IACSD

INSTITUTE FOR ADVANCED
COMPUTING AND
SOFTWARE DEVELOPMENT
AKURDI, PUNE

Documentation On

"ONLINE GROCERY ORDERING SYSTEM"

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Submitted By:

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Project Guide

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1. Introduction:

This project is a web-based shopping system for an existing shop. The "Online Grocery Ordering System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by the existing system. It can assist the business to concentrate on their other activities rather concentrate on the record-keeping by managing the information of Customers, Grocery, Orders, Addresses, Products. Thus, it will help organizations in better utilization of resources. It will also help the business to reach a large number of customers.

In the new normal situation around the world, online grocery is getting huge attention as it helps people to get the essentials without stepping outside and also helps in social distancing. Acceptance of online grocery platforms in India has increased in recent years, owing to rising awareness about the convenience of the process, digital literacy, and internet penetration across the country. Growing interest by consumers to point and click their way through nearly all aspects of daily life has fueled the internet economy to develop services and sell products online even in areas that were once the sole domain of traditional businesses, such as grocery stores. Some of the reasons why an increasing number of consumers buy groceries online are common to all internet purchases, including better prices, larger selection, convenience, and time savings. Home delivery for various reasons such as physical disability, the need to care for small children, the lack of adequate or convenient transportation, a busy lifestyle, and now the need for social distancing. Buying groceries and other products online unchains the consumers from physically driving to and shopping in traditional stores.

Document Purpose:

This document details the software requirements for the E-commerce website. It defines what the problem is and what problems a complete solution has to solve. The purpose of this software requirements specification is to verify that all the specifications are correct and verified. This document also serves to ensure that the software is traceable throughout its software development life cycle.

Online Grocery Shop is based on a concept of making grocery orders from customers to providers. The purpose of this system is basically connect the providers and customers in a platform where provider can increase their sell fast and customers can buy their desire product from home which will also consume less time and make the life easier. On a web-based marketplace, each small business receives a greater exposure, than when operating alone, which in turn provides a greater opportunity for increased sales. Besides, customers also want many options before buying any product and want to order from home. So eventually, providers can reach to the bigger number of customers instantly from anywhere.

Problem Statement:

Online grocers face number of challenges. The major challenge is lack of handy experience in consumer demands. Online market has developed its space in virtual world but is this market worth for all kinds of products specially the perishable grocery products.

Scope of Project:

Online Grocery Shop is a platform for a grocery shop to enhance their sale. In this application the customer can login, select products, quantity and proceed towards confirm order. After confirming the order grocery provider will get a notification of order. Payment method will be cash on delivery. This website will give the grocery shop a greater exposure to their products.

Our project aims at Business process automation, i.e. we have tried to computerize various processes of Online Grocery Ordering System.

- To utilize resources in an efficient manner by increasing their productivity through automation.
- The system generates types of information that can be used for various purposes.

- It satisfy the user requirement.
- Be easy to understand by the user and operator.
- Be easy to operate.
- Have a good user interface.
- Be expandable.
- Delivered on schedule within the budget.

Objectives:

The main objective of the Project on Online Grocery Ordering System is to manage the details of Grocery, Customer, Order and Product. It manages all the information about Grocery. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Grocery, Customer, Address and Order. It tracks all the details about the Order, Product.

2. Overall Description:

Benefits of Online Grocery Ordering System:

- This online Grocery Ordering system is fully functional and flexible.
- It is very easy to use.
- It saves a lot of time, money and labor.
- Eco-friendly: The monitoring of the Grocery orders and Product management and the overall business becomes easy and includes the least of paper work.
- The application acts as an office that is open 24/7.
- It increases the efficiency of the management at offering quality services to the customers.
- It provides custom features development and support with the application.

User classes and characteristics:

There will be two types of users in the system there are Shop owner and customers. First of all, the Shop owner will have control and knowledge over the entire system. They can add and remove products as well. The Shop owner got access to the shop information and has privilege to update it as well. The Shop owner will be able to see shops current order request and can accept and cancel the request and also, they can see all order information. Along with ordering grocery online, the customers can view their personal information and update it in need. They can view which orders are pending and which are received.

Shop owner:

- Shop owner can login to the system.
- View the list of all products.
- Add new Product.
- Delete product details.
- Update product details.
- View the all pending orders and completed orders.

Customer:

- Customer can login to the system.
- View his/her details.
- Check all product details.
- Customer can select product and enter the quantity of product.
- Add product in cart and then place then place the order.
- View Order list pending/delivered.
- Update their personal credentials.

Visitor:

- Visitor can sign up then only he can buy products.
- Visitor can view Products so he can do quick checking what products our sites have.

Operating Environment:

Server Side:

Processor: Intel® Xeon® processor 3500 series
HDD: Minimum 500GB Disk Space
RAM: Minimum 2GB
OS: Windows 10
Database: MySQL

Client Side (minimum requirement):

Processor: Intel Dual Core
HDD: Minimum 4MB Disk Space
RAM: Minimum 512MB
Web Browser: Google Chrome or any compatible browser
OS: Any

Design and Implementation Constraints:

- The application will use ReactJs, NodeJs, Spring boot and CSS as main web technologies.
- HTTP protocols are used as communication protocols.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.
- Since Online Grocery Ordering System is a web-based application, internet connection must be established.
- The Online Grocery Ordering System will be used on PCs and Mobile phone via internet or intranet in any web browser.

3. Specific Requirement:

External Interface Requirements:

User Interface:

- All the users will see the same page when they enter in this website. This page shows all product list and login option.
- Login page asks the users email Id and a password.

- After being authenticated by correct email id and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistent, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

Application Interfaces:

- OS: Windows 10
- Web Browser: The system is a web-based application; clients need a modern web browser such as Microsoft Edge, Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to access the website.

Communications Interfaces:

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.
- This application will communicate with the database that holds all the booking information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfill the request fired by the user.

Functional Requirement:

This section provides requirement overview of the system. Various functional modules that can be implemented by the system are->

Product Catalog:

- Any User will be able to view product.
- Catalog maintained by Shopper.

Inventory:

- Shopper will be able request to add new product to product catalog maintained by system.
- Shopper will be able to add or remove products from product List.
- Product listing will be provided based on their category, sale, quantity, likes, and recommendations.

Shopping Cart:

- Consumer will be able to add or remove products from shopping cart. System will maintain shopping cart for each consumer to maintain list of items selected by him/her.
- Consumer will be able view all items from shopping cart.
- Shopping Cart will present product details, number of items of product selected by consumer with price and total.

Order Processing:

- Registered Customer will be able place an order with the help of shopping cart maintained by system. Registered Customer will be able to cancel placed order within 24 hours.
- Registered customer gets orders history. Registered customer can get details of order from orders been placed.
- Shopper will be able to get details of orders of a particular Customer. Shopper will be able to cancel, reject or approve orders that have been placed by consumer due to some policies of Business.

Payment Processing:

- Consumer will be provided options for payment such as through COD, UPI or other online payment options. Consumer will ask to submit their payment related information. Consumer will be redirected to payment gateway for secure payment transaction. On successful payment processing using payment gateway system will notify consumer about transaction and order placement status.

Customer Support:

- Customer will be able to update his/ her personal information.
- Shopper will be able to monitor daily online shopping business activities using their personalized dashboard.
- Customer will be able get their purchase related information using Customer Dashboard.

Non-Functional Requirement:

Security:

- Registered Customer will allow placing an order.
- System will internally maintain secure communication channel between Servers (Web Servers, App Servers, database Server).
- Sensitive data will be always encrypted across communication.

Reliability:

- The system will backup business data on regular basis and recover in short time duration to keep system operational Continuous updates are maintain, continues Administration is done to keep system operational.
- During peak hours system will maintain same user experience by managing load balancing.

Availability:

- uptime: 24* 7 available

Accessibility:

- Only registered customer will be able to place an order after authentication.
- Shoppers will be able to see their product, delete, update, and add new products.

Efficiency and Maintainability:

- Page loads should be returned and formatted in a timely fashion depending on request being made.
- Administrators have ability to see all orders and maintain products.
- Commercial database software will be used to maintain System data Persistence.
- A readymade Web Server will be installed to host online shopping portal (Web Site) to management server capabilities.

Modularity:

- These modules will be loosely coupled and highly cohesive.
- System will contain CRM, Inventory, shopping cart, order processing, payment processing, and Delivery modules.

4. System Design:

Activity Diagram:

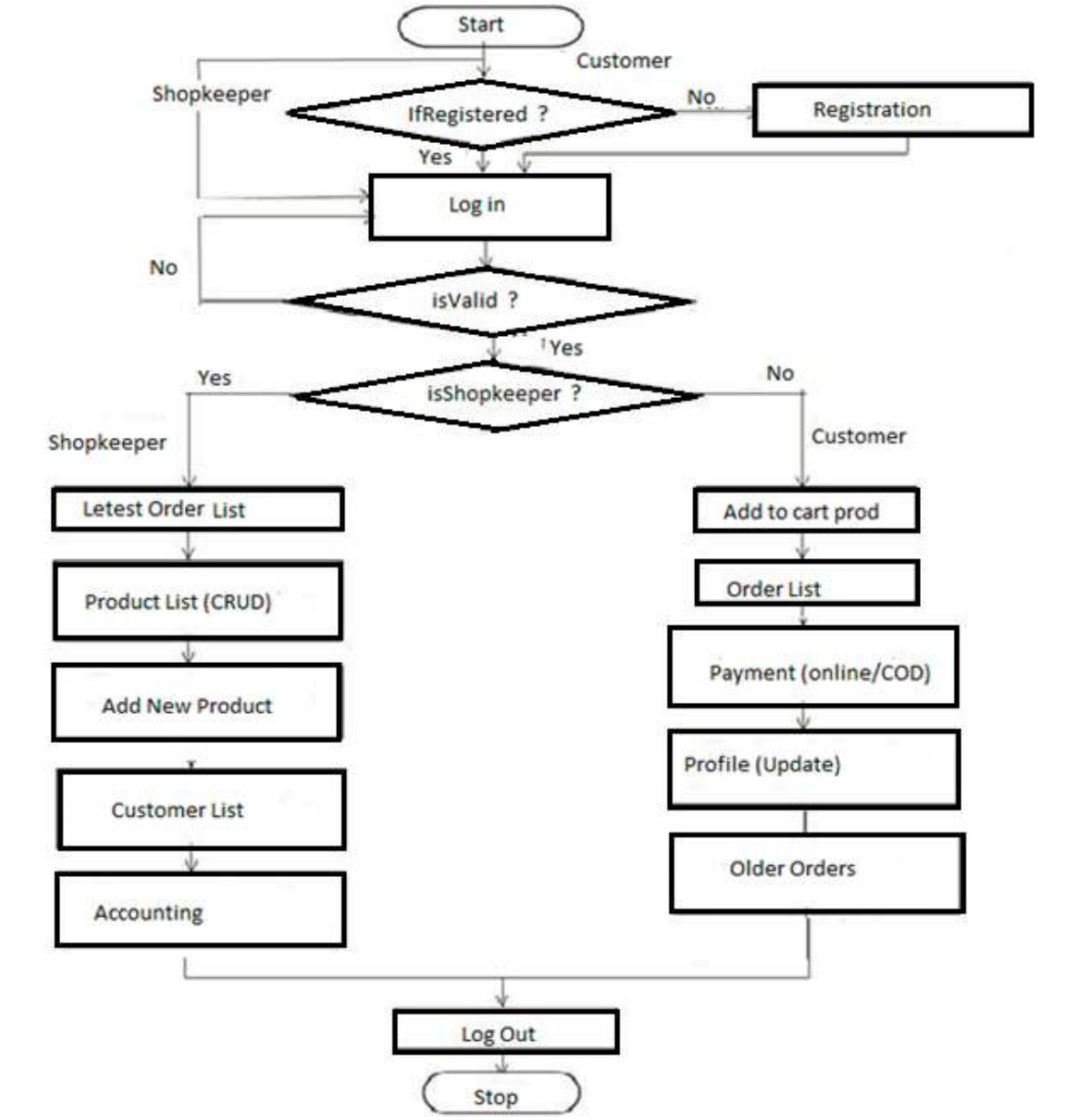


Figure 1: Activity Diagram

Use Case Diagram:

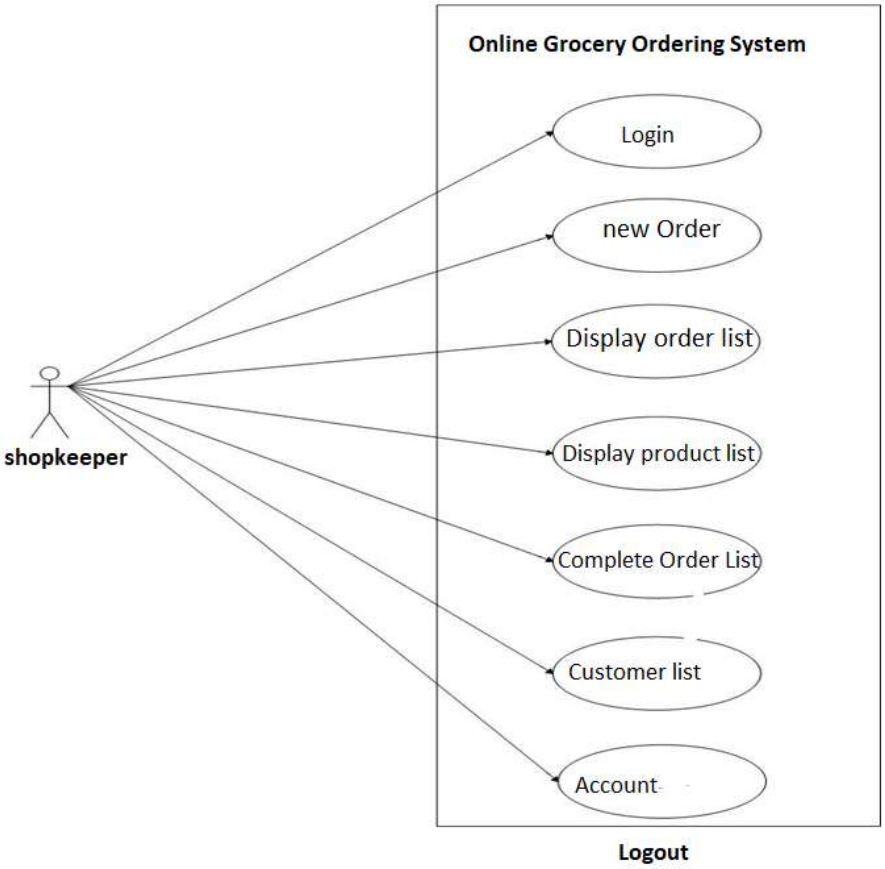


Figure 3: Use Case Diagram for Shopkeeper

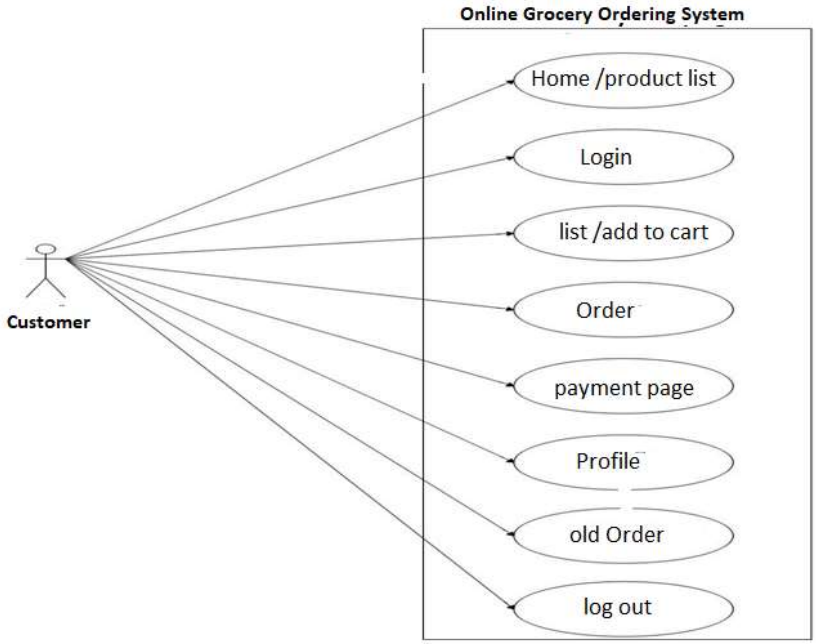


Figure 4: Use Case Diagram for Customer

ER Diagram:

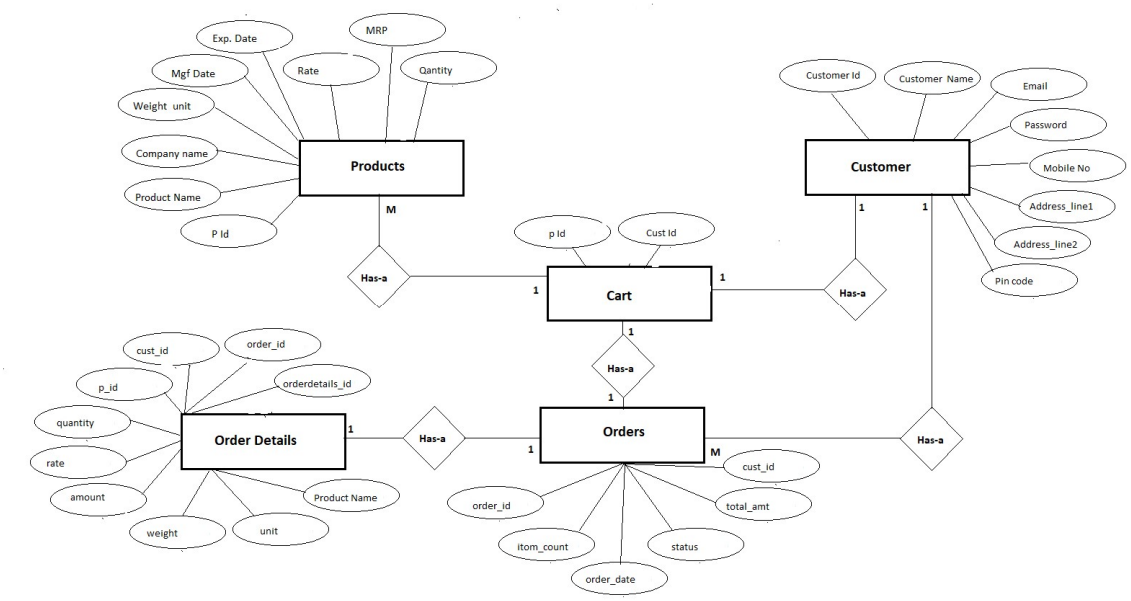


Figure 5: E-R Diagram

5. Table Structure:

1. Products:

Sr.No.	Field	Data Type	Constraint	Description
1	p_id	int	primary key	It stores product id
2	name	varchar	not null	It stores product name
3	Company_name	varchar	null	It stores Company name
4	Mfg_date	date	not null	It stores manufacturing date
5	exp_date	date	null	It stores Expiry date
6	mrp	double	null	It store product mrp
5	rate	double	not null	It stores product rate
6	weight	double	not null	It stores product weight
7	unit	double	not null	It stores unit
8	qty	int	null	It stores quantity

2. **Customer:**

Sr.No.	Field	Data Type	Constraint	Description
1	Cust_id	int	primary key	It stores customer id
2	name	varchar	not null	It stores customer name
3	email	varchar	not null	It stores customer email
4	password	varchar	not null	It stores password
5	mobile_no	double	not null	It stores mobile no.
6	Address_line1	varchar	not null	It stores customer Address Line1
6	Address_line2	varchar	null	It stores customer Address line 2
7	city	varchar	not null	It stores city
8	pincode	int	not null	It stores customer area pincode

3. **Orders:**

Sr. No.	Field	Data Type	Constraint	Description
1	order_id	int	primary key	It stores order id
2	item_count	int	not null	It stores total itom count
3	Order_date	date	not null	It stores order date
4	status	varchar	not null	It stores status
5	total_amt	double	not null	It stores total amount of order
6	Cust_id	int	foreign key	It store customer details

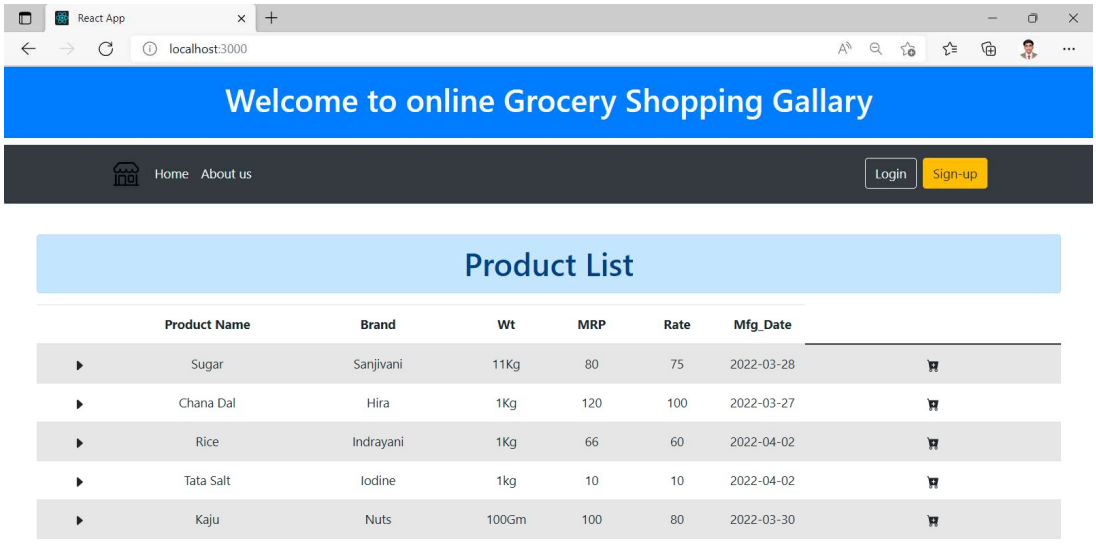
4. **Order Details:**

Sr.No.	Field	Data Type	Constraint	Description
1	Order**r**details_id	int	primary key	It stores orderdetails id
2	Order_id	int	foreign key	It stores order id
3	Cust_id	int	foreign key	It stores customer id
4	p_id	int	not null	It stores product id
5	name	varchar	not null	It stores product name
6	Company_name	varchar	null	It stores Company name
7	Mfg_date	date	not null	It stores manufacturing date

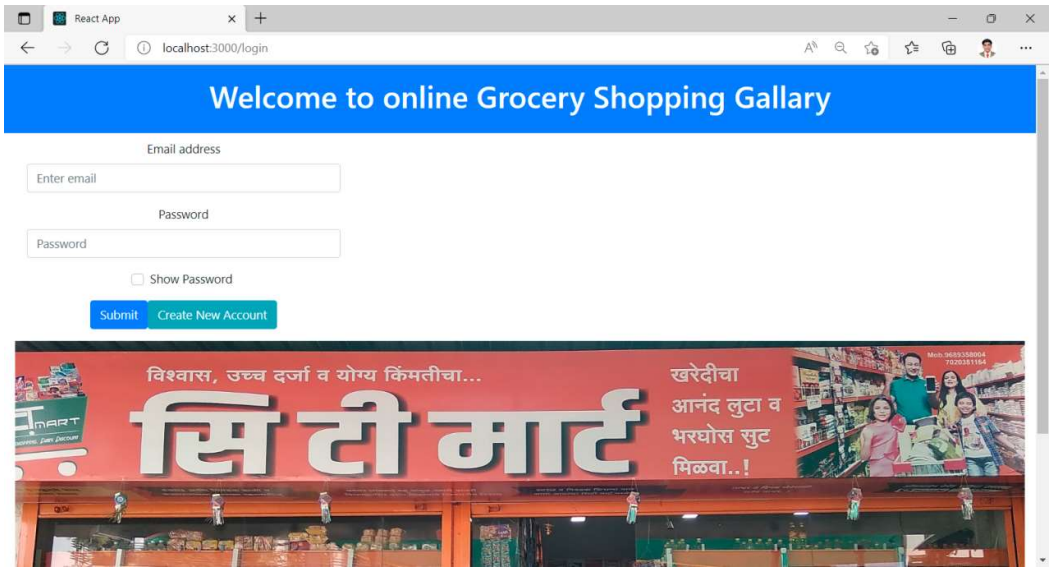
8	exp_date	date	not null	It stores Expiry date
9	mrp	double	null	It store product mrp
10	rate	double	not null	It stores product rate
12	amount	double	Not null	It store toatle amount of product
11	weight	double	not null	It stores product weight
12	unit	double	not null	It stores unit
13	qty	int	not null	It stores quantity

6. Screenshots:

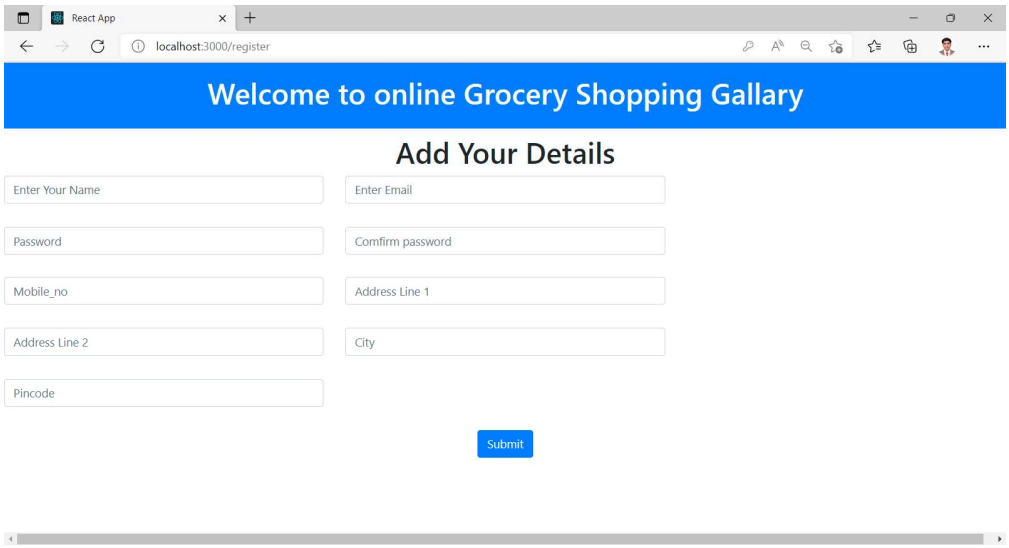
1. Home page



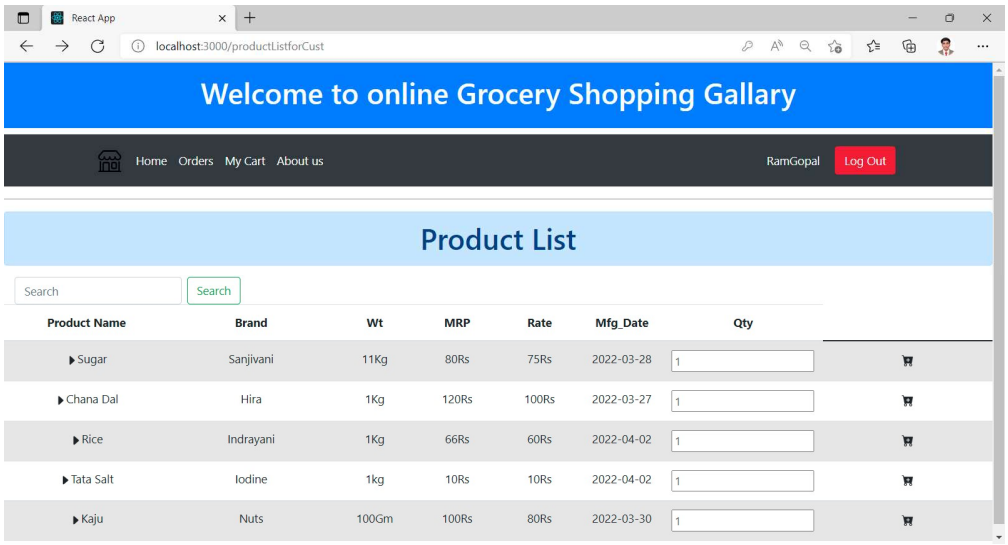
2. Login Page



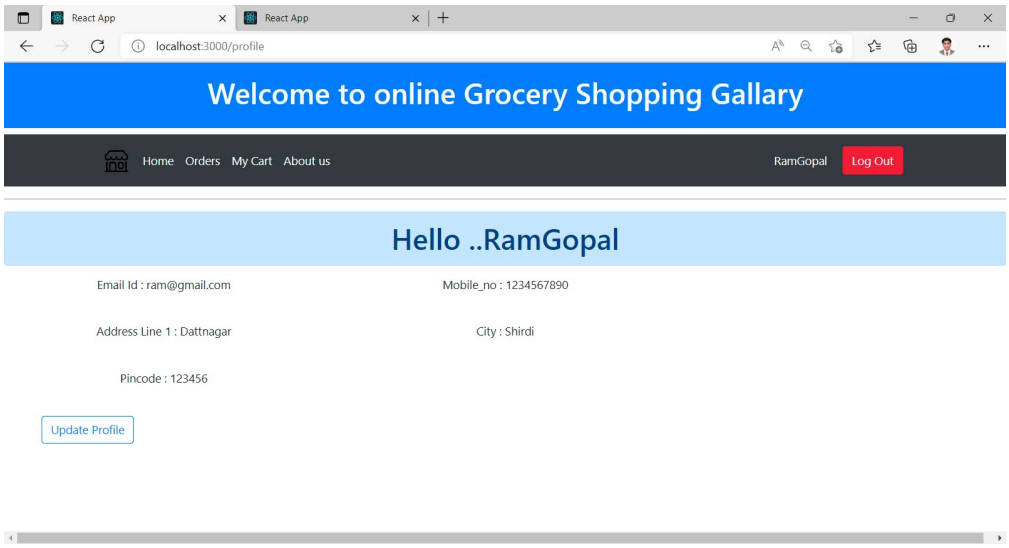
3. Registration Page



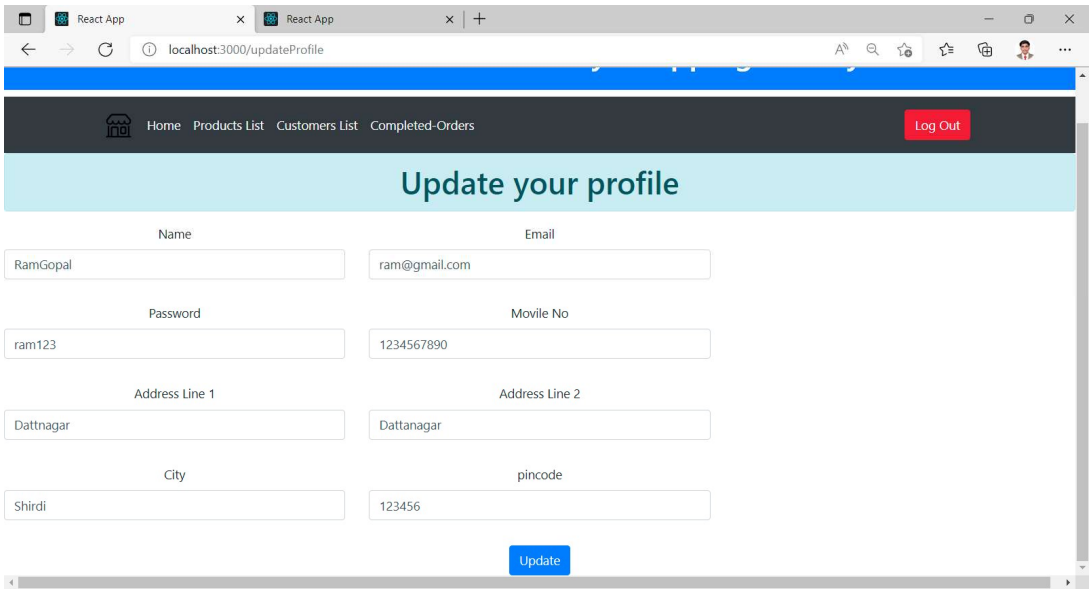
4. Customer Page (RamGopal is a customer)



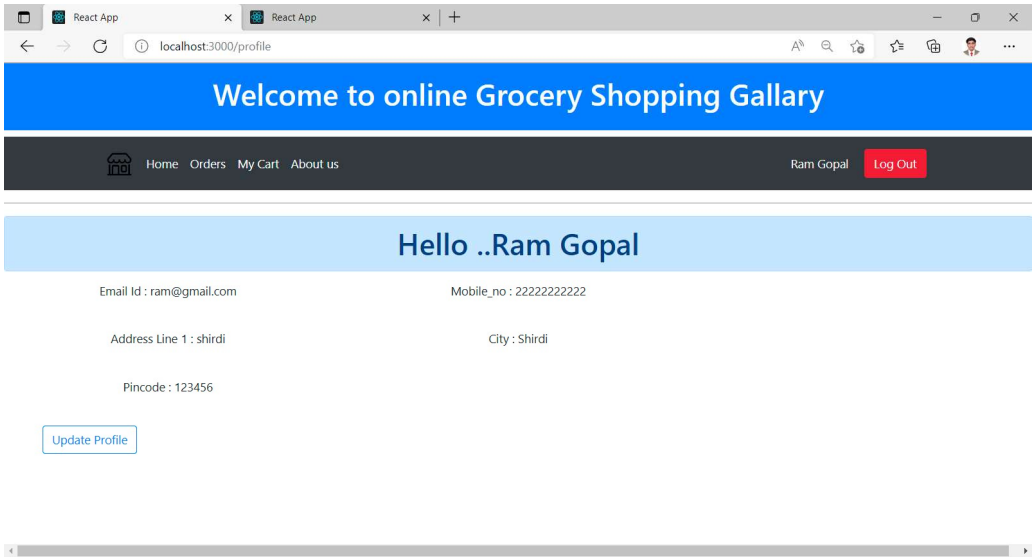
5. Customer View Our Profile On click Our name



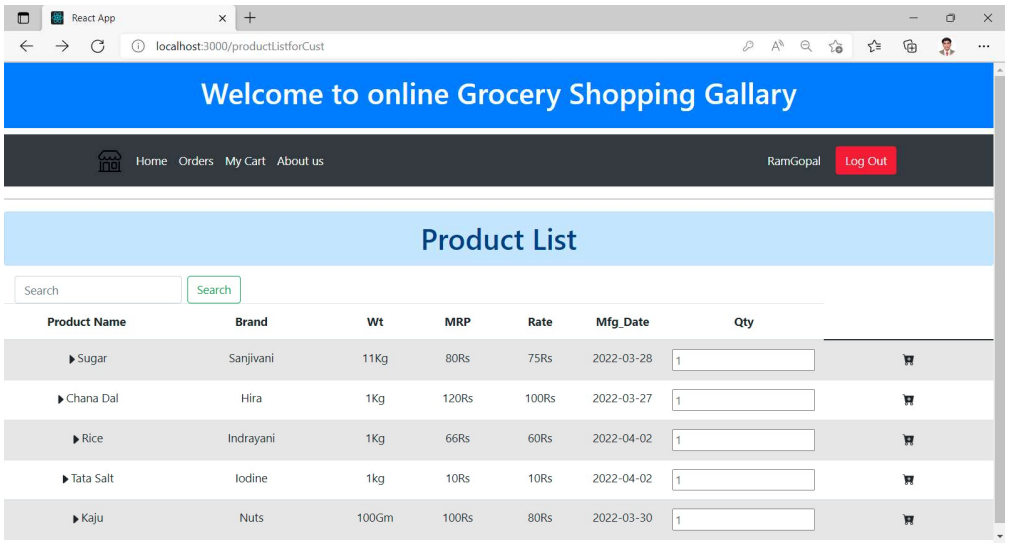
6. On click update button customer update our profile



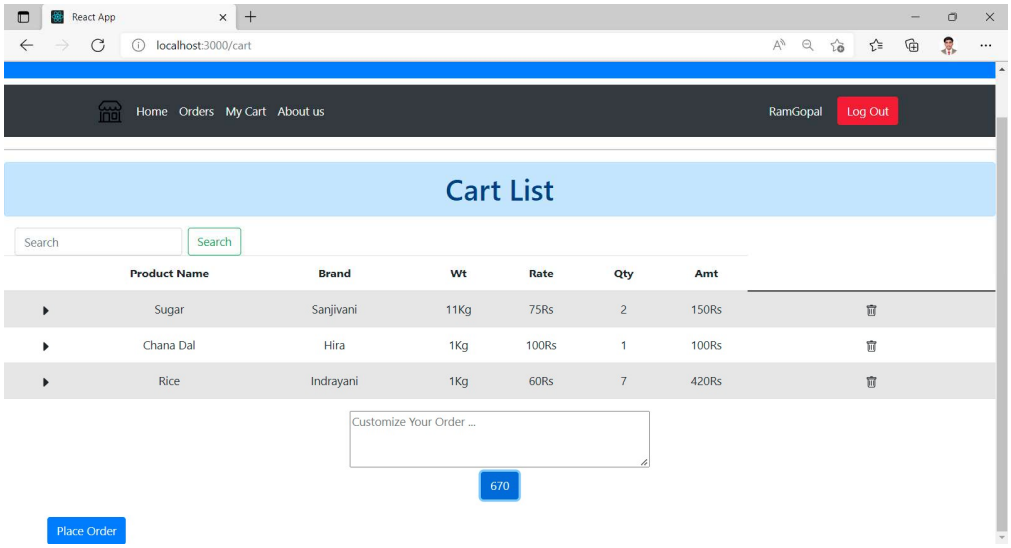
after updating



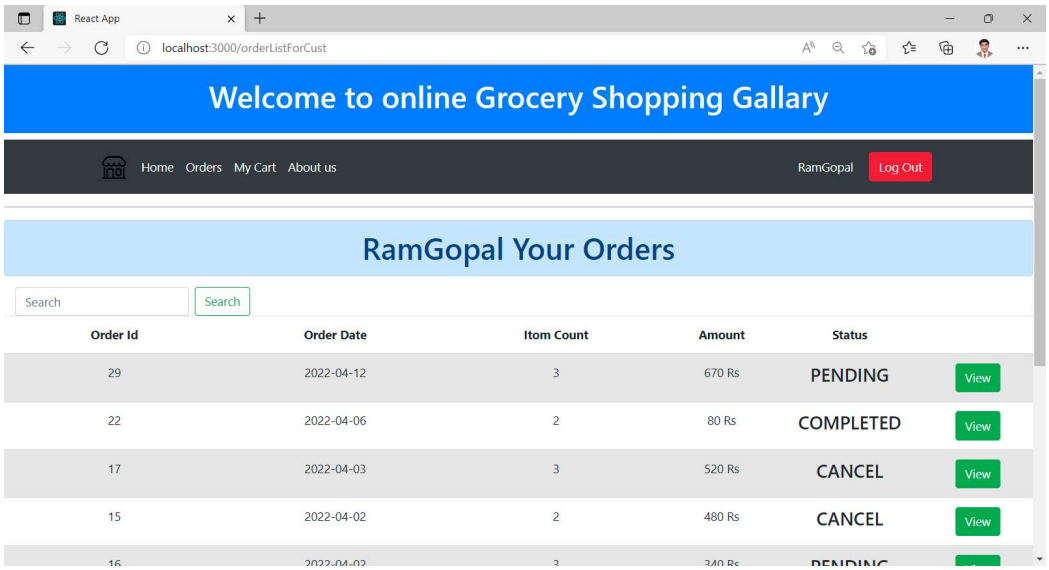
7. Customer Home Page Select Product and add in cart



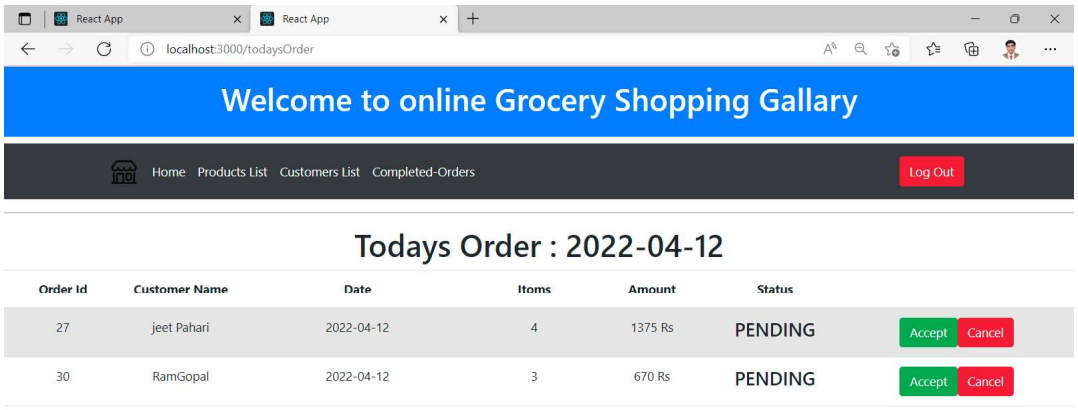
8. After adding product go to My cart and place Order



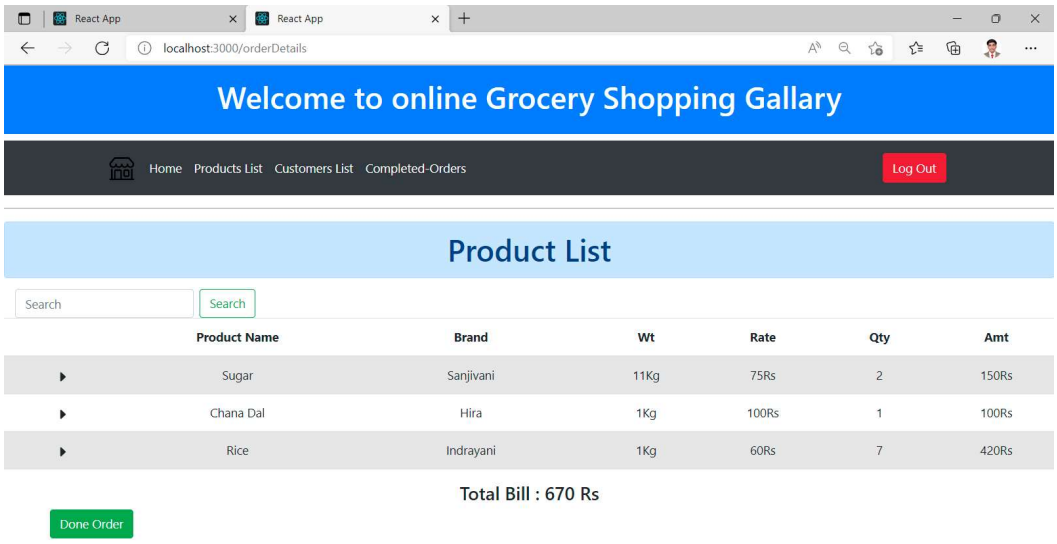
9. After placing order in Orders status is Pending



10. Shopkeeper Page (Only show Pending Order or latest order)

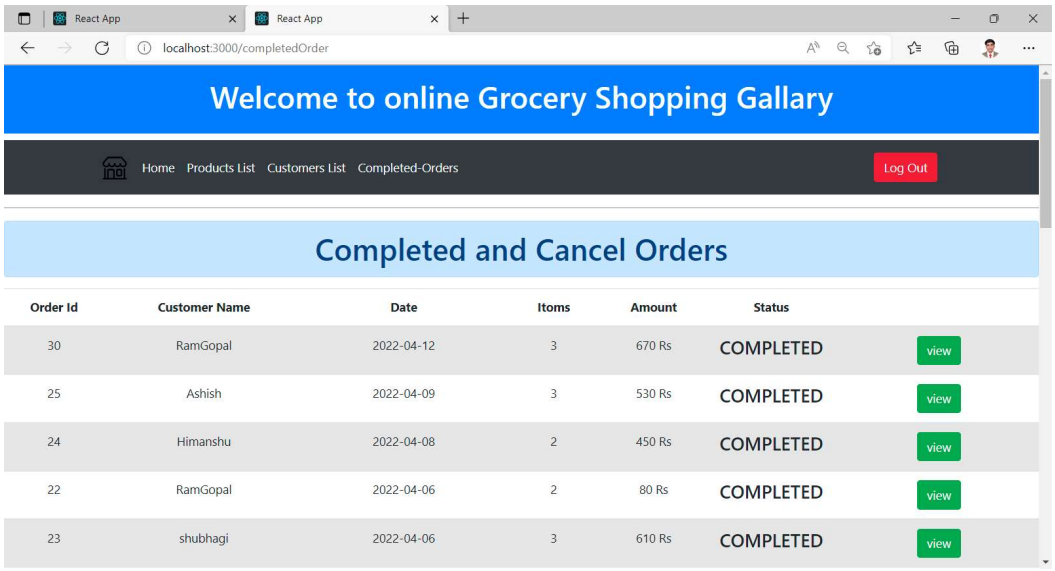


11. On click Accept View Product List

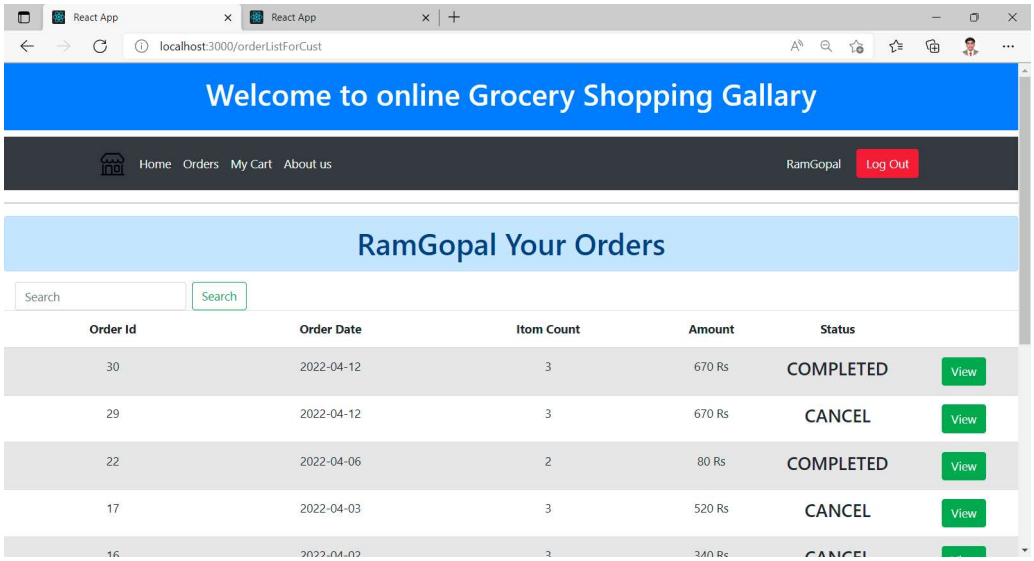


12. On click done Order then Status Will be change to Completed Both side customer And Shopkeeper

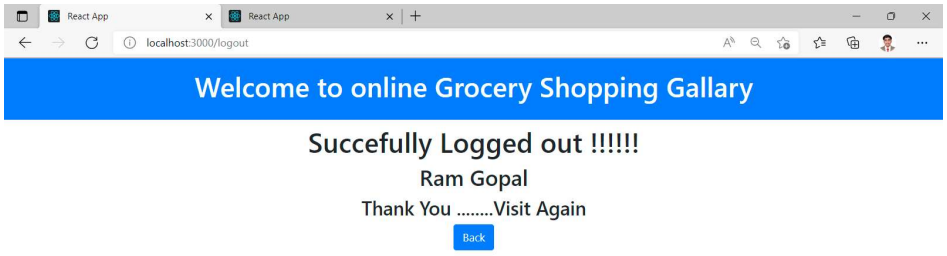
A. Shopkeeper page All Completed Order



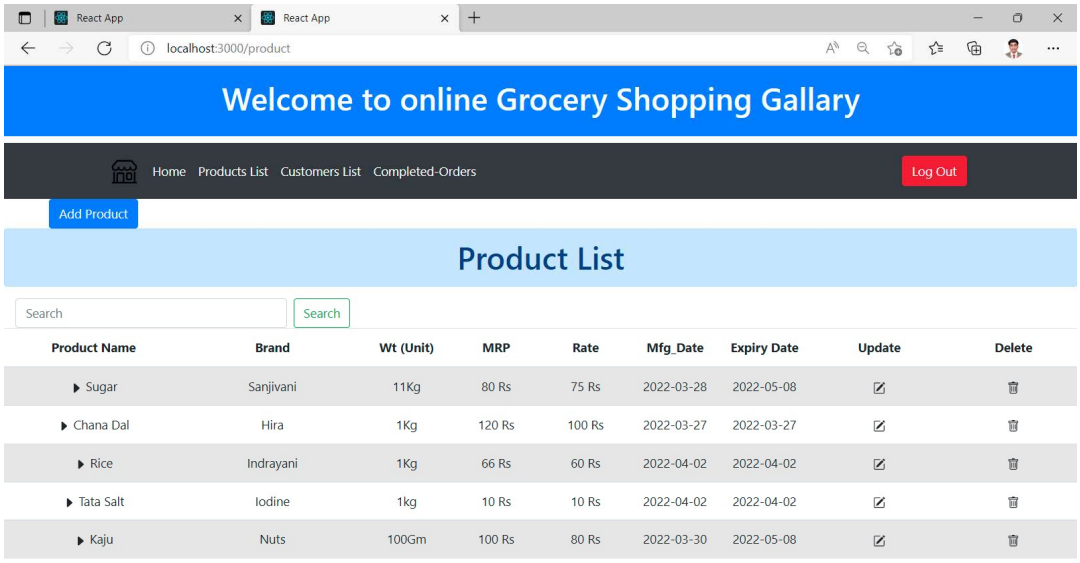
B. Customer Page



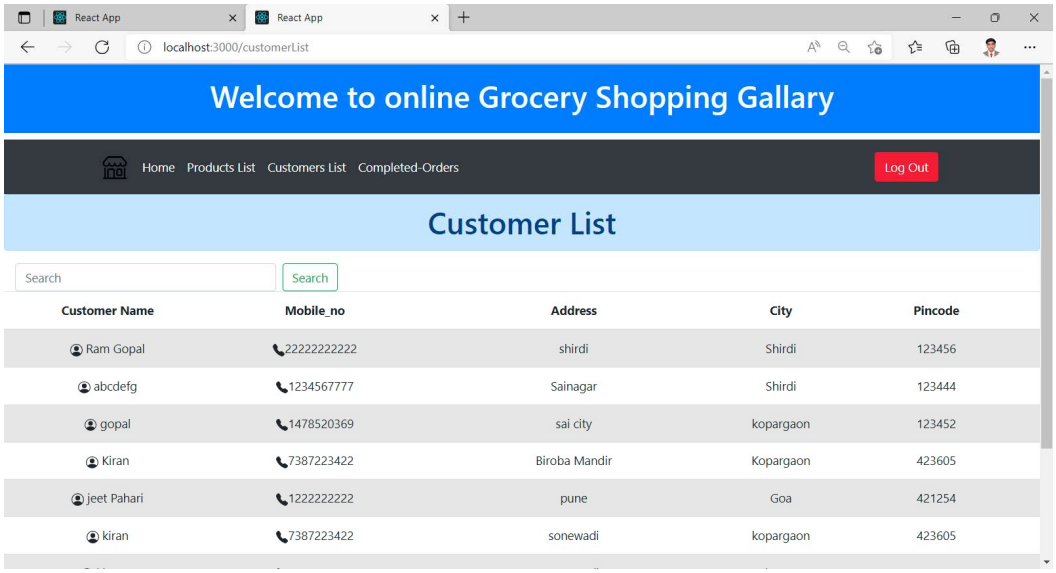
13. Customer Logout



14. All Product (Update Delete Add product)



11. All Customer List



7. Conclusion:

Technology has made significant progress over the years to provide consumers a better online shopping experience and will continue to do so for years to come. With the rapid growth of products and brands, people have speculated that online shopping will overtake in-store shopping. While this has been the case in some areas, there is still demand for brick and mortar stores in market areas where the consumer feels more comfortable seeing and touching the product being bought. However, the availability of online shopping has produced a more

educated consumer that can shop around with relative ease without having to spend a large amount of time. In exchange, online shopping has opened up doors to many small retailers that would never be in business if they had to incur the high cost of owning a brick and mortar store. At the end, it has been a win-win situation for both consumer and sellers.

8. Future Scope:

The internet, its popularity, and technological developments are a good mixture for any business. It is an undeniable fact regarding the future of online grocery delivery. It has not been a very long time since the food industry has turned to the internet way of doing things.
Payment gateway is in our future scope we are going to provide many options for payment. We will permit multiple payment modes that include UPI, cash on delivery, card on delivery, net banking, EMIs on credit or debit card and pay-later credit facility.