

SUBJECT: Database Management Systems

Experiment No.: 10

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Table of Contents

About Project:	2
Home Page	3
Manage Products	3
Shopping	10
Delivery System	14
Conclusion	17

About Project:

In our previous case study, we identified three main drawbacks in approaching a fashion website and proposed solutions. Our project aimed to enhance the current online fashion management system by utilizing databases and addressing industry-specific user experience gaps. To achieve this, we implemented a customer login feature that tailors the website based on user preferences stored in the database.

One of the identified drawbacks was the disregard for users' body types, shapes, and sizes when displaying items. Hence we made the changes such that for a particular user it only displays the relevant items to him. To rectify this, we organized product information in the database, including Product ID, Product Name, Product Category, Price, and Stock. Through backend management, we can update existing products or add new items, ensuring a user-friendly interface that provides accurate information about products.

Another drawback involved discrepancies between inventory and the website database, leading to shipment and tracking issues.

To address inventory and shipment issues, we introduced a "login" system for delivery partners, storing key details like ID, Product Name, Delivery ID, Expected Delivery Date, Stock Left, and an Auto Increment ID. Users can view, add, edit, save, or delete entries. The estimated delivery date is chosen through a calendar, and stock quantities are recorded numerically. This setup enables regular stock audits, helping identify peak stock-out periods and enhancing overall user experience.

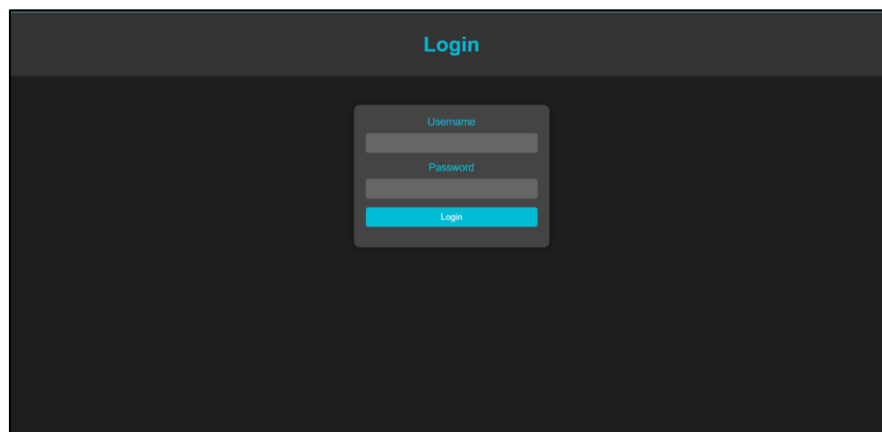
Home Page

Here we have 3 options of – Shop (as a customer), Manage Products (as a product manager), manage deliveries (as a delivery manager).



Manage Products

As soon as we click the manage products section, we are directed to the *dark themed* page



Now we need to enter the login details: the user id and password

As you can see the password is encrypted.

The image shows a login interface with a dark background. At the top, the word "Login" is written in blue. Below it, there is a form with two input fields: "Username" (containing "Someone") and "Password" (containing "*****"). A blue "Login" button is positioned below the password field. At the bottom of the form, a red error message states "Error: Invalid username or password".

When you enter wrong details

On correct id and password it would co-relate it with the database in SQL to verify and hence enter the user.

```
mysql> select * from User;
+-----+-----+-----+-----+-----+
| User_Id | Username | Password | Age | Phone_No |
+-----+-----+-----+-----+-----+
| 1 | Hrishikesh | Change | 19 | 701245 |
| 2 | Aarav | Secret | 25 | 789012 |
| 3 | Eshaan | P@ssword | 22 | 456789 |
| 4 | Aaradhya | Hidden | 28 | 123456 |
| 5 | Vihaan | Access | 23 | 987654 |
| 6 | Shraddha | Locked | 20 | 345678 |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

On entering the valid data we now enter the main site displaying all the details i.e **READ operation**.

The image displays a "Product Management" dashboard. At the top, there are navigation links: "Home", "Add a New Product", "Update Any Product", and "Log out". Below the navigation bar, the title "Product Management" is centered. A summary bar shows: "Avg Price: 297", "Avg Stock: 33", "Min Price: 60", "Max Price: 525", and "Count Products: 9". The main area contains a grid of 8 product cards. Each card displays the product ID, name, category, price, and stock, along with "Update" and "Delete" buttons.

Product Id	Product Name	Product Category	Product Bodytype	Price	Stock
1	T-Shirt	Apparel	Mesomorph	210	20
2	Jeans	Apparel	Endomorph	200	25
3	Sweater	Apparel	Mesomorph	420	25
4	Running Shoes	Footwear	Edomorph	315	45
5	Dress Shirt	Apparel	Mesomorph	368	45
6	Sneakers	Footwear	Endomorph	473	25
7	Socks	Accessories	Mesomorph	525	25
8	Hat	Accessories	Endomorph	105	30

The database

```
mysql> select * from Product;
```

Product_id	Product_Name	Category	Price	Stock	Bodytype
1	T-Shirt	Apparel	210	20	Mesomorph
2	Jeans	Apparel	200	25	Endomorph
3	Sweater	Apparel	420	25	Mesomorph
4	Running Shoes	Footwear	315	45	Ectomorph
5	Dress Shirt	Apparel	368	45	Mesomorph
6	Sneakers	Footwear	473	25	Endomorph
7	Socks	Accessories	525	25	Mesomorph
8	Hat	Accessories	105	30	Endomorph
9	My Sweater	Apparel	60	60	Ectomorph

9 rows in set (0.00 sec)

On clicking update on a particular product here Jeans. Thereby showing the **Update Operation**

[Home](#) [Add a New Product](#) [Update Any Product](#) [Log out](#)

Update

Product Name

Jeans

Product Category

Apparel

Product Bodytype

Endomorph

Price

200

Stock

25

Update

Now can modify the data as per what we want (here increased the stock to 50)

Change reflected on the main page as well as the database

[Home](#) [Add a New Product](#) [Update Any Product](#) [Log out](#)

Product Management

Avg Price: 297

Avg Stock: 36

Min Price: 60

Max Price: 525

Count Products: 9

Product Id : 1

Product Name : T-Shirt

Product Category : Apparel

Product Bodytype : Mesomorph

Price : 210

Stock : 20

Update

Delete

Product Id : 2

Product Name : Jeans

Product Category : Apparel

Product Bodytype : Endomorph

Price : 200

Stock : 50

Update

Delete

Product Id : 3

Product Name : Sweater

Product Category : Apparel

Product Bodytype : Mesomorph

Price : 420

Stock : 25

Update

Delete

Product Id : 4

Product Name : Running Shoes

Product Category : Footwear

Product Bodytype : Ectomorph

Price : 315

Stock : 45

Update

Delete

Product Id : 5

Product Name : Dress Shirt

Product Category : Apparel

Product Bodytype : Mesomorph

Price : 368

Stock : 45

Update

Delete

Product Id : 6

Product Name : Sneakers

Product Category : Footwear

Product Bodytype : Endomorph

Price : 473

Stock : 25

Update

Delete

Product Id : 7

Product Name : Socks

Product Category : Accessories

Product Bodytype : Mesomorph

Price : 525

Stock : 25

Update

Delete

Product Id : 8

Product Name : Hat

Product Category : Accessories

Product Bodytype : Endomorph

Price : 105

Stock : 30

Update

Delete

```
mysql> select * from Product;
```

Product_id	Product_Name	Category	Price	Stock	Bodytype
1	T-Shirt	Apparel	210	20	Mesomorph
2	Jeans	Apparel	200	50	Endomorph
3	Sweater	Apparel	420	25	Mesomorph
4	Running Shoes	Footwear	315	45	Ectomorph
5	Dress Shirt	Apparel	368	45	Mesomorph
6	Sneakers	Footwear	473	25	Endomorph
7	Socks	Accessories	525	25	Mesomorph
8	Hat	Accessories	105	30	Endomorph
9	My Sweater	Apparel	60	60	Ectomorph

```
9 rows in set (0.00 sec)
```

On clicking **Update** any product we have the power to change the values for any product in the database just by entering the valid product id and just making changes to the necessary data.

[Home](#)
[Add a New Product](#)
[Update Any Product](#)
[Log out](#)

Update

Product Id*

Product Name

Product Category

Product Bodytype

Price

Stock

On entering the data

Update

Product Id*

3

Product Name

eg. Leather Jacket

Product Category

eg. Apparel

Product Bodytype

eg. Mesomorph

Price

10

Stock

eg. 50, 30..

Update

On entering invalid data an error is thrown

Product Id*

5

Product Name

eg. Leather Jacket

Product Category

eg. Apparel

Product Bodytype

eg. Mesomorph

Price

-50

Stock

eg. 50, 30..

Update

Error : Enter valid data!

Now well perform the **deletion operation** by pressing the delete command and we can see the changes in the database as well as the main page

[Home](#)
[Add a New Product](#)
[Update Any Product](#)
[Log out](#)

Product Management

Avg Price: 359
Avg Stock: 34
Min Price: 200
Max Price: 525
Count Products: 7

Product Id : 1
Product Name : T-Shirt
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 210
Stock : 20
Update Delete

Product Id : 2
Product Name : Jeans
Product Category : Apparel
Product Bodytype : Endomorph
Price : 200
Stock : 50
Update Delete

Product Id : 3
Product Name : Sweater
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 420
Stock : 25
Update Delete

Product Id : 4
Product Name : Running Shoes
Product Category : Footwear
Product Bodytype : Ectomorph
Price : 315
Stock : 45
Update Delete

Product Id : 5
Product Name : Dress Shirt
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 368
Stock : 45
Update Delete

Product Id : 6
Product Name : Sneakers
Product Category : Footwear
Product Bodytype : Endomorph
Price : 473
Stock : 25
Update Delete

Product Id : 7
Product Name : Socks
Product Category : Accessories
Product Bodytype : Mesomorph
Price : 525
Stock : 25
Update Delete

Point to note that we can see the statistics change

```
mysql> select * from Product;
```

Product_id	Product_Name	Category	Price	Stock	Bodytype
1	T-Shirt	Apparel	210	20	Mesomorph
2	Jeans	Apparel	200	50	Endomorph
3	Sweater	Apparel	420	25	Mesomorph
4	Running Shoes	Footwear	315	45	Ectomorph
5	Dress Shirt	Apparel	368	45	Mesomorph
6	Sneakers	Footwear	473	25	Endomorph
7	Socks	Accessories	525	25	Mesomorph

7 rows in set (0.00 sec)

Now we will add a product i.e perform the **Add Operation**

Add the necessary details

Product Id

Product Name

Product Category

Product Bodytype

Price

Stock

Enter

[Home](#)
[Add a New Product](#)
[Update Any Product](#)
[Log out](#)

Product Management

Avg Price: 389
Avg Stock: 31
Min Price: 200
Max Price: 600
Count Products: 8

Product Id : 1
Product Name : T-Shirt
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 210
Stock : 20

Update
Delete

Product Id : 2
Product Name : Jeans
Product Category : Apparel
Product Bodytype : Endomorph
Price : 200
Stock : 50

Update
Delete

Product Id : 3
Product Name : Sweater
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 420
Stock : 25

Update
Delete

Product Id : 4
Product Name : Running Shoes
Product Category : Footwear
Product Bodytype : Ectomorph
Price : 315
Stock : 45

Update
Delete

Product Id : 5
Product Name : Dress Shirt
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 368
Stock : 45

Update
Delete

Product Id : 6
Product Name : Sneakers
Product Category : Footwear
Product Bodytype : Endomorph
Price : 473
Stock : 25

Update
Delete

Product Id : 7
Product Name : Socks
Product Category : Accessories
Product Bodytype : Mesomorph
Price : 525
Stock : 25

Update
Delete

Product Id : 8
Product Name : Leather Jacket
Product Category : Apparel
Product Bodytype : Mesomorph
Price : 600
Stock : 15

Update
Delete

If you enter the wrong details i.e. here it's the same Product Id which already exists.

Product Id
5

Product Name
Leather Jacket

Product Category
Apparel

Product Bodytype
Mesomorph

Price
6000

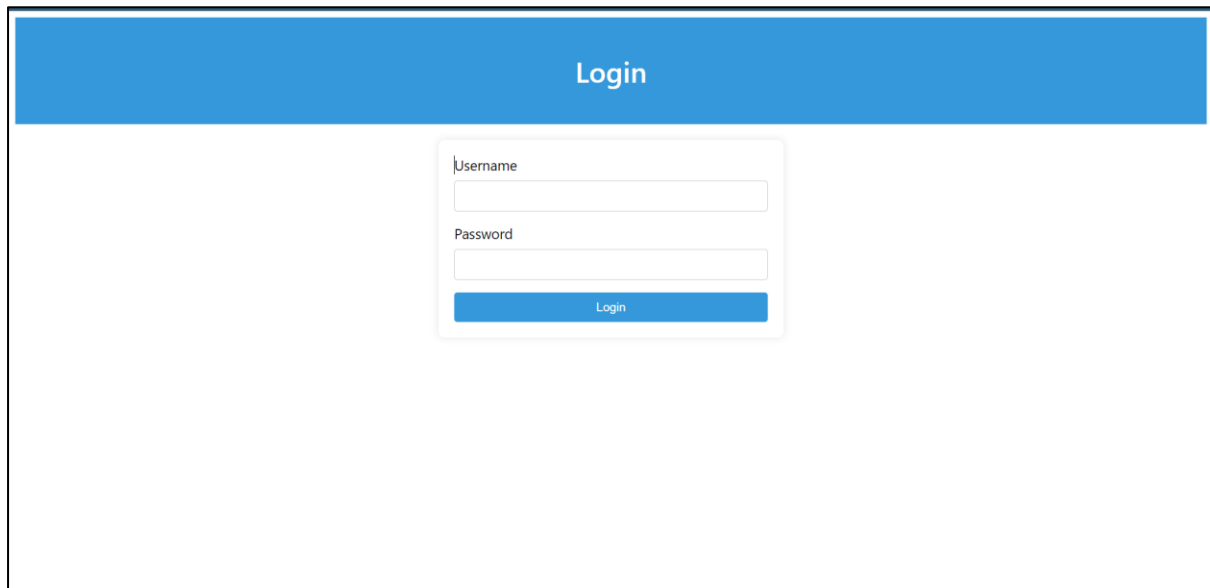
Stock
15

Enter

Error : Enter Proper Details!

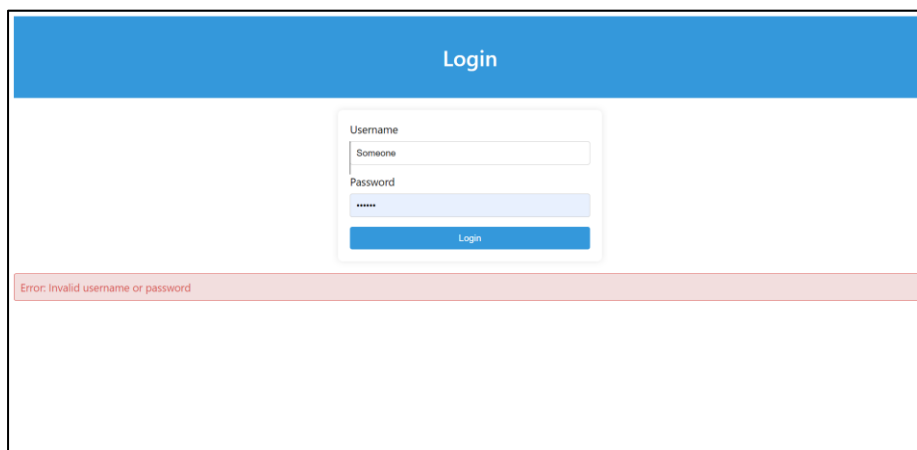
Shopping

As soon as we click the Shop section, we are directed to the *light themed* page



Now we need to enter the login details: the user id and password

As you can see the password is encrypted.



When you enter wrong details

On correct id and password it would co-relate it with the database in SQL to verify and hence enter the user.

```
mysql> select * from customers;
+-----+-----+-----+-----+-----+
| cust_id | cust_name | password | bodytype | phone_no |
+-----+-----+-----+-----+-----+
| 1 | Hrishikesh | Change | Mesomorph | 789987 |
| 2 | Shraddha | password | Ectomorph | 467898 |
| 3 | Rajesh | hidden | Endomorph | 789545 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

On entering the valid data we now enter the main site displaying all the details i.e **READ operation**.

[Home](#) [Cart](#) [Log out](#) Hi, Hrishikesh!

Fashion Trends

Product Name : T-Shirt
Product Category : Apparel
Price : 210

Add

Product Name : Sweater
Product Category : Apparel
Price : 420

Add

Product Name : Dress Shirt
Product Category : Apparel
Price : 368

Add

Product Name : Socks
Product Category : Accessories
Price : 525

Add

Product Name : Leather Jacket
Product Category : Apparel
Price : 600

Add

This is for customer Hrishikesh a Mesomorph. Therefore as a way to overcome the drawback the relevant products ones for Mesomorph are shown. This is the rectification of one of the drawabacks that we showed.

Similarly for Shraddha i.e. Ectomorph

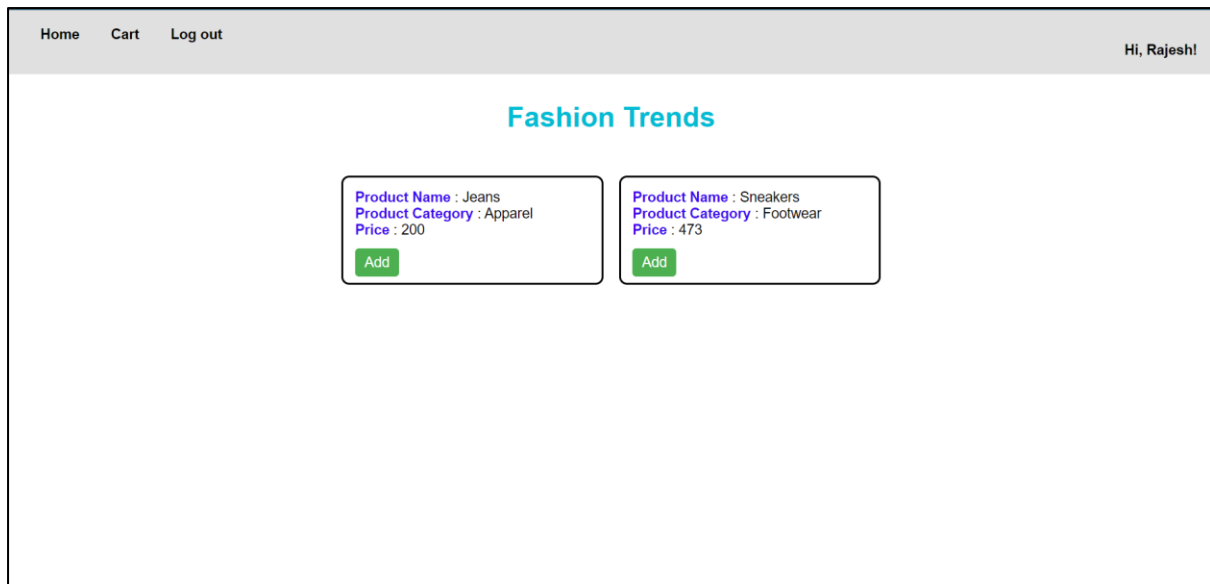
[Home](#) [Cart](#) [Log out](#) Hi, Shraddha!

Fashion Trends

Product Name : Running Shoes
Product Category : Footwear
Price : 315

Add

Similarly for Rajesh i.e Endomorph



This enables us to solve the major problem. Reading differently for different users.

Also we are hiding the unnecessary information from the user that is not relevant to him

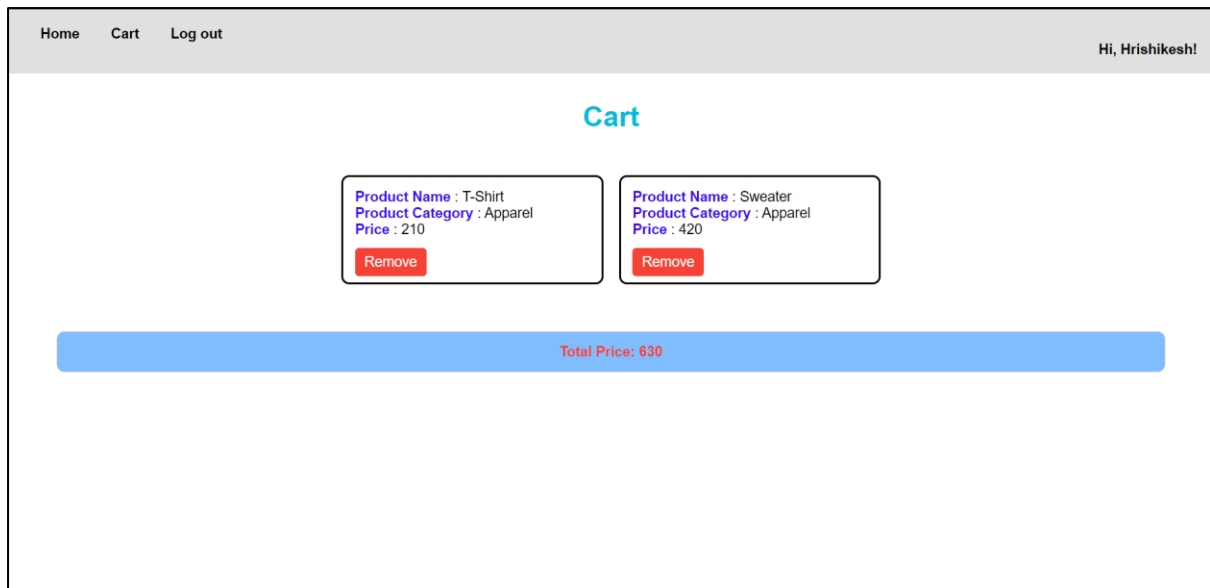
We are using the subqueries to combine the data of products and user to help us build a powerful website.

When we click add for one Hrishikesh

We have added two products for him.



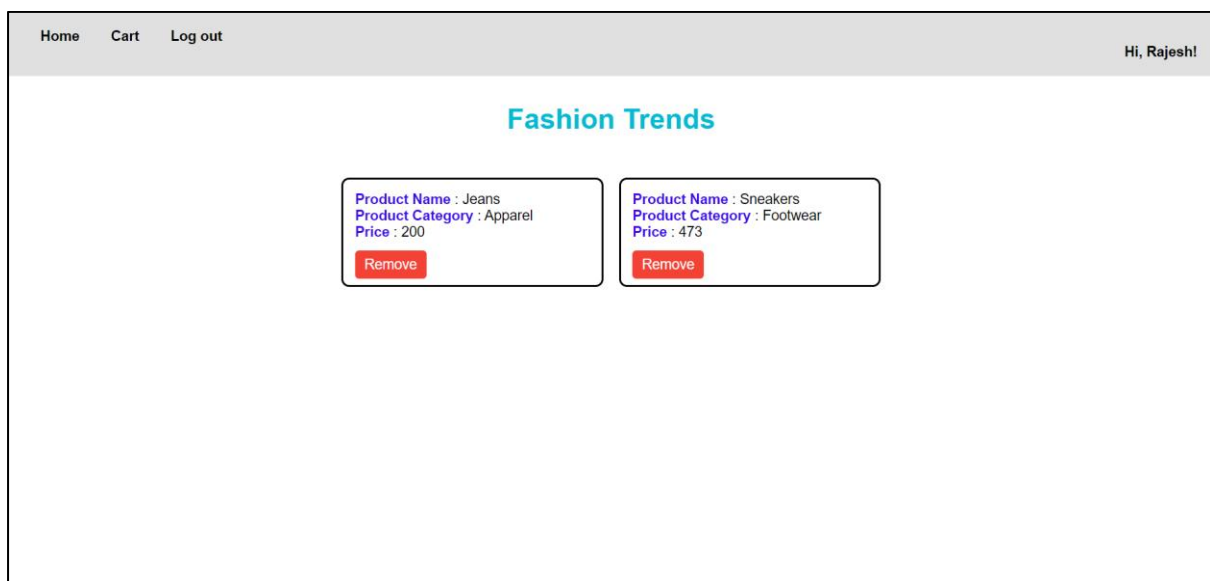
His cart:



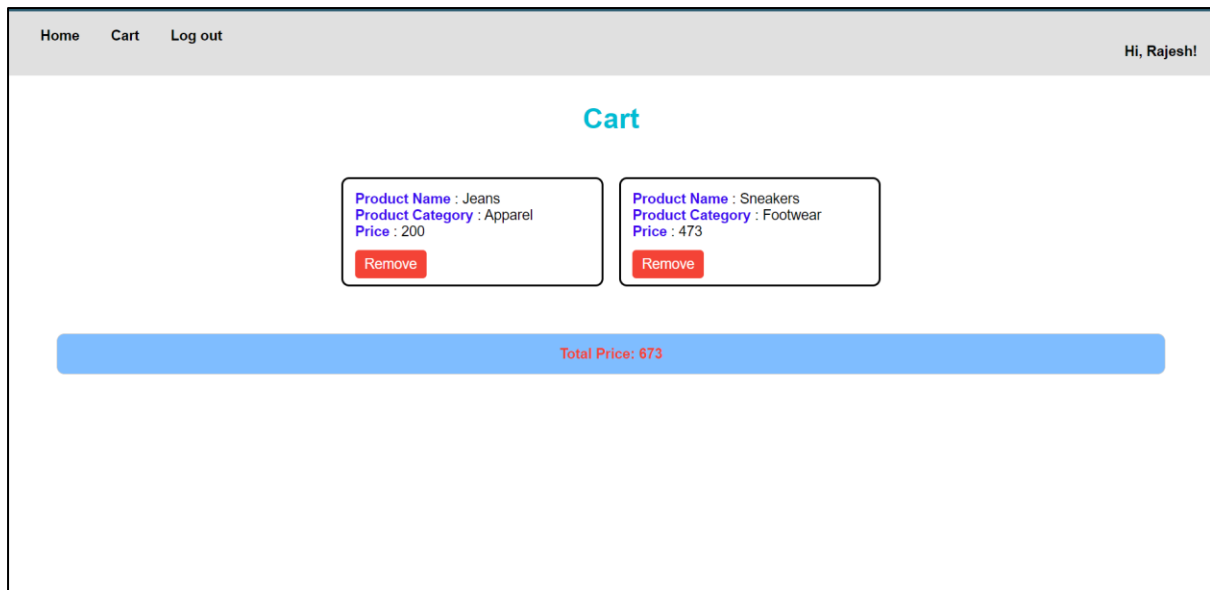
The SQL table cart

```
mysql> select * from cart;
+-----+-----+-----+
| cart_id | cust_id | Product_id |
+-----+-----+-----+
| 1 | 1 | 1 |
| 1 | 1 | 3 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

Now we add some products for Rajesh



His cart



The SQL database:

```
mysql> select * from cart;
+-----+-----+-----+
| cart_id | cust_id | Product_id |
+-----+-----+-----+
| 1 | 1 | 1 |
| 1 | 1 | 3 |
| 1 | 3 | 2 |
| 1 | 3 | 6 |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

As we can see the data is updated for the different user.

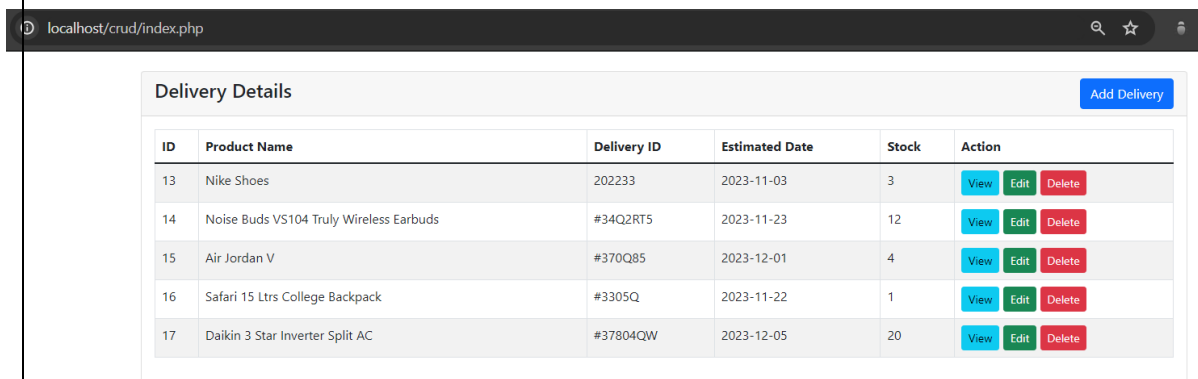
This showcases the powerful use of sub queries and making use of the POST method in the code that we have used to make the cart we take in data from 3 table namely the Customers, Cart and Products which correlates to the same one as used in the product management.

Delivery System

The Delivery Management System has been created so that e-commerce platforms can help the delivery workers to track products and their estimated delivery time efficiently.

The Process: Created a simple tracker for the team to add details, edit and view but at the same time added constraints so as to not violate any basic details such as stock being negative or delivery date being behind the current date.

- 1) Main Page of the Delivery System where options to create, read, update and delete (CRUD) are present



ID	Product Name	Delivery ID	Estimated Date	Stock	Action
13	Nike Shoes	202233	2023-11-03	3	View Edit Delete
14	Noise Buds VS104 Truly Wireless Earbuds	#34Q2RT5	2023-11-23	12	View Edit Delete
15	Air Jordan V	#370Q85	2023-12-01	4	View Edit Delete
16	Safari 15 Ltrs College Backpack	#3305Q	2023-11-22	1	View Edit Delete
17	Daikin 3 Star Inverter Split AC	#37804QW	2023-12-05	20	View Edit Delete

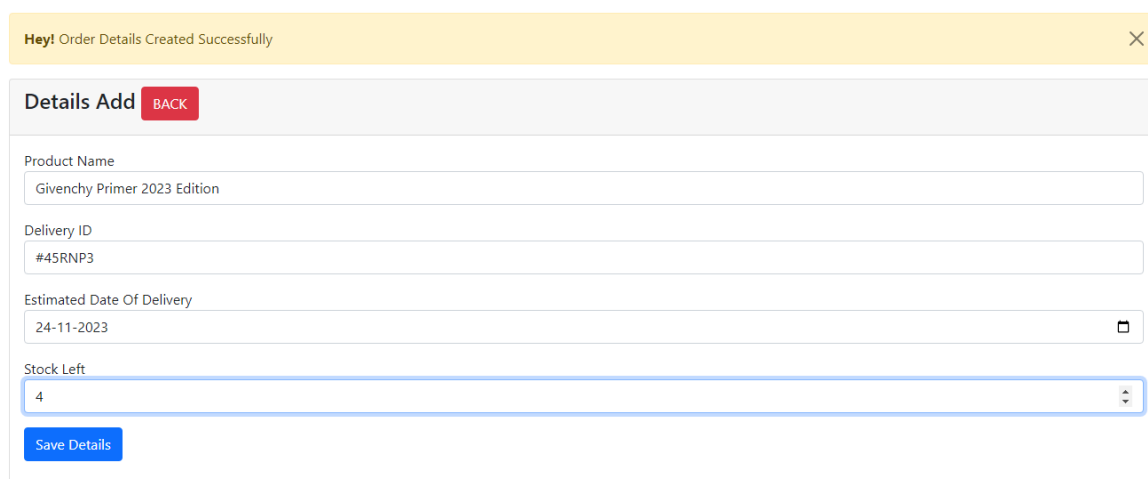
2) CREATE:

The ability to add details to the table

Entries and constraints:

- Primary Key ID such that it auto-increments every time a new entry is created
- Product Name
- Delivery ID
- Estimated Date-> Constraint: The eod should be after the current date
- Stock Left -> Constraint : Should be 0 or greater

On Creation Of A Table, A message alerting successful creation is displayed



Hey! Order Details Created Successfully

Details Add [BACK](#)

Product Name
Givency Primer 2023 Edition

Delivery ID
#45RNP3

Estimated Date Of Delivery
24-11-2023

Stock Left
4

[Save Details](#)

Else if the date of creation is previous to the current date, a automated message for the date to be change can be seen below

localhost/crud/create.php

Hey! Date is in the past. Please enter a date starting today

Details Add [BACK](#)

Product Name

Delivery ID

Estimated Date Of Delivery

dd-mm-yyyy

Stock Left

Save Details

2) Read

A View method helps to read all the details about the delivery flexibly.

Details View [BACK](#)

Product Name

Nike Shoes

Delivery ID

202233

Estimated Date Of Delivery

2023-11-03

Stock Left

3

3) Edit Function

Helps to update the details in case of any error or changes required such as delaying the delivery time or incrementing the stock present.

Details Edit [BACK](#)

Product Name

FabIndia Yellow Cotton Kurta For Men

Delivery ID

202233

Estimated Date Of Delivery

03-11-2023

Stock Left

3

Update Details

4) Delete Function

The delete button deletes the details and drops the tuple from our table. This is quite efficient to remove completed orders and bind them to the delivered products.

Delivery Details						Add Delivery
ID	Product Name	Delivery ID	Estimated Date	Stock	Action	
13	FabIndia Yellow Cotton Kurta For Men	202233	2023-11-03	3	View	Edit Delete
14	Noise Buds VS104 Truly Wireless Earbuds	#34Q2RT5	2023-11-23	12	View	Edit Delete
15	Air Jordan V	#370Q85	2023-12-01	4	View	Edit Delete
16	Safari 15 Ltrs College Backpack	#3305Q	2023-11-22	1	View	Edit Delete
17	Daikin 3 Star Inverter Split AC	#37804QW	2023-12-05	20	View	Edit Delete
18	Calculator	#50694R	2023-11-24	1	View	Edit Delete
19	Givenchy Primer 2023 Edition	#45RNP3	2023-11-24	4	View	Edit Delete

Working In phpMyAdmin:

A mySql displays the entire schema and all the tuples present in the same. The backend serves as the backbone of the application thus effectively terminating a smooth process.

✓ Showing rows 0 - 6 (7 total. Query took 0.0016 seconds.)

`SELECT * FROM `deliver``

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: | Filter rows: | Sort by key:

Extra options

↶ ↷

id

productname

deliveryid

eod

stock

<input type="checkbox"/>	Edit	Copy	Delete	13	FabIndia Yellow Cotton Kurta For Men	202233	2023-11-03	3
<input type="checkbox"/>	Edit	Copy	Delete	14	Noise Buds VS104 Truly Wireless Earbuds	#34Q2RT5	2023-11-23	12
<input type="checkbox"/>	Edit	Copy	Delete	15	Air Jordan V	#370Q85	2023-12-01	4
<input type="checkbox"/>	Edit	Copy	Delete	16	Safari 15 Ltrs College Backpack	#3305Q	2023-11-22	1
<input type="checkbox"/>	Edit	Copy	Delete	17	Daikin 3 Star Inverter Split AC	#37804QW	2023-12-05	20
<input type="checkbox"/>	Edit	Copy	Delete	18	Calculator	#50694R	2023-11-24	1
<input type="checkbox"/>	Edit	Copy	Delete	19	Givenchy Primer 2023 Edition	#45RNP3	2023-11-24	4

☐ Check all | With selected: [Edit](#) [Copy](#) [Delete](#) [Export](#)

☐ Show all | Number of rows: | Filter rows: | Sort by key:

Conclusion

In conclusion, our Online Fashion Management system is not just a platform, it's a catalyst for transforming how the fashion industry operates. By smoothly combining customer interactions and making delivery processes more efficient, we've created a comprehensive solution that helps create a better user-interface and at the same time help in reducing the losses being incurred by the

businesses. With our platform, we encourage you to explore its full potential, experiment with the features, and leverage the power it brings to your fingertips.