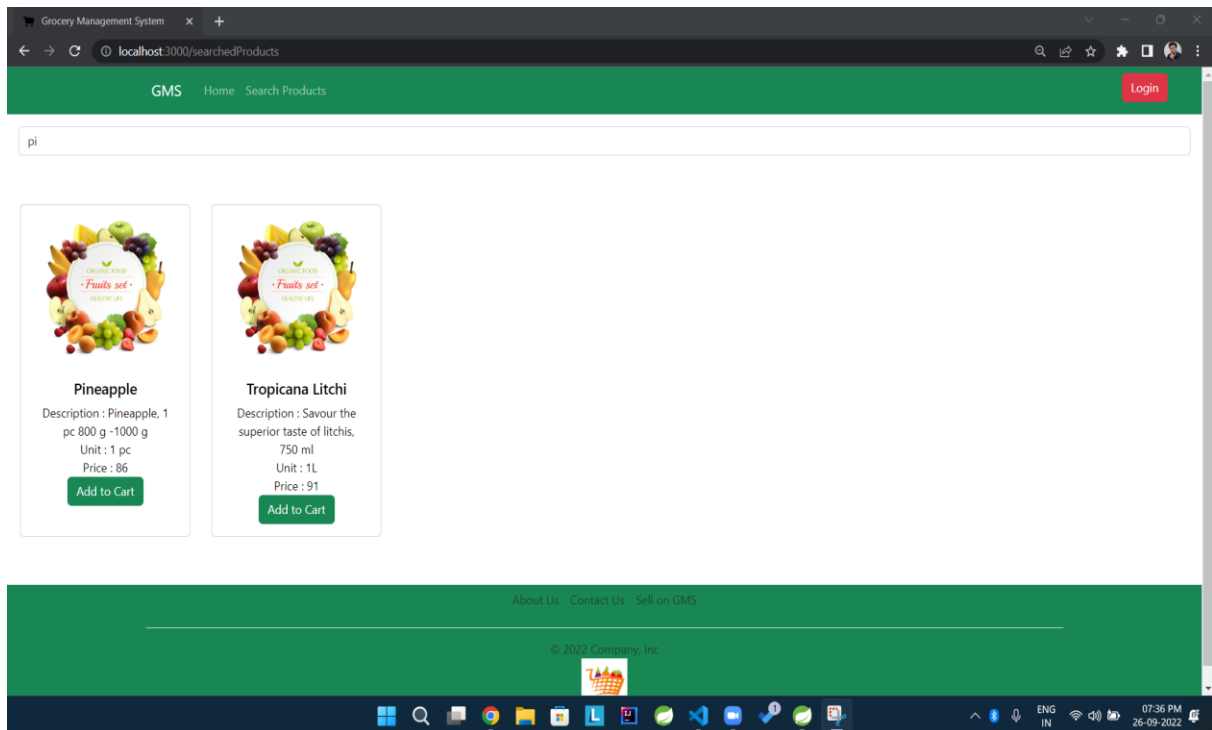
Homepage:



Login Popup:



Search Product:



Customer Sign Up:

Signup here!!!

First Name Last Name

Email

Mobile number

Password

Confirm Password

Address

Pincode

City State

[Already have an account? login here](#)

After Customer Log In:

Welcome, Rakesh Patil

Fruits
fresh and delicious fruits directly from farm at your door steps

Vegetables
fresh and direct from farm at your door steps

Beverages & Drinks
Your Daily need of tea, coffee, fruit juice and soft drinks at your service

Biscuits
Biscuits and cookies

Chocolates & Desserts
low colestrol

Dairy Products

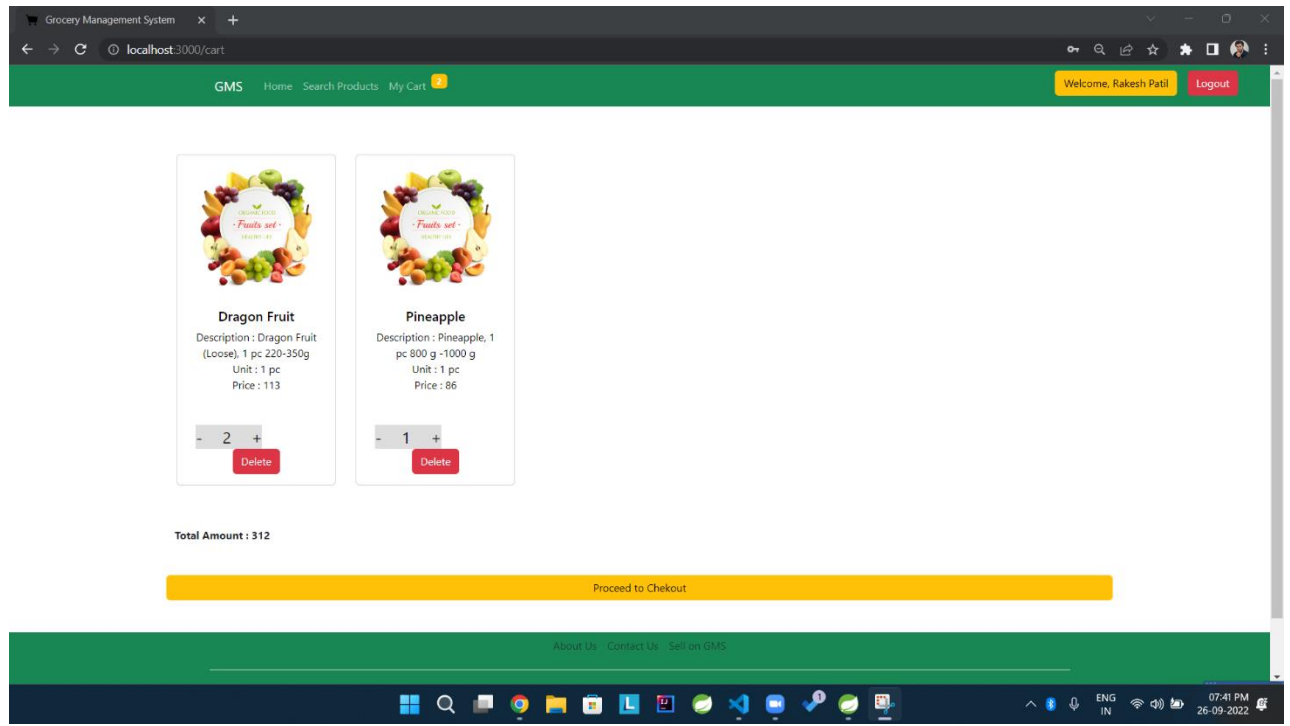
Oil, Masala & Sugar

Rice, Atta & Dal

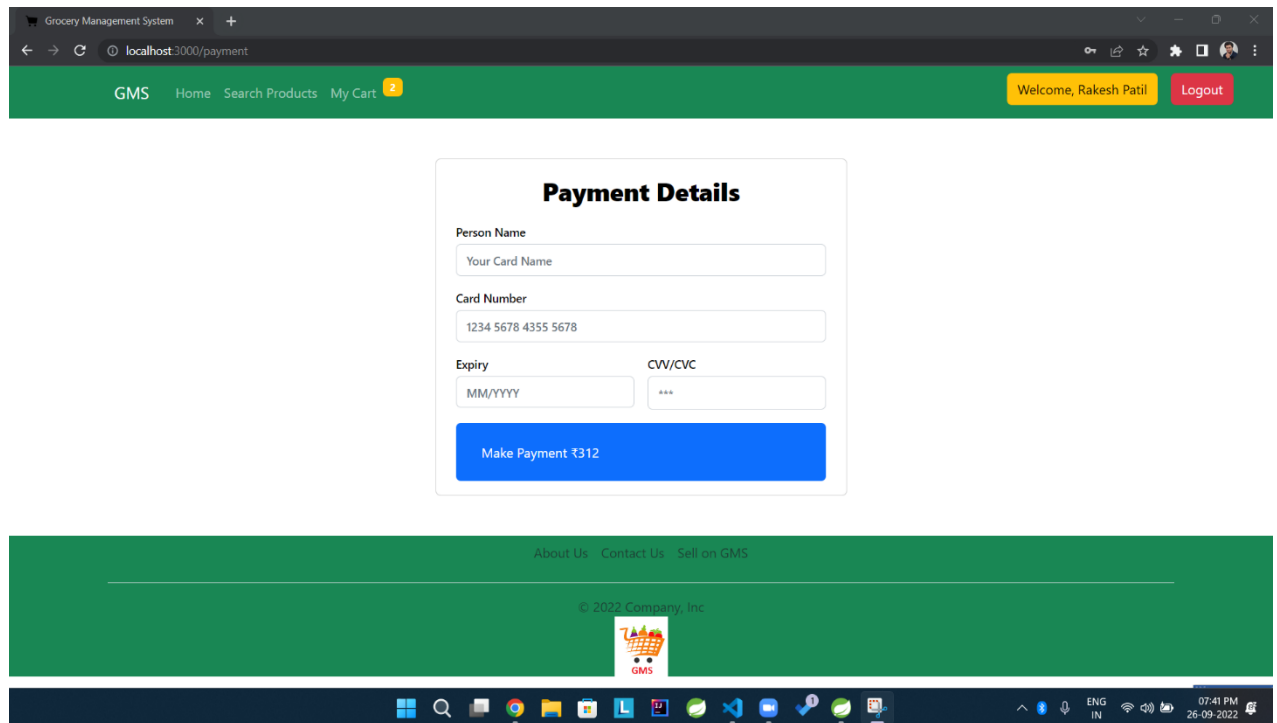
Snacks & Munchies

Health & Nutrition

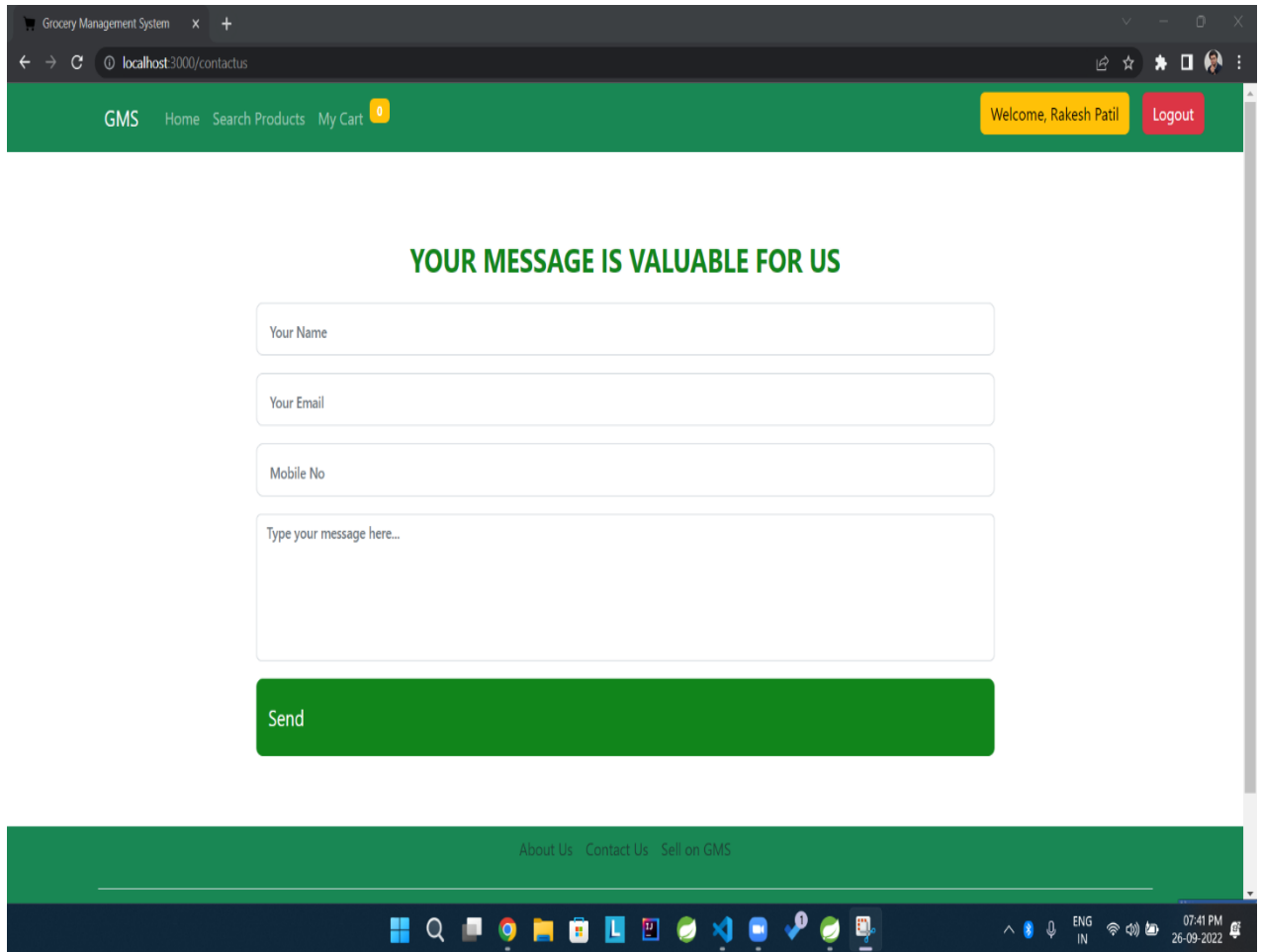
Cart:



Payment Page:



Contact Us:



The screenshot displays a web browser window with the title 'Grocery Management System'. The address bar shows 'localhost:3000/contactus'. The page has a green header with navigation links: 'GMS', 'Home', 'Search Products', and 'My Cart' (with a yellow badge showing '0'). On the right of the header, there is a yellow 'Welcome, Rakesh Patil' button and a red 'Logout' button. The main content area has a green background with the text 'YOUR MESSAGE IS VALUABLE FOR US' in bold green letters. Below this text are four input fields: 'Your Name', 'Your Email', 'Mobile No', and a larger text area for 'Type your message here...'. A green 'Send' button is positioned below the text area. At the bottom of the page, there is a green footer with links: 'About Us', 'Contact Us', and 'Sell on GMS'. The Windows taskbar is visible at the very bottom, showing various application icons and the system clock indicating 07:41 PM on 26-09-2022.

YOUR MESSAGE IS VALUABLE FOR US

Your Name

Your Email

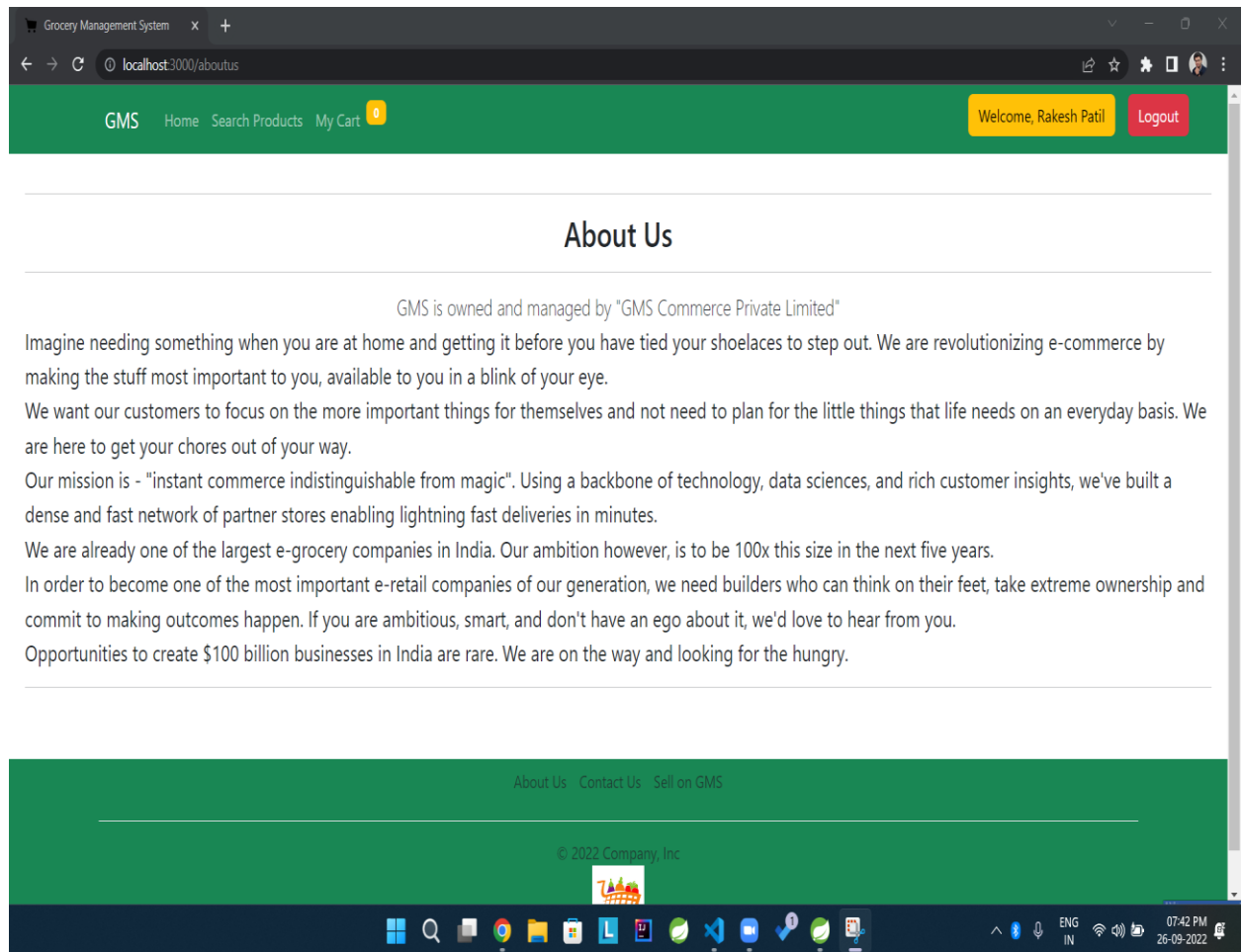
Mobile No

Type your message here...

Send

About Us Contact Us Sell on GMS

About Us:



Administrators / Seller Login:

Grocery Management System x +

localhost:3000/signin

GMS Home Search Products Login

Email

Password

[Signup](#)

Signin

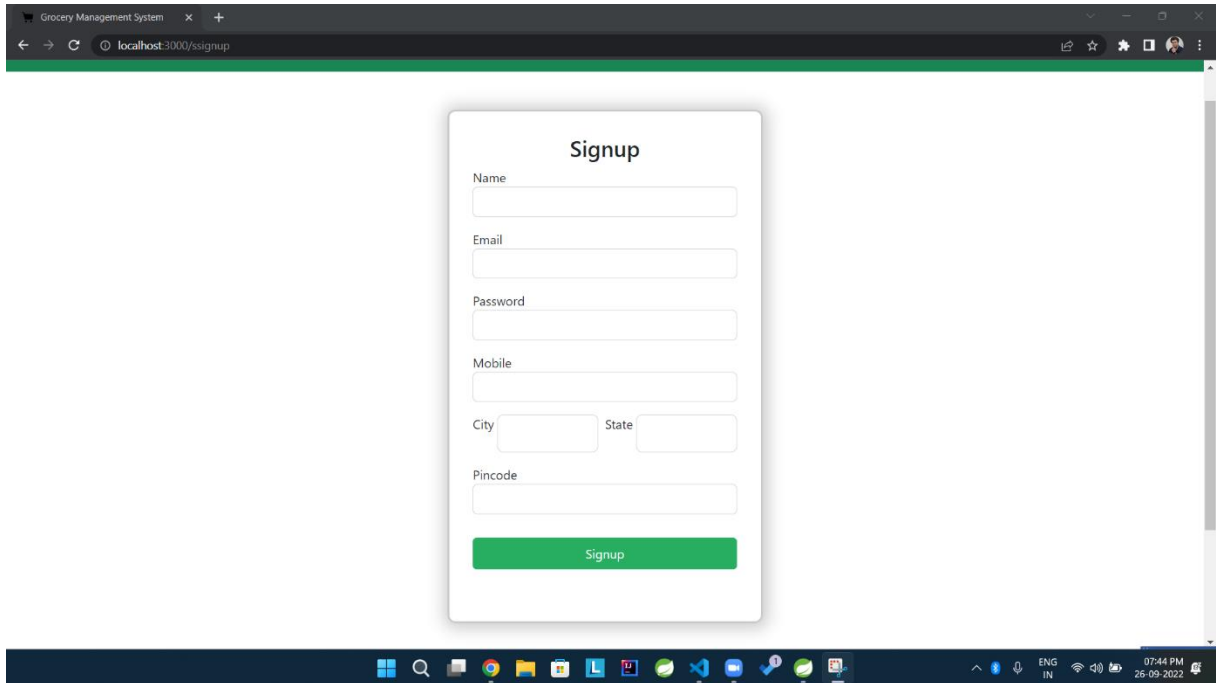
About Us Contact Us Sell on GMS

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GMS

07:43 PM 26-09-2022

Seller Sign Up:



Signup

Name

Email

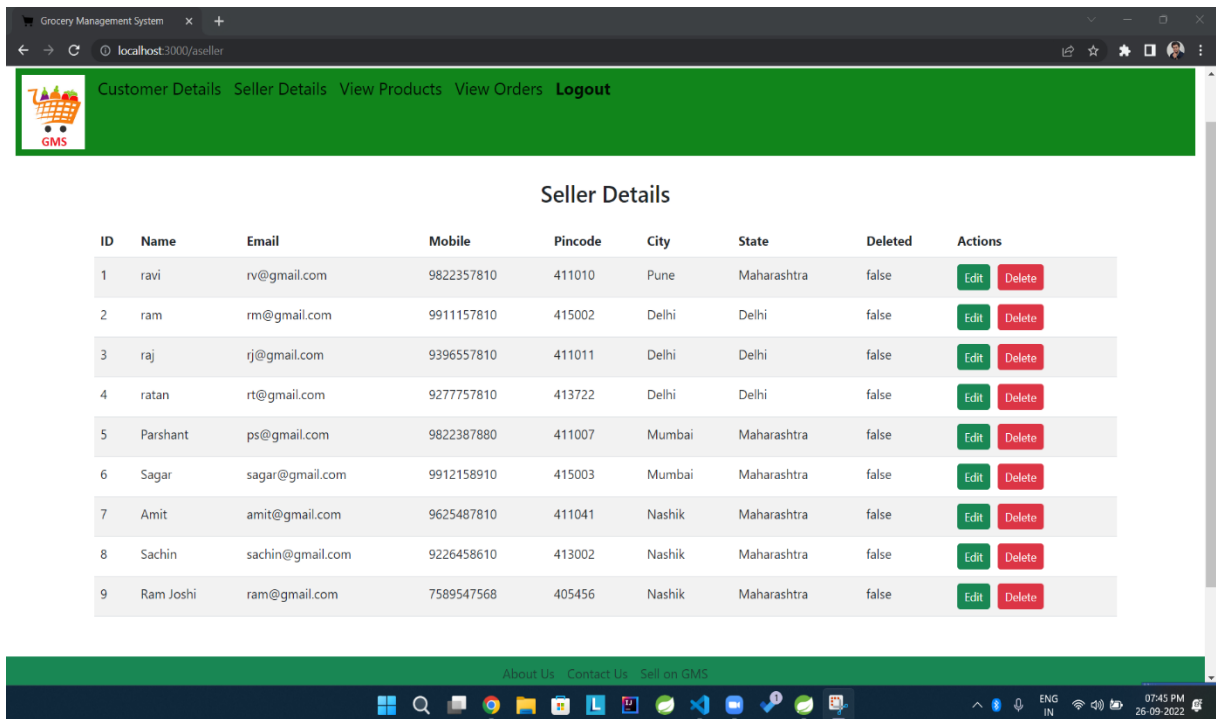
Password

Mobile

City State

Pincode

Admin Page → Seller Details:




Customer Details Seller Details View Products View Orders Logout

Seller Details

ID	Name	Email	Mobile	Pincode	City	State	Deleted	Actions
1	ravi	rv@gmail.com	9822357810	411010	Pune	Maharashtra	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
2	ram	rm@gmail.com	9911157810	415002	Delhi	Delhi	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
3	raj	rj@gmail.com	9396557810	411011	Delhi	Delhi	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
4	ratan	rt@gmail.com	9277757810	413722	Delhi	Delhi	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
5	Parshant	ps@gmail.com	9822387880	411007	Mumbai	Maharashtra	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
6	Sagar	sagar@gmail.com	9912158910	415003	Mumbai	Maharashtra	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
7	Amit	amit@gmail.com	9625487810	411041	Nashik	Maharashtra	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
8	Sachin	sachin@gmail.com	9226458610	413002	Nashik	Maharashtra	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
9	Ram Joshi	ram@gmail.com	7589547568	405456	Nashik	Maharashtra	false	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

About Us Contact Us Sell on GMS

Admin Page → Customer Details:



[Customer Details](#)
[Seller Details](#)
[View Products](#)
[View Orders](#)
[Logout](#)


Customer Details

ID	First Name	Last Name	Email	Mobile Number	Address	Pincode	City	State	Deleted	Actions
1	Pratik	Satpute	pratik@gmail.com	785200255	Satara	401280	Satara	MH	false	Edit Delete
5	Ramesh	Pawar	ramesh@gmail.com	7814752364	adasd	401285	Pune	Maharashtra	false	Edit Delete
7	Rakesh	Patil	rakesh@gmail.com	9814752364	Matru Bhakti	411021	Pune	Maharashtra	false	Edit Delete
8	Praveen	Vaware	praveen@gmail.com	7584569575	IIIIII	401203	Thane	Maharashtra	false	Edit Delete

[About Us](#)
[Contact Us](#)
[Sell on GMS](#)

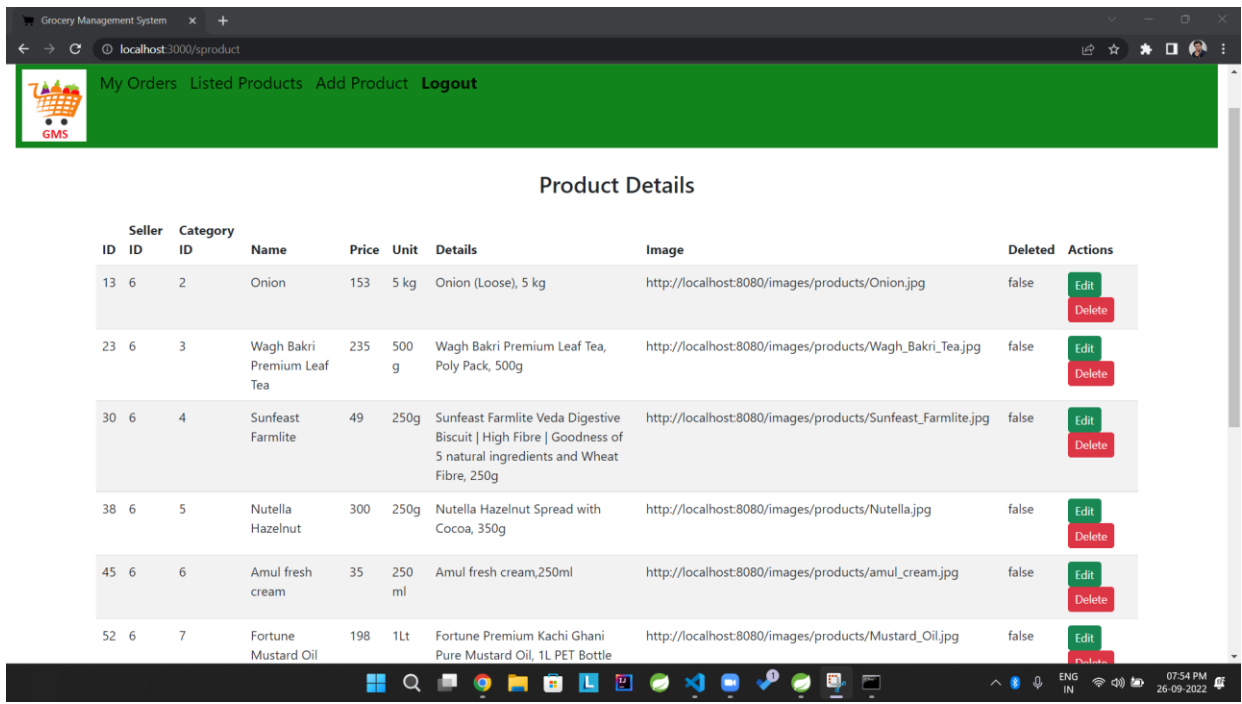
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Admin Page → Product Details:


[Customer Details](#)
[Seller Details](#)
[View Products](#)
[View Orders](#)
[Logout](#)

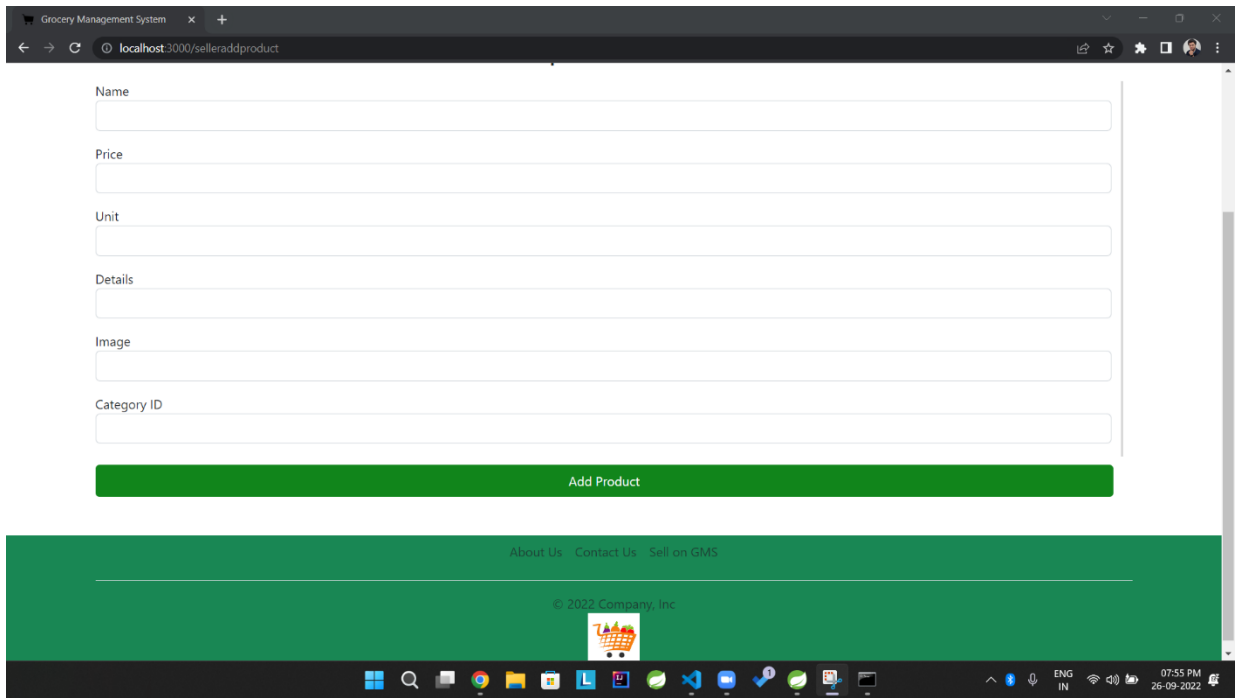
Product Details

ID	Seller ID	Category ID	Name	Price	Unit	Details	Image Path	Deleted	Actions
1	1	1	Apple	97	4 pcs	Fresh Apple- Shimla, 4 pcs (Approx. 550 - 640 g)	http://localhost:8080/images/products/apple-shimla.jpg	false	Delete
2	2	1	Dragon Fruit	113	1 pc	Dragon Fruit (Loose), 1 pc 220-350g	http://localhost:8080/images/products/Dragon_Fruit.jpg	false	Delete
3	3	1	Pineapple	86	1 pc	Pineapple, 1 pc 800 g -1000 g	http://localhost:8080/images/products/Pineapple.jpg	false	Delete
4	4	1	Mosambi	72	1 kg	Mosambi - Organically Grown (Loose), 1 kg	http://localhost:8080/images/products/Mosambi.jpg	false	Delete
5	5	1	Pomegranate	191	4 pcs	Pomegranate (Loose), 4 pcs (approx. 720 - 800 g)	http://localhost:8080/images/products/Pomegranate.jpg	false	Delete
6	6	1	eeeeeeeee	450	5	shaksdakjd	saldaskld	true	Delete
7	7	1	Raw Mango	103	1 kg	Raw Mango (Loose), 1 kg	http://localhost:8080/images/products/Raw_Mango.jpg	false	Delete
8	8	1	Pear	260	4 pcs	Pear - Beauty, Rich In Fiber, Vitamin C, 4 pcs (500g - 600g)	http://localhost:8080/images/products/Pear.jpg	false	Delete

Seller Page → Product Details:


Product Details

Seller ID	Category ID	Name	Price	Unit	Details	Image	Deleted	Actions	
13	6	2	Onion	153	5 kg	Onion (Loose), 5 kg	http://localhost:8080/images/products/Onion.jpg	false	Edit Delete
23	6	3	Wagh Bakri Premium Leaf Tea	235	500 g	Wagh Bakri Premium Leaf Tea, Poly Pack, 500g	http://localhost:8080/images/products/Wagh_Bakri_Tea.jpg	false	Edit Delete
30	6	4	Sunfeast Farmlite	49	250g	Sunfeast Farmlite Veda Digestive Biscuit High Fibre Goodness of 5 natural ingredients and Wheat Fibre, 250g	http://localhost:8080/images/products/Sunfeast_Farmlite.jpg	false	Edit Delete
38	6	5	Nutella Hazelnut	300	250g	Nutella Hazelnut Spread with Cocoa, 350g	http://localhost:8080/images/products/Nutella.jpg	false	Edit Delete
45	6	6	Amul fresh cream	35	250 ml	Amul fresh cream, 250ml	http://localhost:8080/images/products/amul_cream.jpg	false	Edit Delete
52	6	7	Fortune Mustard Oil	198	1Lt	Fortune Premium Kachi Ghani Pure Mustard Oil, 1L PET Bottle	http://localhost:8080/images/products/Mustard_Oil.jpg	false	Edit Delete

Seller Page → Add Product:


Add Product

Name

Price

Unit

Details

Image

Category ID

[Add Product](#)

[About Us](#) [Contact Us](#) [Sell on GMS](#)

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Seller Page → Update Product:

The screenshot displays the 'Update Product' interface within the Grocery Management System. The header is green and contains a shopping cart icon with 'GMS' and navigation links: 'My Orders', 'Listed Products', 'Add Product', and 'Logout'. The main content area is titled 'Update Product' and features a vertical form with the following fields: 'Name', 'Price', 'Unit', 'Details', 'Image', and 'Category ID'. Each field is represented by a white input box. At the bottom of the form is a green button labeled 'Update Product'. The browser's address bar shows 'localhost:3000/sellereditproduct'. The Windows taskbar at the bottom indicates the time is 07:54 PM on 26-09-2022.

7.REFERENCES:

<http://www.google.com>

<https://www.amazon.in/>

<https://blinkit.com/>

<https://www.bigbasket.com/>

<https://www.javatpoint.com/>

<http://www.w3school.org>

<http://www.wikipedia.org>