CST2120 Web Applications and Databases

Coursework 2:
E-commerce Website

- Student Name: Alexander Shekhar Parke
  Student Number: M00832048

- Student Name: Lakshit Sharma
  Student Number: M00830555

- Student Name: Somya Sookraz
  Student Number: M00829884

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Introduction

Our e-commerce, KartFlip, is based on the sale of electronic products such as televisions, phones and speakers. The customer will be able to view our products, select the quantity needed, add to cart and check out. Once the order has been placed, information about the order and the customer is stored is the database. Customers can register on the website and view past transactions.

The CMS (Content Management System) allows the employees to view all the products, add products, delete products and view the order details.

The front end is written in HTML, CSS and PHP.

The methodology used to store data on a site is called a database. Databases can be queried to fetch and return information on-demand to be displayed by the front end. Information obtained from the front end will be stored in the database. Our choice of database program is MongoDB.

MongoDB will add utility to the front-end functionality. Through MongoDB, we will be able to validate and exchange information such as login IDs and passwords.

Furthermore, Data retrieval from a database presents the biggest challenge for websites. However, only critical website content, such as articles and user credentials, should be stored in remote databases. Similar to cookies, features like user preferences can be saved in the user's browser. So, to save user preferences, we will use HTML local/session storage in conjunction with a local database.

Website

KartFlip is made up of 5 webpages. The website consists of the Home page, Sign Up page, Login page, Products page and the customer's order history.

Website Screenshots

1. Home Page

The home page welcomes the client and contains a slideshow for recommendations; items that can be purchased as well as sales on chosen items.

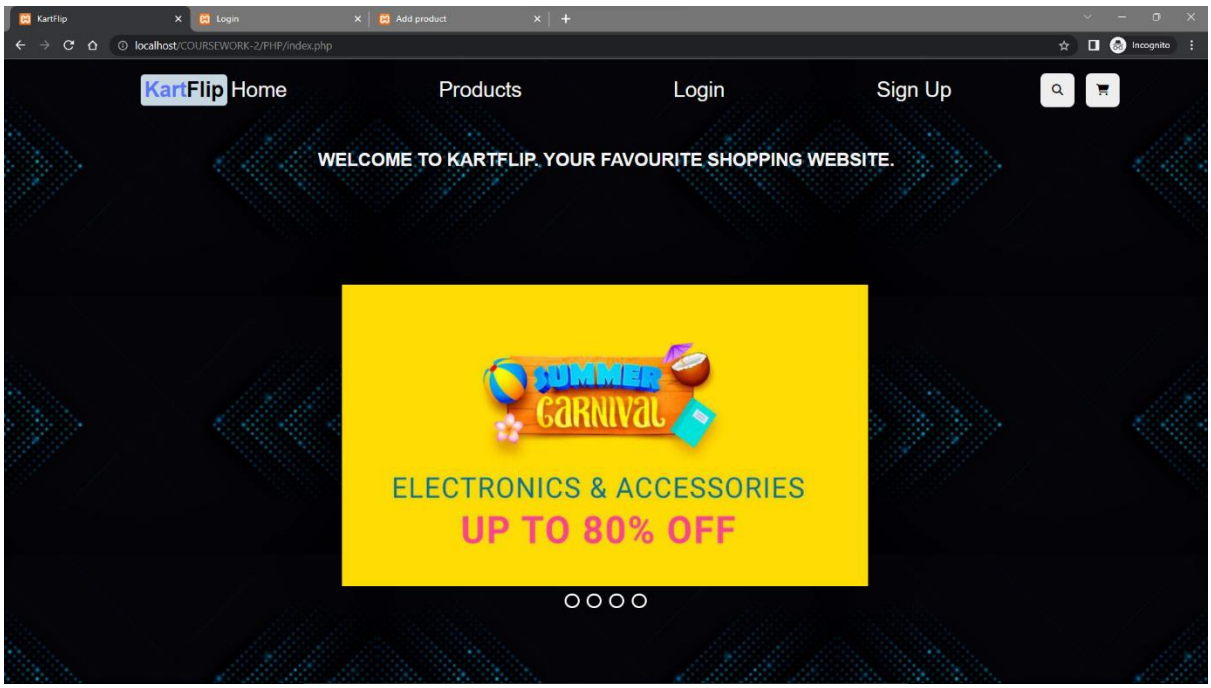


Figure 1-HomePage

2. Sign Up Page

If the customer is shopping for the first time, he/she will have to sign up to place an order. To do so, the customer will have to enter his username, phone number, age, password and confirm his password.

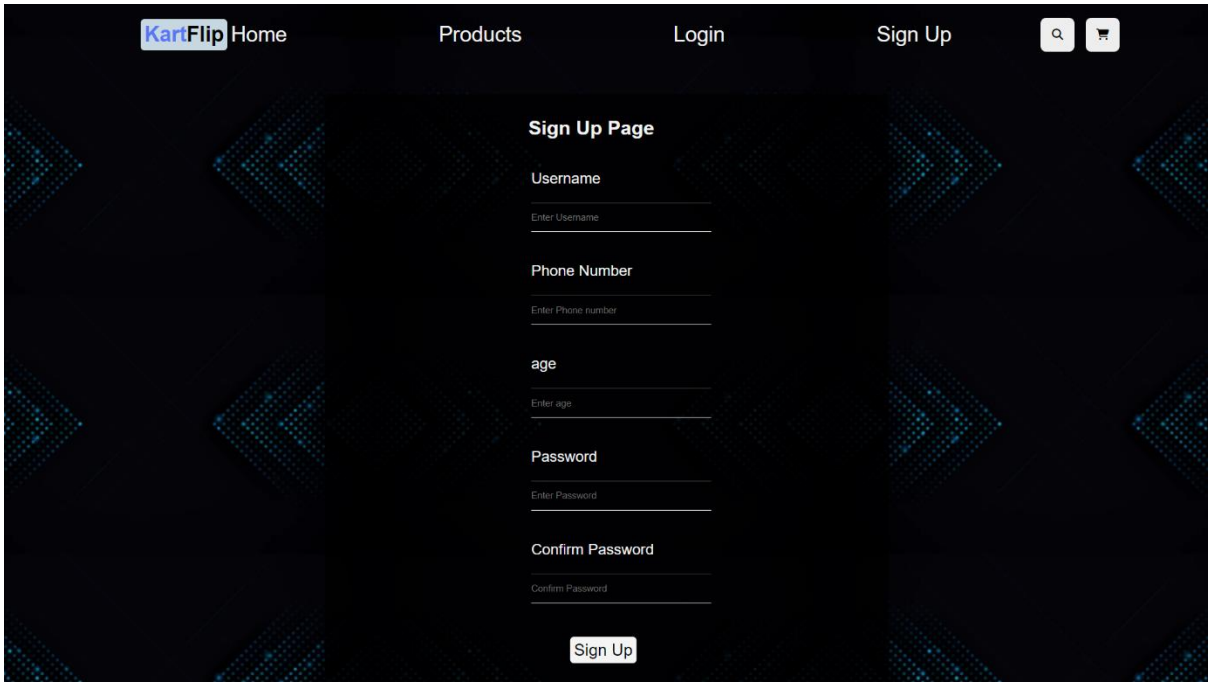


Figure 2-Sign Up Page

3. Login Page

If the customer already has an account, he/she can login to continue shopping using the username and password the latter used while signing up.

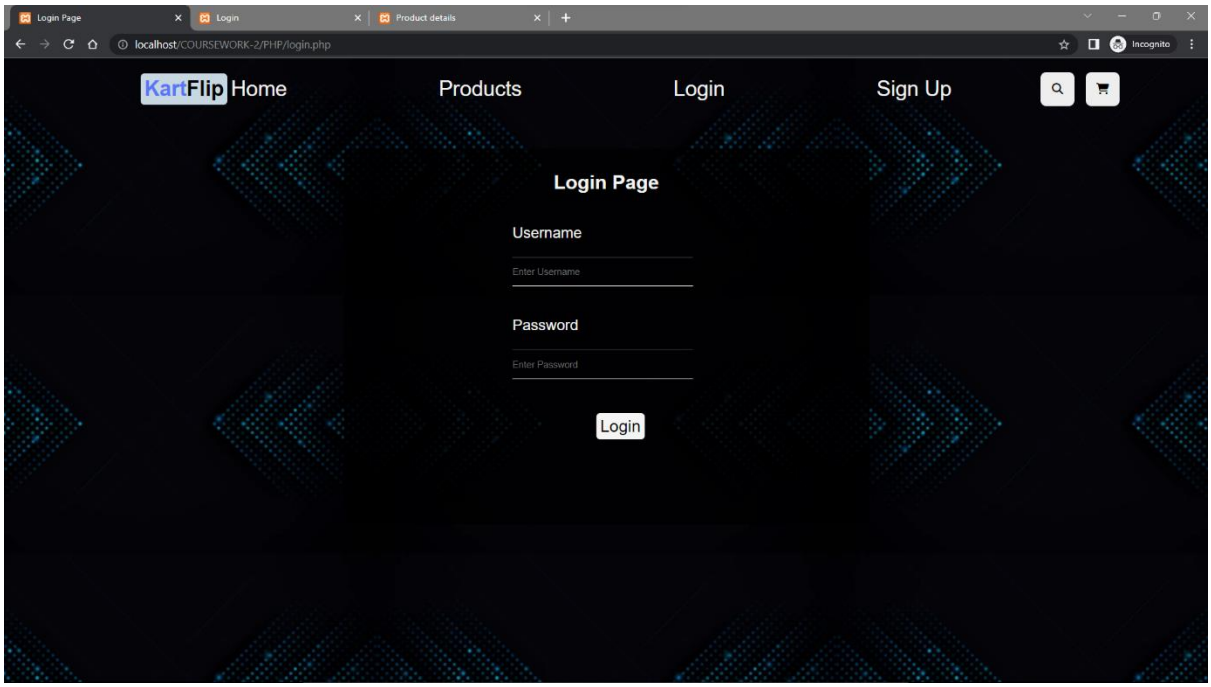


Figure 3-Login Page

4. Product Page

On this page, all our products will be displayed.

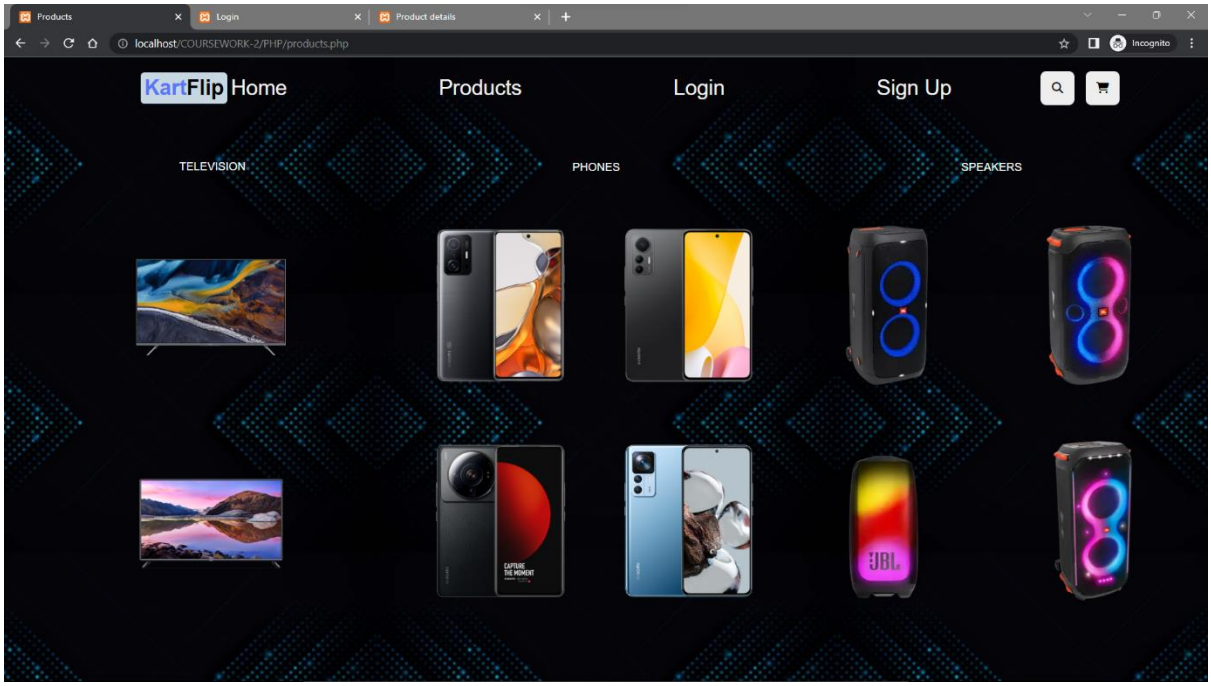


Figure 4-Product Page

5. Personal Cart

The products that the customer wishes to buy will be added to the personal cart and will be displayed as follows.

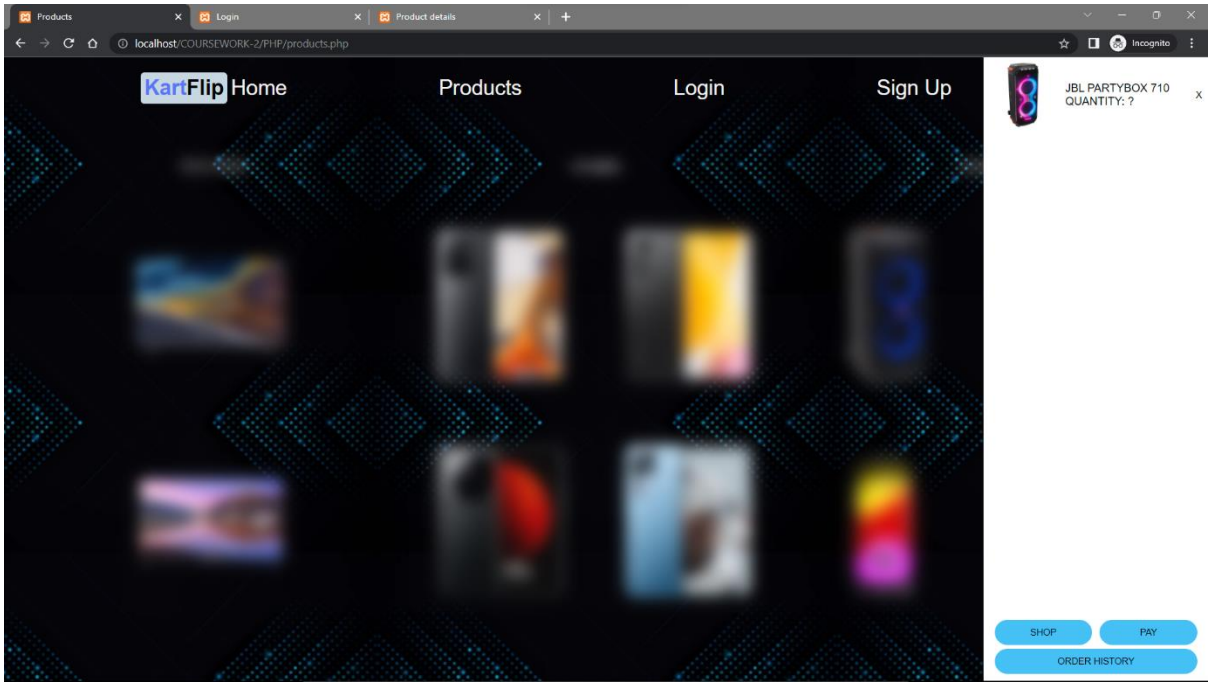


Figure 5-Personal Cart

6. Customer Order History

On this page, the customer will be able to view the previous items he bought, the date of purchase and the price.

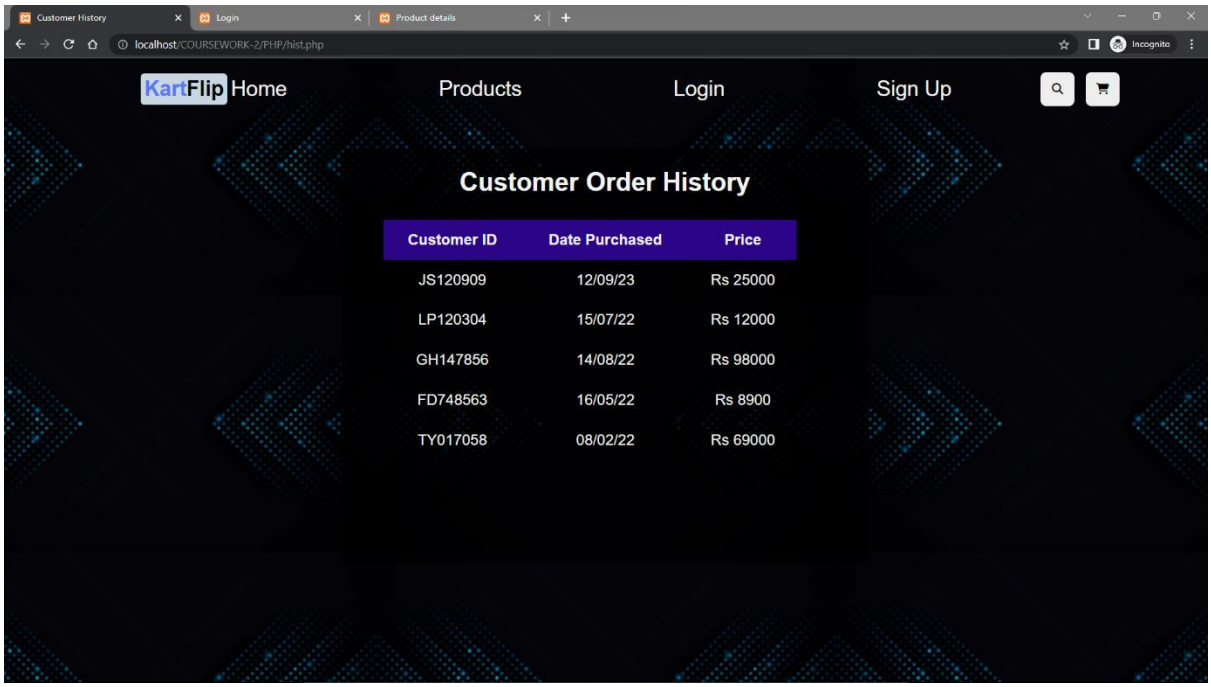


Figure 6-Customer Order History

7. Footer

The footer contains the website logo, a note, social media, 'about us' and the copyright notice.

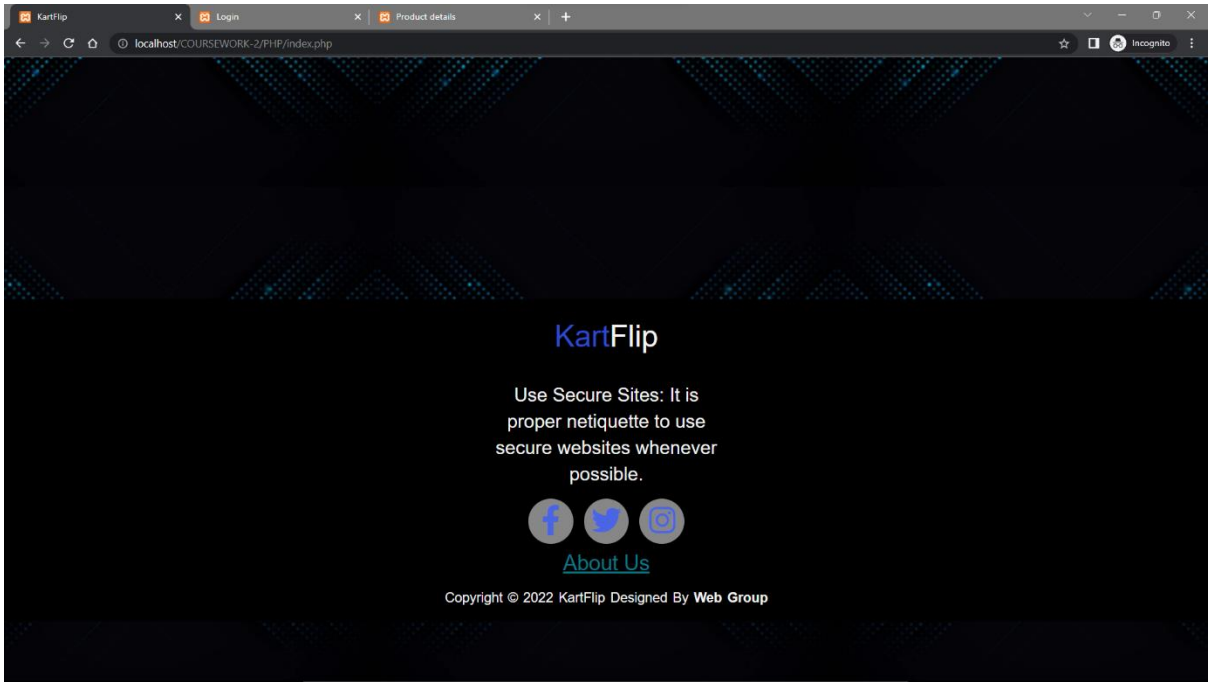


Figure 7-Footer

CMS

The Content Management System allows the staff to view all the products, add products on the website, delete a specific product and view order details. These option will be available to the staff only after logging in.

CMS Screenshots

1. Login Page

The employee can login by entering his/her username and the corresponding password.

After successfully logging in, the employee will be redirected to the 'Products' page. Otherwise if the username or the password is typed in incorrectly, an error message will pop up asking the user try again.

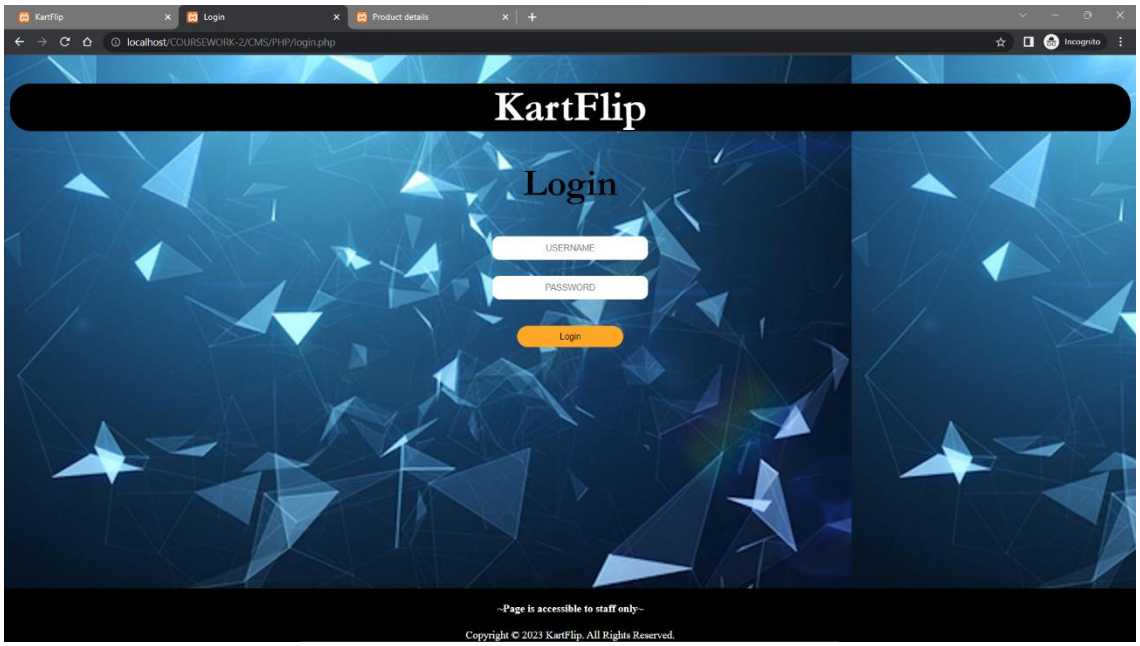


Figure 8-CMS Login page

2. All Products

In this page the staff will be able to view all the products together with their respective categories, model, stock and price.

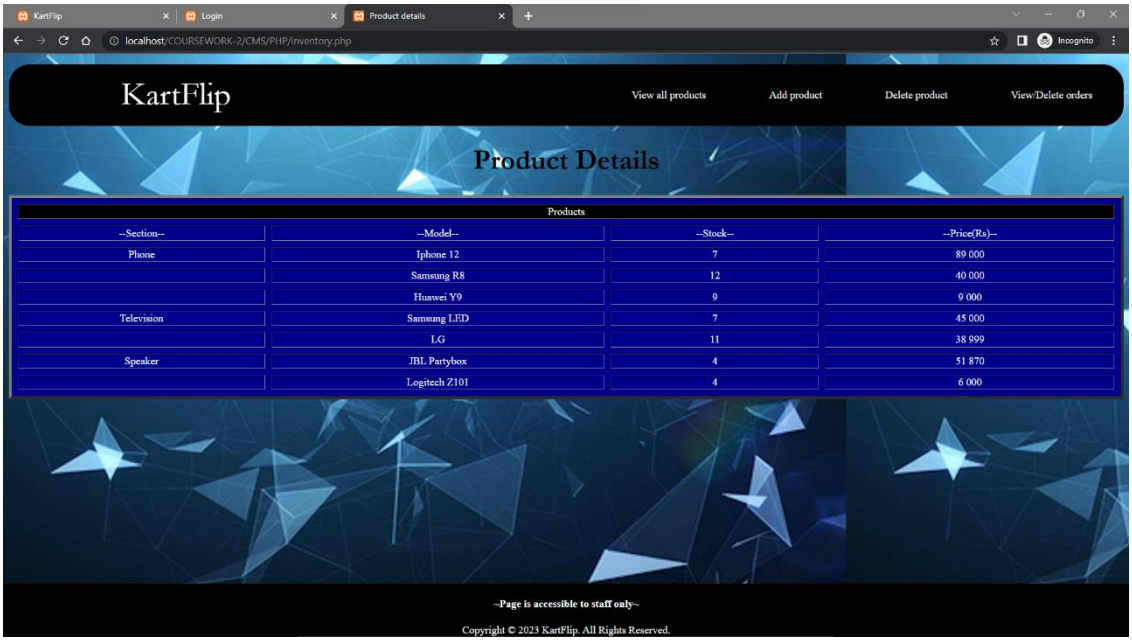


Figure 9-All products displayed

3. Add Product

Before adding a product, the user will have to register the product details such as category, model, product ID and price.

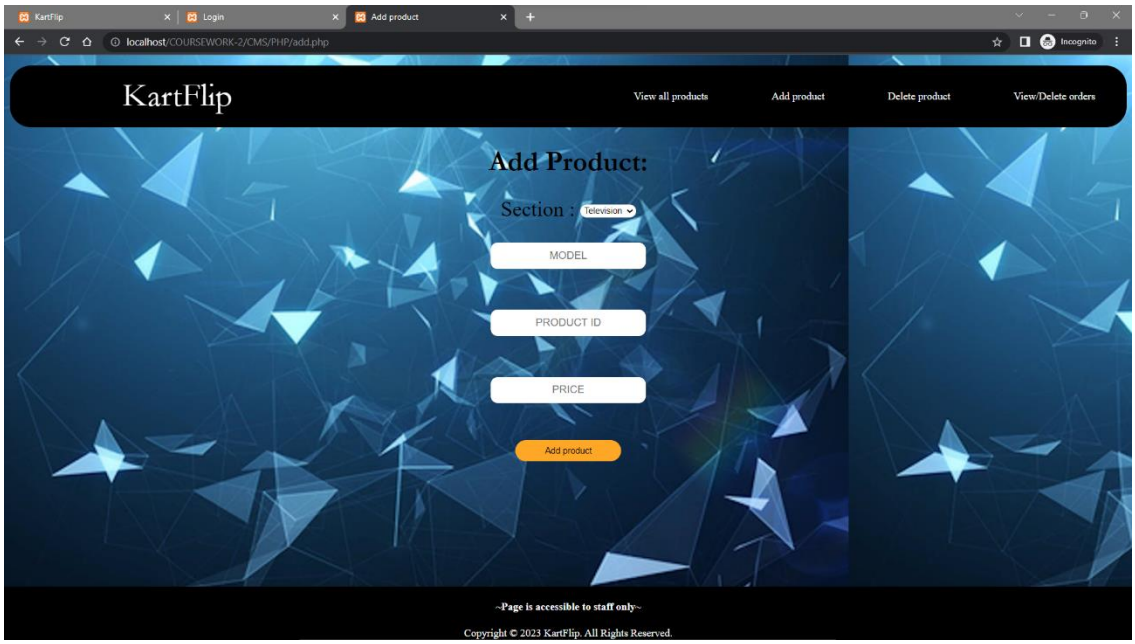


Figure 10-Adding product to inventory

4. Delete Product

To delete a specific product, the product's section and ID will have to be entered in their respective fields.

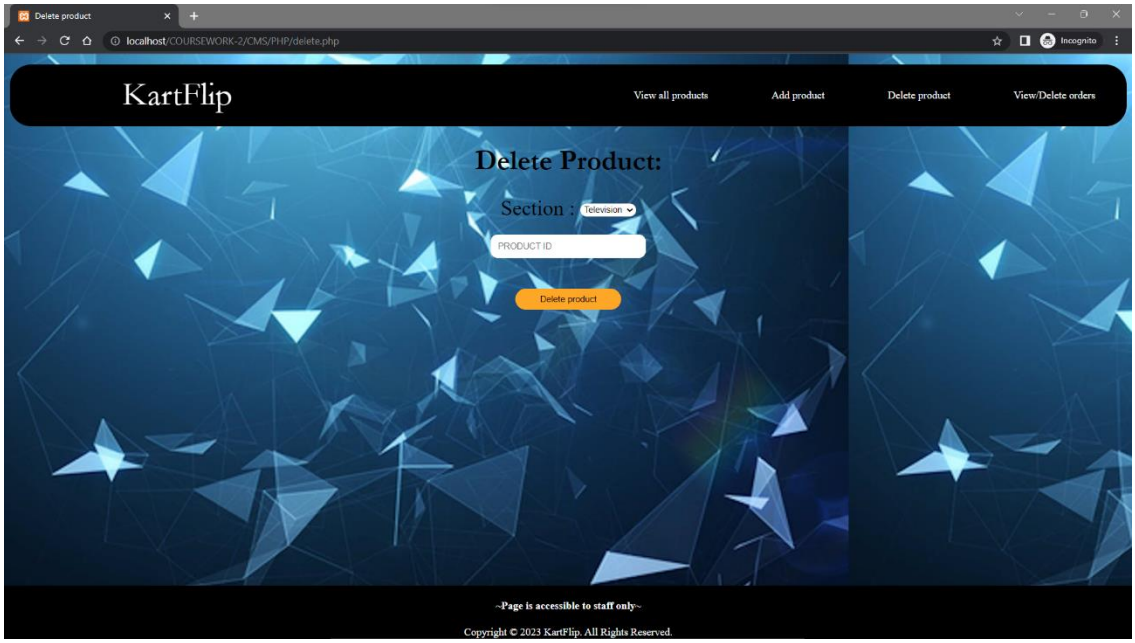


Figure 11-Deleting product from inventory

5. Order Details

On this page, the employee will be able to view the order placed by customers on the website. To be more specific, the Order ID, Customer ID, Date of purchase and product price will be displayed.

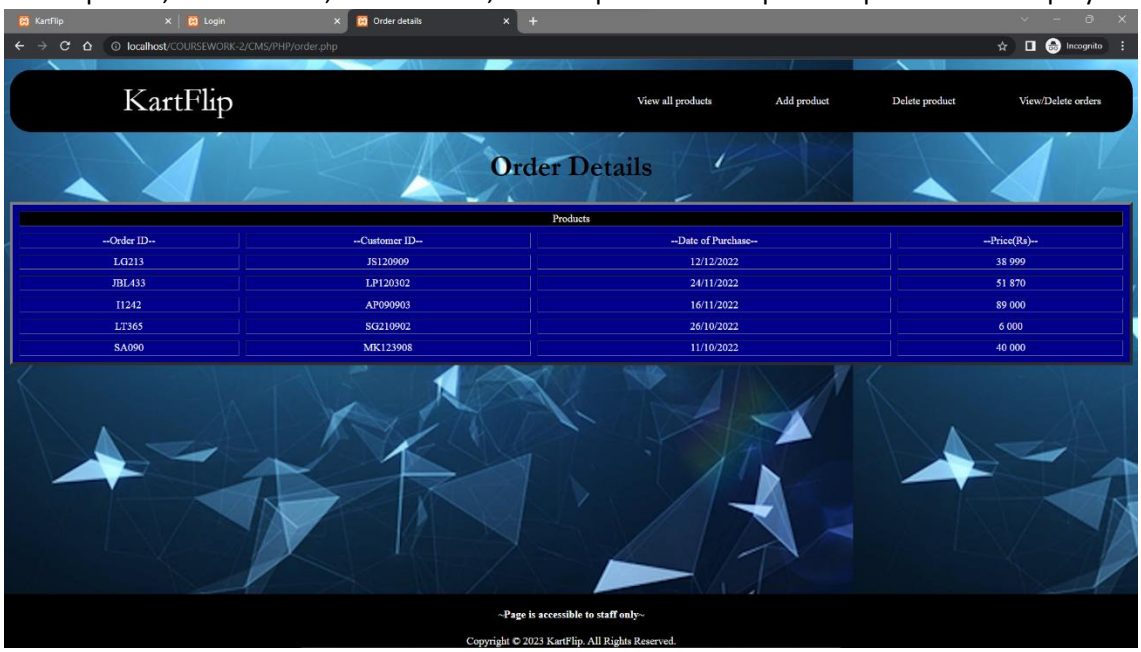
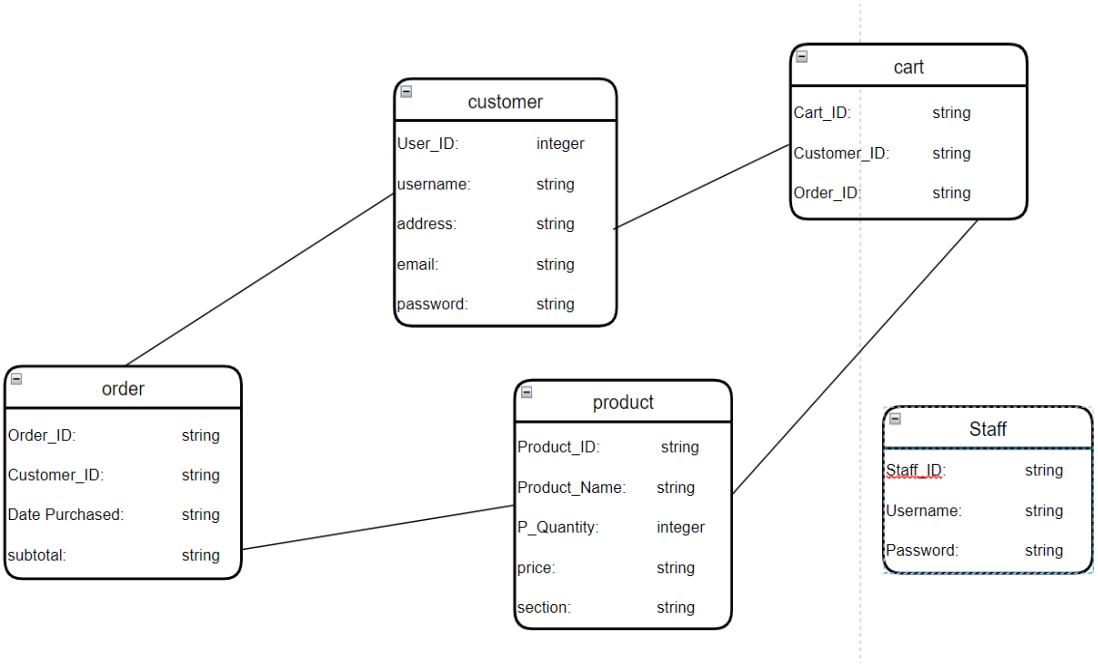


Figure 12-View Orders placed

MongoDB Database Design



{

“_id”: (Product_ID: “P454”),

“Product_Name”: “JBL Partybox”,

“P_Quantity”: 15,

“price”: “Rs 8900”,

Section:”speaker”

}

{

“_id”: (Product_ID: “P458”),

“Product_Name”: “iphone 12”,

“P_Quantity”: 188

“price”: “Rs 45000”,

Section:”smartphone”

}

{

“_id”: (User_ID: 0001),

“username”: “Sharma2022”,

“address” : ”Sir Newton Rd, Curepipe”

“email”: “Laksh2@gmail.com”,

“Password”:”King2022@”

}

{

“_id”: (User_ID: 0089),

“username”: “Karen2022”,

“address” : ”Sir Kingston Rd, Bambous”

“email”: “henkey2@gmail.com”,

“Password”:”Queen2023!”

}

{

“_id” : (Order_ID:”LG213”),

“Customer_ID” : ”JS12345”,

“Date_Purchased” : ”12/05/2022”,

“subtotal” : ””Rs 25000”

}

{

“_id” : (Order_ID:”JBL433”),

“Customer_ID” : ”LP120302”,

“Date_Purchased” : ”14/08/2022”,

“subtotal” : ”Rs 45000”

}

{

“_id” : (Cart_ID: “C154”),

“Customer_ID”: “LP120302”,

“Order_ID”: “LG213”

}

{

“_id” : (Cart_ID: “C169”),

“Customer_ID”: “OT457812”,

“Order_ID”: “IG456”

}

{

“_id” : (Staff_ID: “S149”),

“username”: “KartFlip2018”,

“Password”:”Lockdown2020!”

}

Only 1 example given for collection/document for staff since CMS contains only 1 account; ie: the Admin account.

Conclusion:

A good website design is crucial for modern Web development. A poor design will result in fewer visits, which may result in less revenue. A good page layout should generally satisfy the fundamental elements of a good page design. This comprises the use of colour contrast, text organization, font selection, style of a page, page size, graphics used, and consistency. This is what our group has considered all throughout while designing the Front-End of KartFlip. Moreover, all the requirements have been kept in mind and tried to be fully implemented. The backend database design has been included above to provide an insight into how the structure of the backend of the website may look like.