

Name: Sanjai Harikrishnan

Emp no:11996

## **Micro Project-Inventory Management System**

### **Case Study 11: Inventory Management System**

An inventory management system helps you efficiently track, organize and manage your inventory. It provides tools and functionalities to streamline inventory processes, such as inventory tracking, stock control, order

management and reporting.

1 Dashboard

2.Inventory tracking

3.Inventory Forecasting

4.Stock alert automations and notifications

5.Order management

### **Other Document Link:**

1.W3H Analysis: [Inventory management w3H Analysis](#)

2.UML Diagram:[UML Diagram](#)

3.DB Diagram:[Db Diagram](#)

4.Wireframes:[Wireframes](#)

5.Backend Repo:[Backend Repository](#)

6.Front End Repo:[Frontend repository](#)

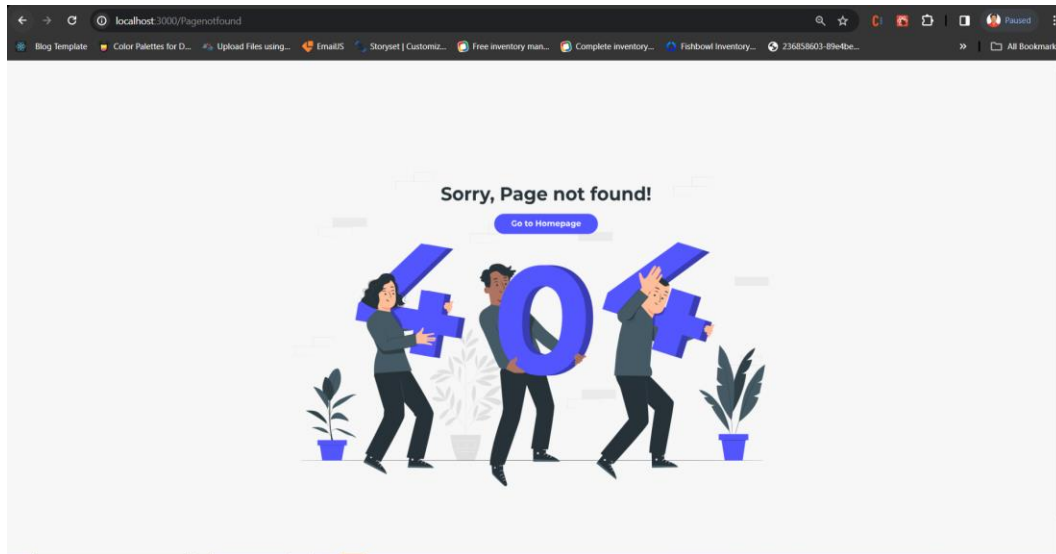
7.Sonar Report:[Code Quality Report](#)

8.Manual Testing:[Manual Testing](#)

9.CI CD Pipeline: [CI CD Pipeline Project](#)

## Final Output:

### 1. Unauthorized User Access the webpage:



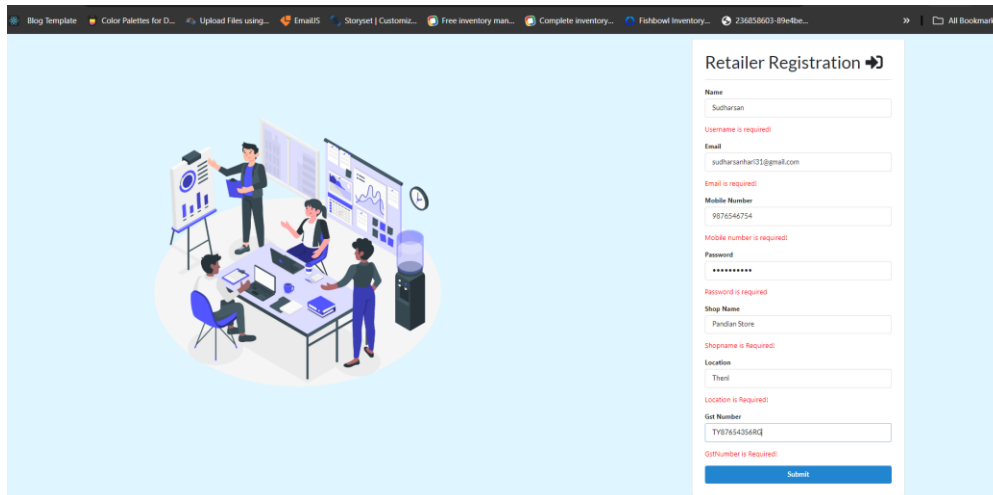
### 2. Retailer Registration Page Validation:

A screenshot of a web browser window displaying a "Retailer Registration" form. The address bar shows the URL "localhost:3000/Signup". The form is titled "Retailer Registration" and includes the following fields and validation messages:

- Name:** Enter the Name (Username is required)
- Email:** Enter the Email (Email is required)
- Mobile Number:** Enter the mobileno (Mobile number is required)
- Password:** Enter the Password (Password is required)
- Shop Name:** ShopName (Shopname is Required)
- Location:** Location (Location is Required)
- Get Number:** getNumber (GetNumber is Required)

A "Submit" button is located at the bottom of the form. The background of the page features an illustration of three people working at a desk with multiple monitors displaying charts and graphs. The browser's taskbar at the bottom shows the Windows search bar and various application icons.

### 3. Retailer registration:

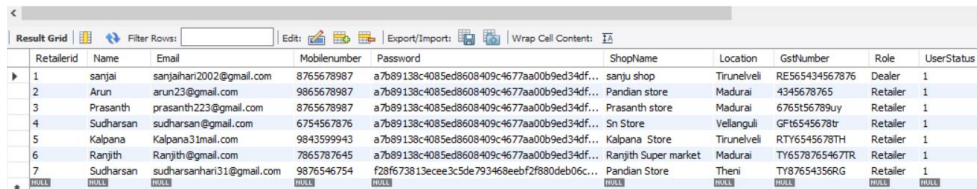


The image shows a web browser window with a 'Retailer Registration' form. The form is titled 'Retailer Registration' with a right-pointing arrow icon. It contains several input fields with red error messages below them: 'Name' (Sudharsan), 'Email' (sudharsanhar31@gmail.com), 'Mobile Number' (9876546754), 'Password' (\*\*\*\*\*), 'Shop Name' (Pandian Store), 'Location' (Theri), and 'Gst Number' (TY8765436RG). A blue 'Submit' button is at the bottom right. On the left side of the form, there is an illustration of four people in a modern office setting, with one person standing and pointing at a large screen displaying charts and graphs.

### Store in the database:

**Note:** password also Encrypt format

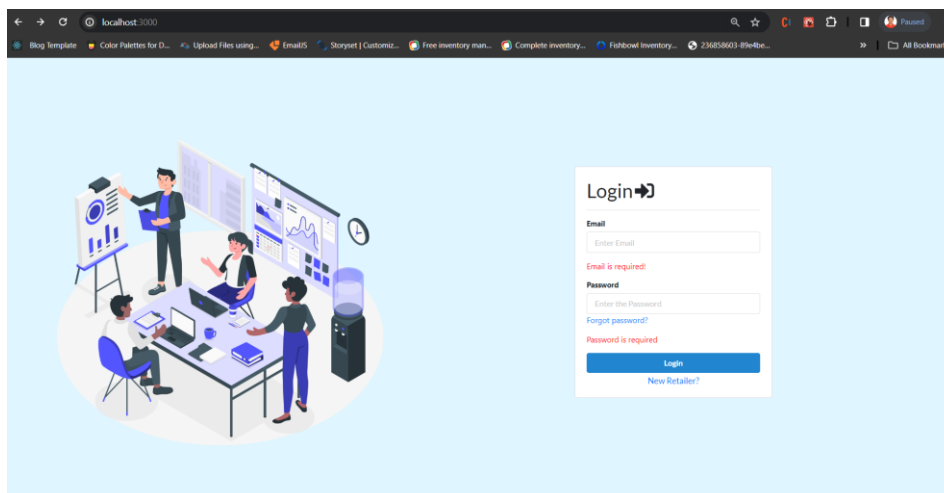
```
1 • SELECT * FROM inventorymanagement.retailer;  
2
```



The image shows a 'Result Grid' from a database query. It contains a table with 10 columns: RetailerId, Name, Email, Mobilenumber, Password, ShopName, Location, GstNumber, Role, and UserStatus. The table has 7 rows of data, each representing a retailer. The first row is for 'sanjai' (Dealer), and the others are for various retailers like 'Arun', 'Prasanth', 'Sudharsan', 'Kalpana', 'Ranjith', and 'Sudharsanhar31'.

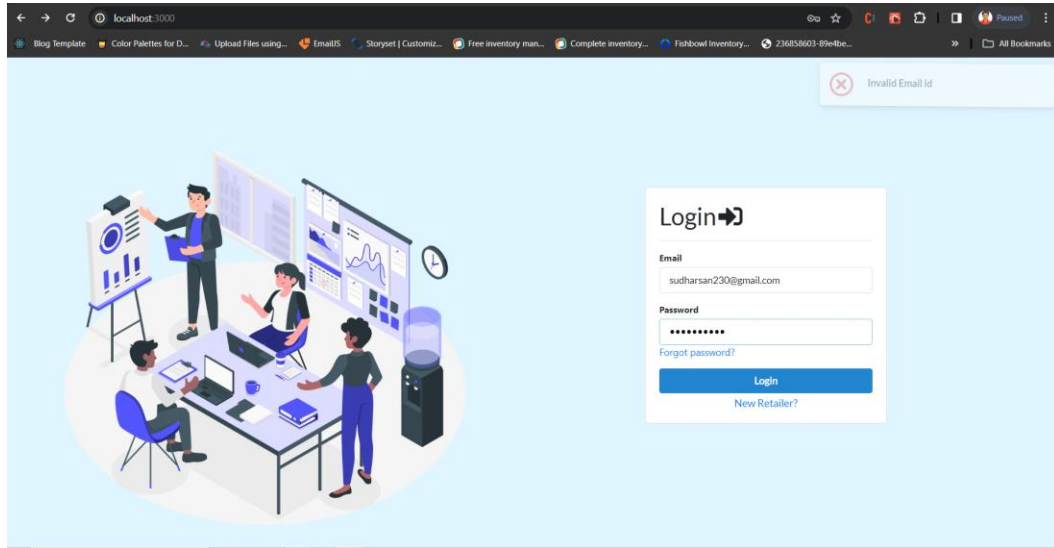
RetailerId	Name	Email	Mobilenumber	Password	ShopName	Location	GstNumber	Role	UserStatus
1	sanjai	sanjahari2002@gmail.com	8765678987	a7b89138c4085ed8608409c4677aa00b9ed34df...	sanju shop	Tirunelveli	RE565434567876	Dealer	1
2	Arun	arun23@gmail.com	9865678987	a7b89138c4085ed8608409c4677aa00b9ed34df...	Pandian store	Madurai	4345678765	Retailer	1
3	Prasanth	prasanth223@gmail.com	8765678987	a7b89138c4085ed8608409c4677aa00b9ed34df...	Prasanth store	Madurai	6765156789uy	Retailer	1
4	Sudharsan	sudharsan@gmail.com	6754567876	a7b89138c4085ed8608409c4677aa00b9ed34df...	Sn Store	Vellanguli	GF6545678tr	Retailer	1
5	Kalpana	Kalpana31mail.com	9843599943	a7b89138c4085ed8608409c4677aa00b9ed34df...	Kalpana Store	Tirunelveli	RTY6545678TH	Retailer	1
6	Ranjith	Ranjith@gmail.com	7865787645	a7b89138c4085ed8608409c4677aa00b9ed34df...	Ranjith Super market	Madurai	TY6578765467TR	Retailer	1
7	Sudharsan	sudharsanhar31@gmail.com	9876546754	f28f673813ecce3c5de793468eebf2f880deb06c...	Pandian Store	Theri	TY87654356RG	Retailer	1

### 2. Login page validation

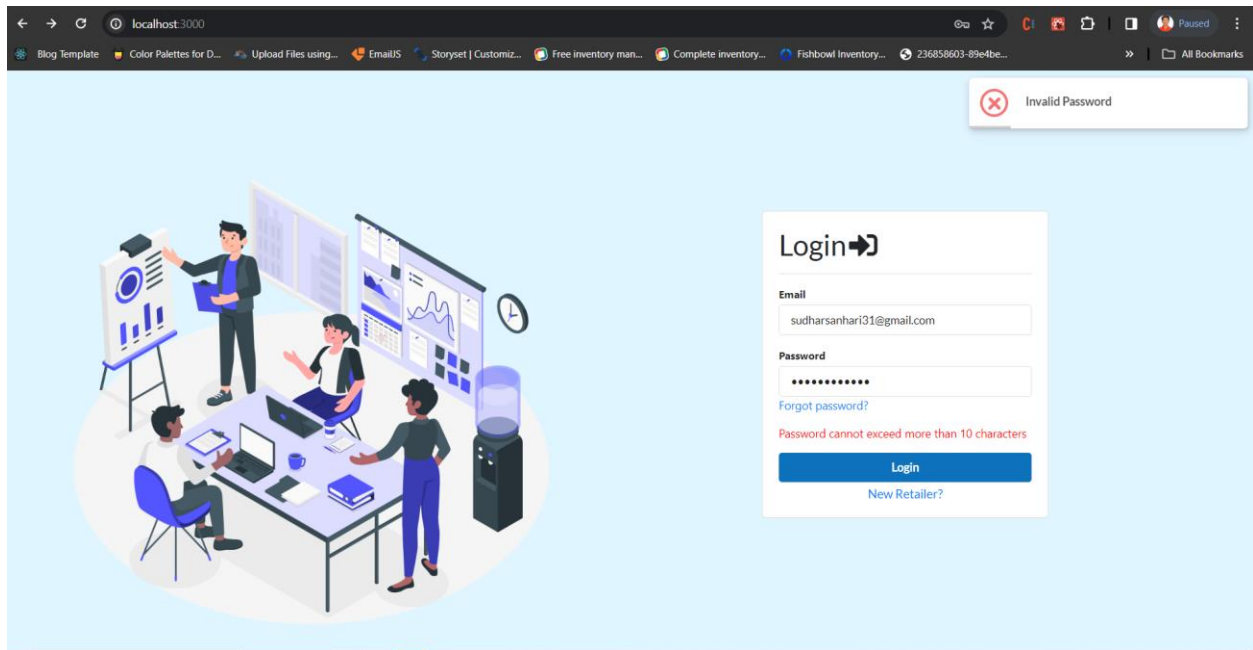


The image shows a web browser window with a 'Login' form. The form is titled 'Login' with a right-pointing arrow icon. It contains two input fields: 'Email' (Enter Email) and 'Password' (Enter the Password). Below the password field, there is a link 'Forgot password?'. A red error message 'Password is required' is displayed below the password field. A blue 'Login' button is at the bottom right, and a link 'New Retailer?' is below it. On the left side of the form, there is an illustration of four people in a modern office setting, with one person standing and pointing at a large screen displaying charts and graphs.

### 3. Wrong Email and Correct Password:

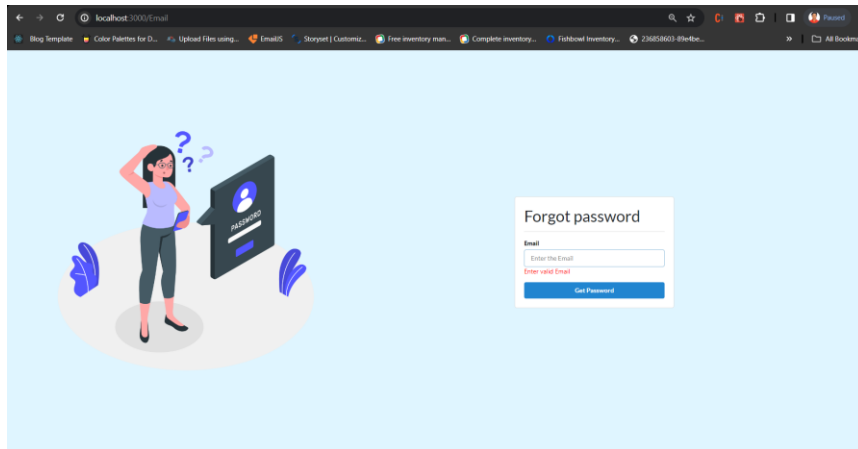


### 4. Correct Email with Wrong Password

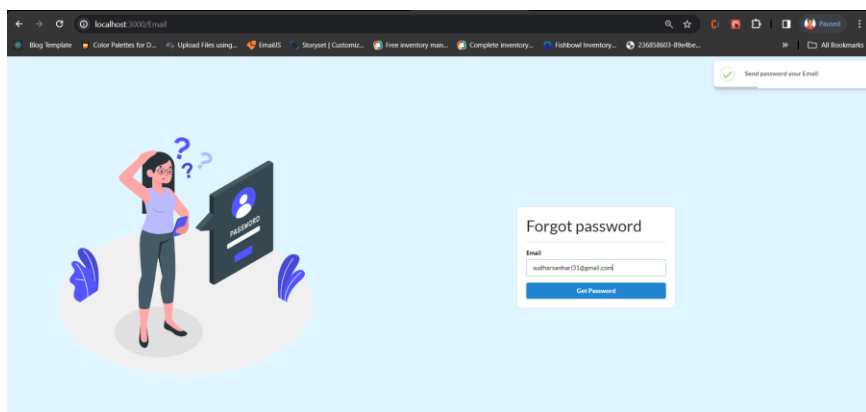
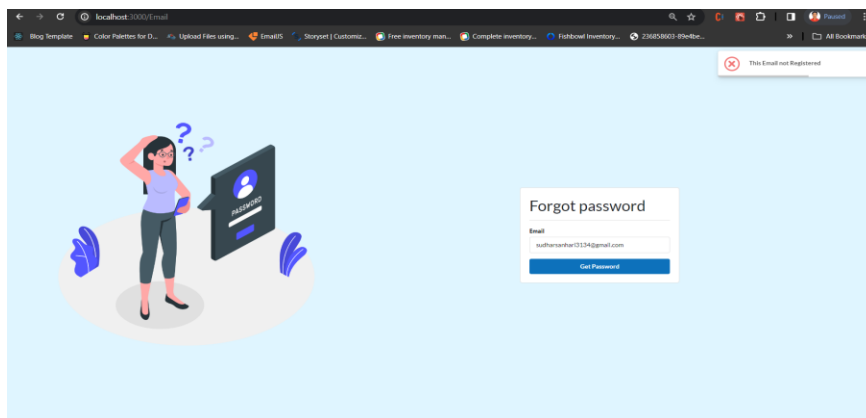


## Forgot Password:

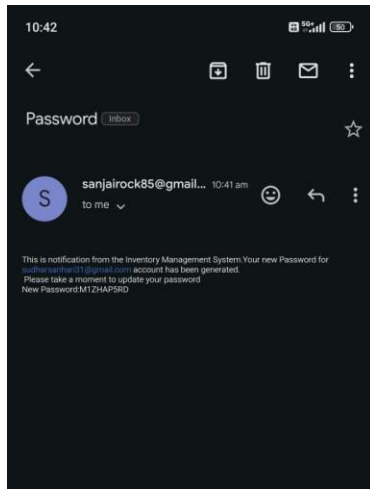
Click forgot password option



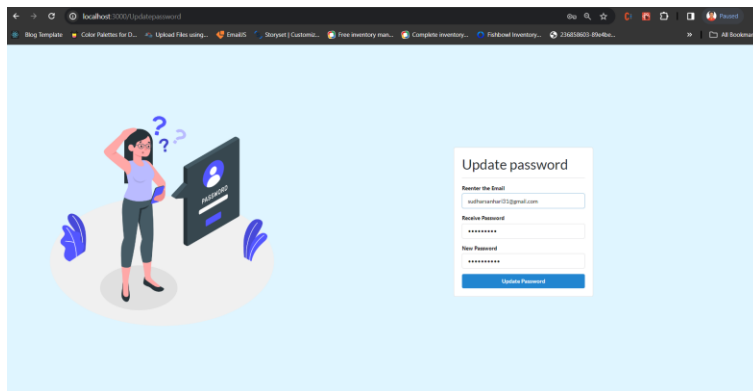
## Enter invalid Email:



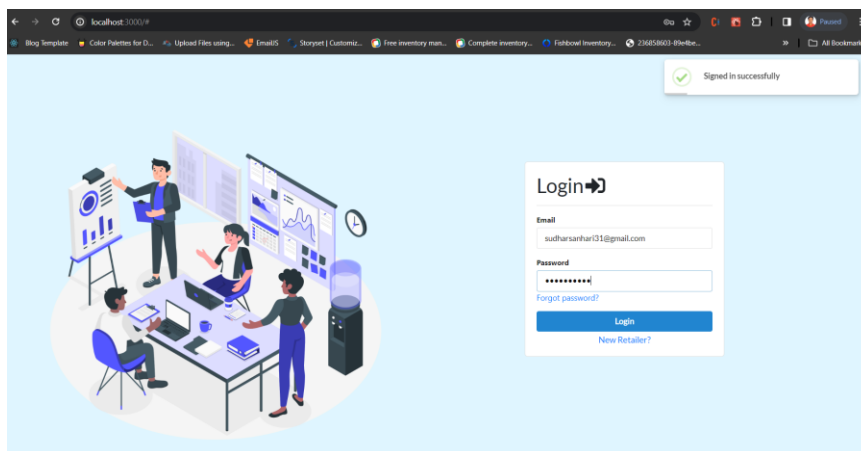
Receive password:



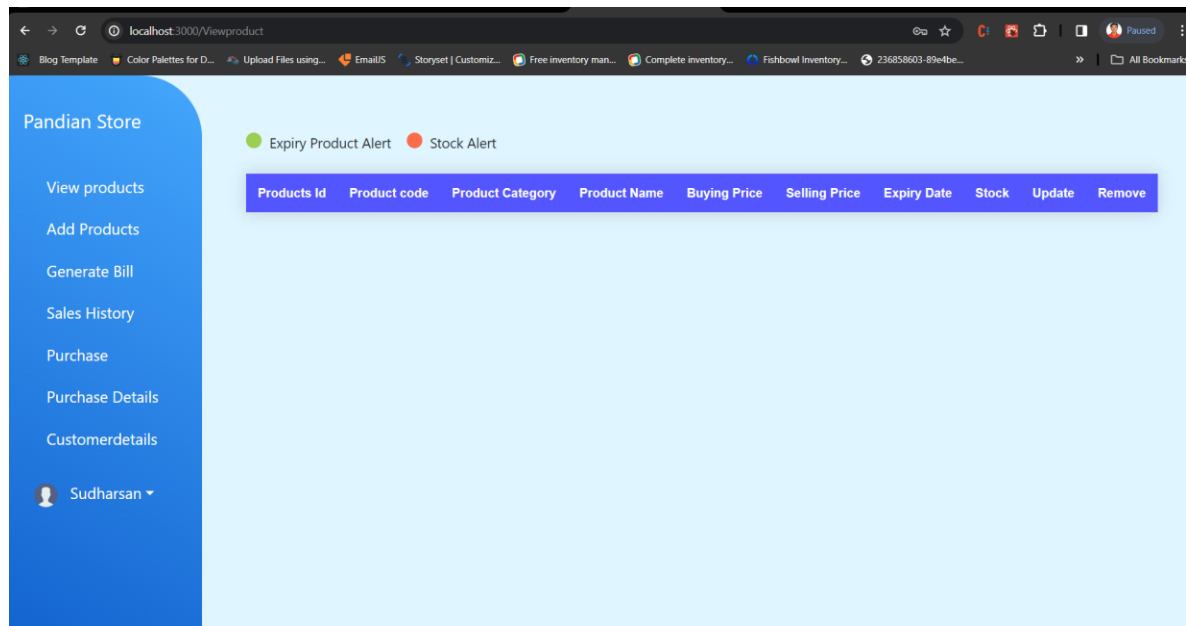
Update password:



Correct Email and Correct Password:



After Login Automatically go to home page:



Add the products Validation:

Add the Product

Product code  
Required

Product Name  
Required

Product Category  
Required

Description  
Required

Product Image  
Required

Buying Price  
Required  
Enter Buying Price

Selling Price  
Required  
Enter selling price

Expiry Date  
Required  
All year valid

Stock  
Required

Add the Product

Add the Products:

Blog Template

Color Palettes for D...

Upload Files using...

EmailJS

Storyset | Customiz...

Free inventory man...

Complete inventory...

Fishbowl Inventory...

236858603-89e4be...

Paused

All Bookmarks

Pandian Store

View products

Add Products

Generate Bill

Sales History

Purchase

Purchase Details

Customerdetails

Sudharsan

Add the Product

Product code

76746

Product Name

Kitkat

Product Category

chocolate

Description

KitKat is a chocolate covered wafer bar that offers a delightful crunch.

ProductImage

Choose File KitKat.jpg

Buying Price

38

.00

Selling Price

40

.00


Expiry Date

29-06-2024

Stock

120

Add the Product



Store in the database:

ProductsId	Productcode	ProductCategory	ProductName	Description	ProductImage	BuyingPrice	SellingPrice	ExpiryDate	Stock	RetailerId
3	675555	chocolate	Maggi	KitKat is a chocolate-covered wafer bar that off...	BL.08	100	9	2024-05-11	360	2
4	897	chocolate	Kitkat	KitKat is a chocolate-covered wafer bar that off...	BL.08	40	44	2024-04-11	56	3
5	47386	chocolate	Kitkat	Cholocate	KitKat is a chocolate-covered wafer bar that offers a delightful crunch with every bite.				2	
6	76746	chocolate	Kitkat	KitKat is a chocolate-covered wafer bar that off...	BL.08	38	40	2024-06-29	120	7
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Click View products show the whole products list:

Expiry Product Alert

Stock Alert

Products Id	Product code	Product Category	Product Name	Buying Price	Selling Price	Expiry Date	Stock	Update	Remove
6	76746	chocolate	Kitkat	38	40	2024-06-29	120	Update	Remove

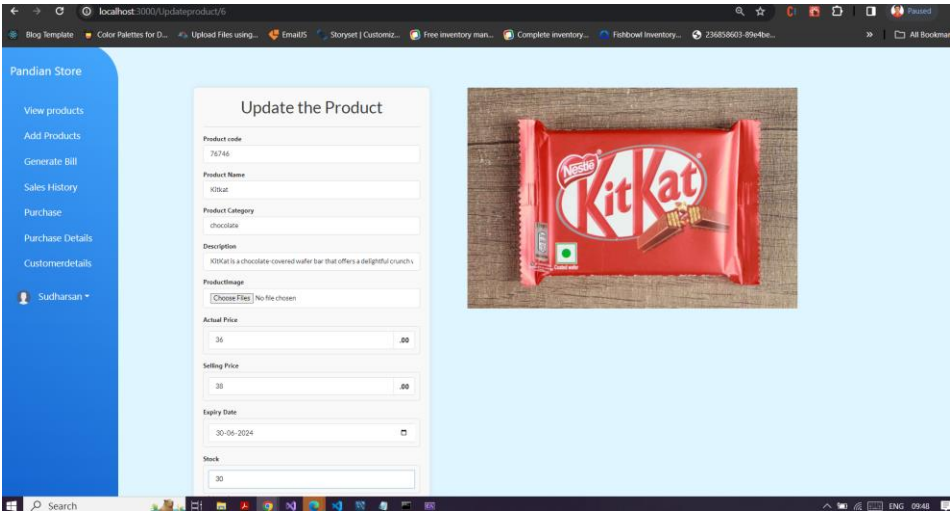
Update the products:







Click the update button easily update the product details and stock.

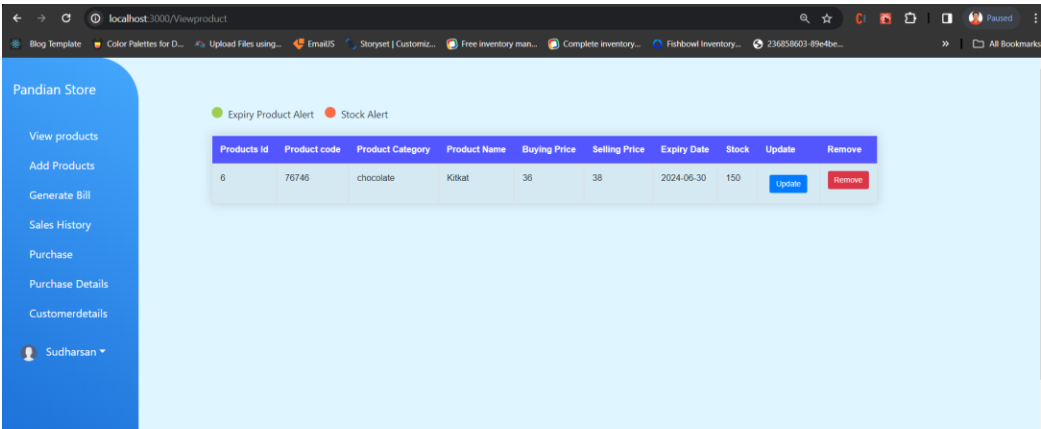
Old stock :120

New stock :30



Update the database:

ProductsId	Productcode	ProductCategory	ProductName	Description	ProductImage	BuyingPrice	SellingPrice	ExpiryDate	Stock	RetailerId
3	675555	chocolate	Maggi	KitKat is a chocolate-covered wafer bar that off...		100	9	2024-05-11	360	2
4	897	chocolate	Kitkat	KitKat is a chocolate-covered wafer bar that off...		40	44	2024-04-11	56	3
5	47386	Cholocate	Kitkat	Cholocate		40	50	2024-04-07	208	2
6	76746	chocolate	Kitkat	KitKat is a chocolate-covered wafer bar that off...		36	38	2024-06-30	150	7
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



Customers:

If Customer buy the product automatically updates the stock in database:

If a new customer buys the product in the shop automatically creates a new account using mobile number.

### Billing system validation:

The screenshot shows the 'Pandian Store' Billing System interface. On the left is a blue sidebar with navigation links: View products, Add Products, Generate Bill, Sales History, Purchase, Purchase Details, Customer details, and a user profile for 'Sudharsan'. The main content area is titled 'Billing System' and contains a form with the following fields:

- Customer Name:
- Mobile Number:   
Please enter valid Mobile number
- Product Name:
- Quantity:

Below the form is a 'Generate Bill' button. To the right of the form is a summary card with three sections:

- Pandian Store**: Address: Theni, Phone: 9876546754, Email: sudharsanhan31@gmail.com
- Customer**: Name: Govtham, Mobile Number: 875655
- Invoice**: Invoice Number: R2x12bad2, Date: 2024-03-31

Below the summary card is a table with columns: Item, Quantity, Price, Total.

Item	Quantity	Price	Total
Kiklat	38	0	
Total			0

At the bottom right of the table is a 'Print Bill' button.

The screenshot shows the 'Pandian Store' Billing System interface with the same layout as the previous one. The form fields are now populated with valid data:

- Customer Name:
- Mobile Number:
- Product Name:
- Quantity:

The 'Generate Bill' button is still present. The summary card on the right now shows:

- Pandian Store**: Address: Theni, Phone: 9876546754, Email: sudharsanhan31@gmail.com
- Customer**: Name: Govtham, Mobile Number: 8756557865
- Invoice**: Invoice Number: R249d5343, Date: 2024-03-31

The table below the summary card now shows:

Item	Quantity	Price	Total
Kiklat	105	38	3990
Total			3990

The 'Print Bill' button remains at the bottom right.



Create a new Customer:

	CustomerID	CustomerName	MobileNumber	Creditpoints	Retailerid
	11	sanjai	1234567897	0	2
	12	arun	7875575656	2	2
	13	makjd	1234567896	1	2
	14	sanjai	6789765456	8	3
	15	sanjai	8765456789	1	2
	16	Kalpana	7654567876	1	2
	17	Kalpana	6754567876	13	2
	18	Kalpana	6656556783	5	2
	19	Gowtham	8756557	6656556783	7
	NULL	NULL	NULL	NULL	NULL

Product Page reduce the stocks:

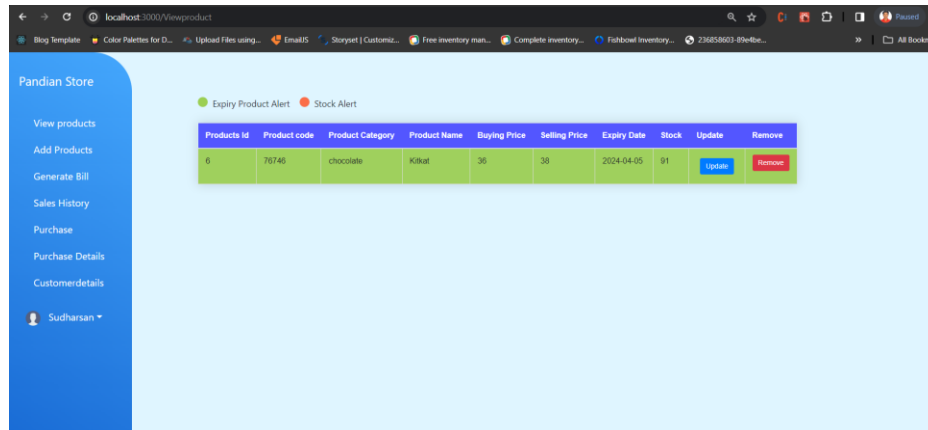
The screenshot shows a web application interface for 'Pandian Store'. On the left is a blue sidebar with navigation links: View products, Add Products, Generate Bill, Sales History, Purchase, Purchase Details, Customerdetails, and a user profile for 'Sudharsan'. The main content area has a light blue background. At the top, there are two alert indicators: a green dot for 'Expiry Product Alert' and a red dot for 'Stock Alert'. Below these is a table with the following columns: Products Id, Product code, Product Category, Product Name, Buying Price, Selling Price, Expiry Date, Stock, Update, and Remove. The table contains one row with the following data: Products Id: 6, Product code: 76746, Product Category: chocolate, Product Name: Kiklat, Buying Price: 36, Selling Price: 38, Expiry Date: 2024-06-30, Stock: 45. The 'Update' and 'Remove' buttons are visible next to the stock value. The browser's address bar shows 'localhost:3000/Viewproduct'.

Stock is less then 50 means show the blink alert:

This screenshot is identical to the one above, showing the 'Pandian Store' product page. The table displays a product with a stock of 45. The 'Stock Alert' indicator (red dot) is active, indicating that the stock level is below the threshold of 50. The interface elements, including the sidebar and the table structure, are the same as in the previous image.

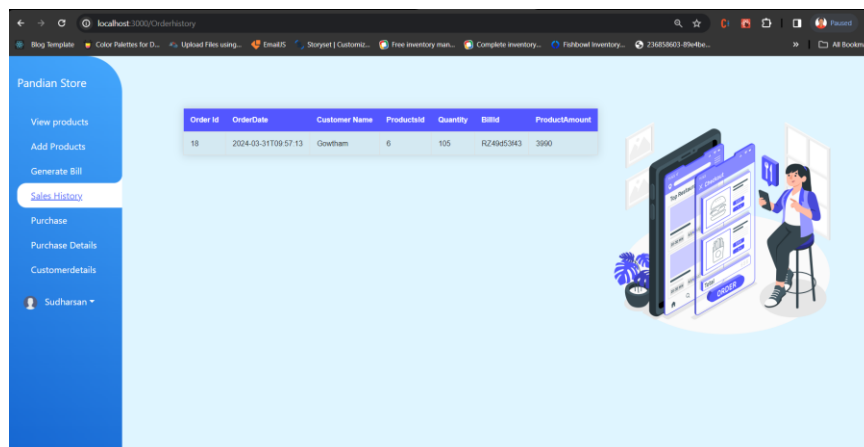
Product expiry date 5 days before show the alert message:

Example: expiry date 05.04.2024.(5 days before show the alert message)



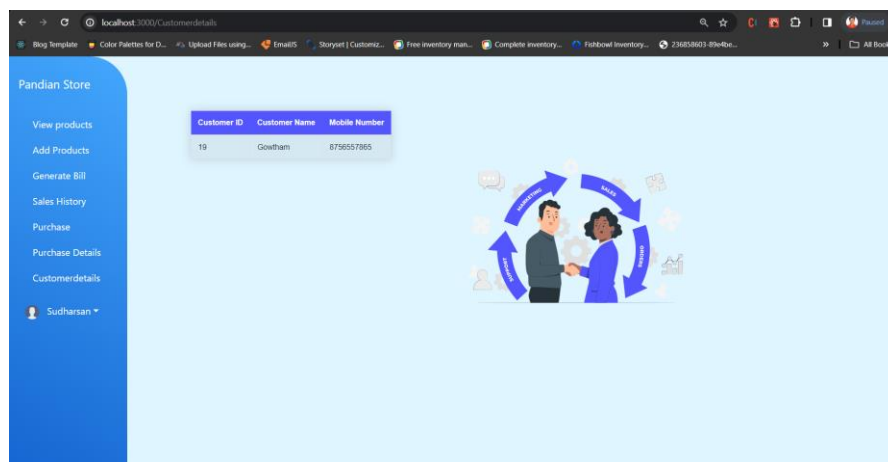
Products Id	Product code	Product Category	Product Name	Buying Price	Selling Price	Expiry Date	Stock	Update	Remove
6	78746	Chocolate	Kikot	38	38	2024-04-05	91	<a href="#">Update</a>	<a href="#">Remove</a>

Retailer can easily see the sales details:



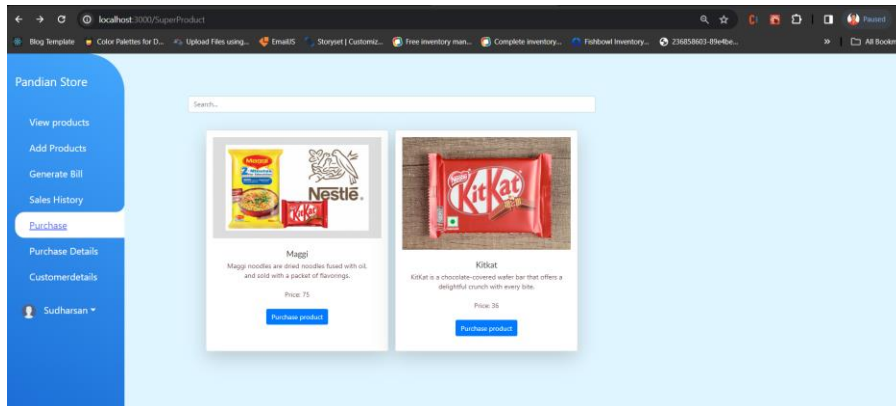
Order Id	Order Date	Customer Name	Product Id	Quantity	Bill Id	Product Amount
18	2024-03-31T08:57:13	Gowtham	6	105	RZ485343	3890

View the customer details:

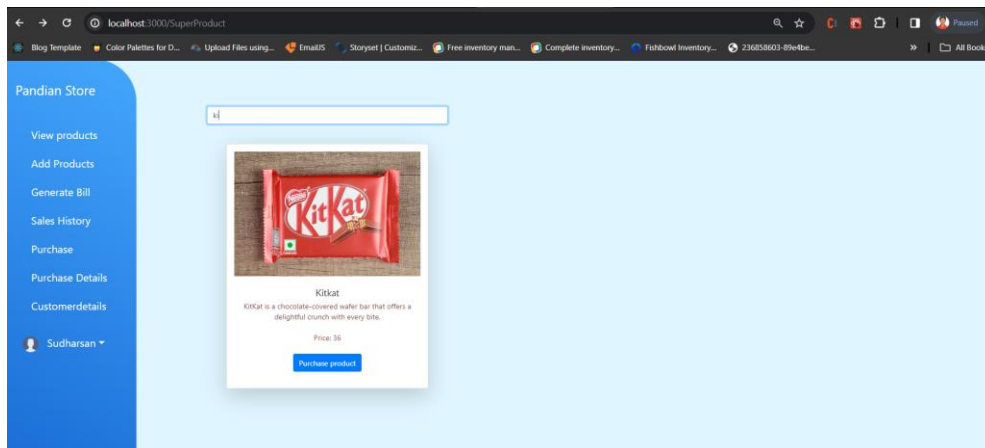


Customer ID	Customer Name	Mobile Number
19	Gowtham	8796557965

Retailer Purchase the product:

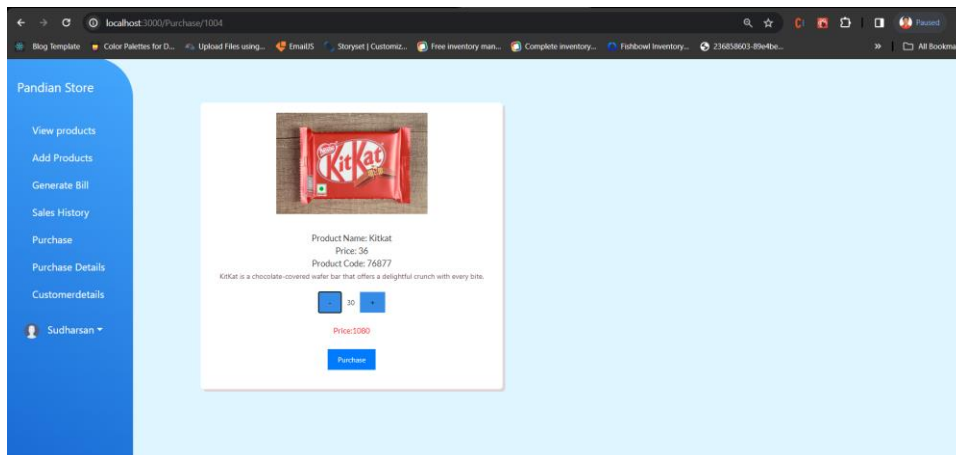


Using Search filter easily search the product:

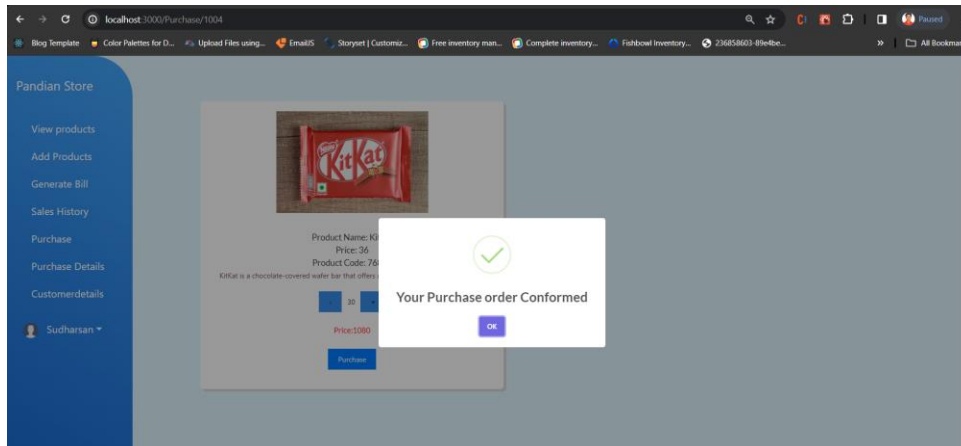


But the product:

Using (+) button retailer add the count. Below shows the amount.

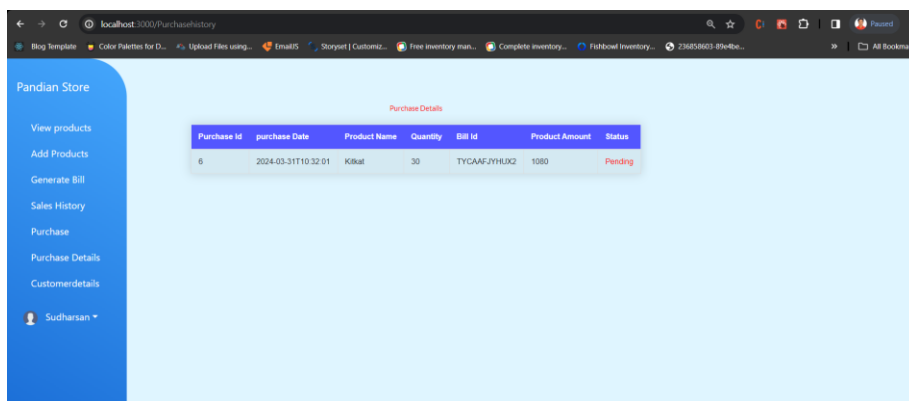


## Retailer Purchase:



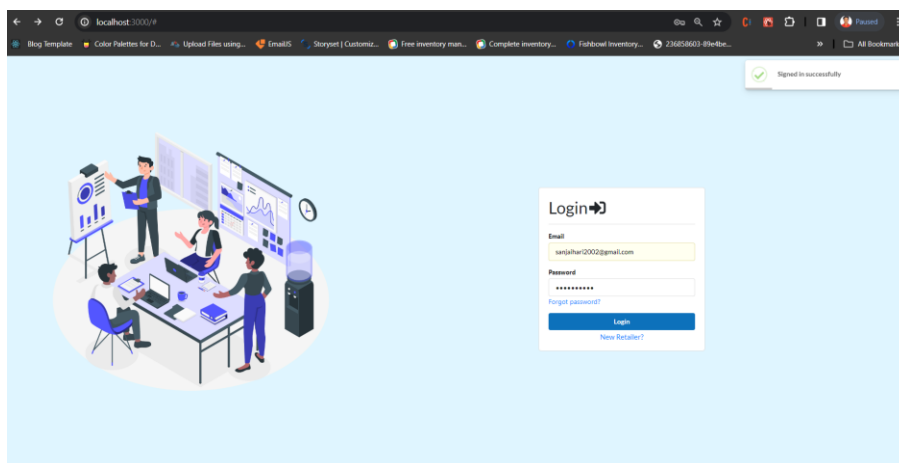
## Retailer purchase details:

Purchase status: **pending**





## Dealer page:

## Dealer Login:





View All products;

Stock Alert-below 1000 product

Products Id	Product code	Product Category	Product Name	Description	Product Image	Buying Price	Selling Price	ExpiryDate	Stock	Update	Delete
1003	76778	Maggi	Maggi	Maggi noodles are dried noodles fused with oil, and sold with a packet of flavorings.		70	75	2024-03-30	1000	<a href="#">Update</a>	<a href="#">Delete</a>
1004	76877	chocolate	KitKat	KitKat is a chocolate-covered wafer bar that offers a delightful crunch with every bite.		30	36	2024-04-07	270	<a href="#">Update</a>	<a href="#">Delete</a>

Stock below 1000 show the Blink alert:

Stock Alert-below 1000 product

Products Id	Product code	Product Category	Product Name	Description	Product Image	Buying Price	Selling Price	ExpiryDate	Stock	Update	Delete
1003	76778	Maggi	Maggi	Maggi noodles are dried noodles fused with oil, and sold with a packet of flavorings.		70	75	2024-03-30	1000	<a href="#">Update</a>	<a href="#">Delete</a>
1004	76877	chocolate	KitKat	KitKat is a chocolate-covered wafer bar that offers a delightful crunch with every bite.		30	36	2024-04-07	270	<a href="#">Update</a>	<a href="#">Delete</a>

Manage orders:

The Pandian store purchased 30 KitKat items.

Purchase Id	Purchase Date	Shop Name	Product Name	Count	Bill Id	Product Amount	Order Status	Update status
3	2024-03-27 14:33:25	Pandian store	Maggi	3	TYCAALWLSP	225	Delivered	
4	2024-03-27 17:38:39	Prasanth store	KitKat	10	TYCOPVWASIK	350	Delivered	
5	2024-03-28 16:46:22	Pandian store	Maggi	0	TYCB871JZ	0	Delivered	
6	2024-03-31 10:32:01	Pandian Store	KitKat	30	TYCAAFJYHUX2	1080	Pending	<a href="#">Request</a>



Click shipped button change the order status:

The screenshot shows a web application interface for managing orders. On the left, there is a sidebar with options: 'View product', 'Add stock', and 'Manageorders'. The main area displays a table with the following data:

Purchase Id	Purchase Date	Shop Name	Product Name	Count	Bill Id	Product Amount	Order Status	Update status
3	2024-03-27T14:33:25	Pandian store	Maggi	3	TYCAALWLSF	225	Delivered	
4	2024-03-27T17:38:39	Prasanth store	Kiklat	10	TYCOPV9ASIK	350	Delivered	
5	2024-03-28T16:46:22	Pandian store	Maggi	0	TYCBB71JZ	0	Delivered	
6	2024-03-31T10:32:01	Pandian Store	Kiklat	30	TYCAAFJYHUKJ	1080	Shipped	<button>Delivered</button>

On the right side of the table, there is an illustration of a person holding a smartphone displaying a mobile app interface with buttons for 'Details', 'Payment', and 'ORDER'.

Retailer stores change the purchase status:

The screenshot shows a web application interface for viewing purchase history. On the left, there is a sidebar with options: 'View products', 'Add Products', 'Generate Bill', 'Sales History', 'Purchase', 'Purchase Details', and 'Customerdetails'. The main area displays a table titled 'Purchase Details' with the following data:

Purchase Id	purchase Date	Product Name	Quantity	Bill Id	Product Amount	Status
6	2024-03-31T10:32:01	Kiklat	30	TYCAAFJYHUKJ	1080	Shipped

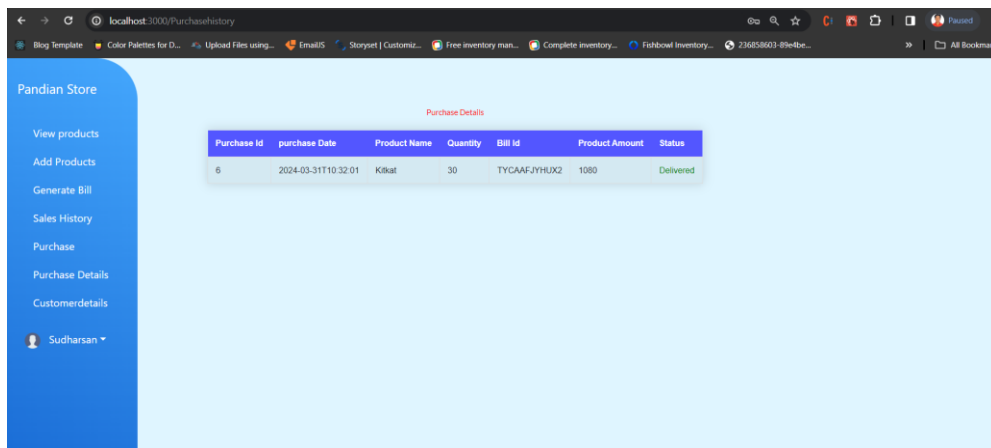
Click delivered button change the status:

The screenshot shows a web application interface for managing orders. On the left, there is a sidebar with options: 'View product', 'Add stock', and 'Manageorders'. The main area displays a table with the following data:

Purchase Id	Purchase Date	Shop Name	Product Name	Count	Bill Id	Product Amount	Order Status	Update status
3	2024-03-27T14:33:25	Pandian store	Maggi	3	TYCAALWLSF	225	Delivered	
4	2024-03-27T17:38:39	Prasanth store	Kiklat	10	TYCOPV9ASIK	350	Delivered	
5	2024-03-28T16:46:22	Pandian store	Maggi	0	TYCBB71JZ	0	Delivered	
6	2024-03-31T10:32:01	Pandian Store	Kiklat	30	TYCAAFJYHUKJ	1080	Delivered	

On the right side of the table, there is an illustration of a person holding a smartphone displaying a mobile app interface with buttons for 'Details', 'Payment', and 'ORDER'.

Retailer stores change the purchase status:



Retailer Logout:

Click logout button navigate to login page.

