

eShop (A complete E-commerce website)

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Approval

This project report has been submitted for examination with the approval of our supervisor.

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Acknowledgement

We, Mst. Shafiatun Nur Shimu and Md. Ibne Sina, are presenting a project report titled “eShop (A complete E-commerce website)” as a part of “CSE 3200: System Development Project” course.

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Abstract

Our abstract to develop a complete e-commerce system was redefining Ecommerce Excellence. The advent of online commerce has transformed the way consumers engage with businesses, necessitating the creation of innovative and user-centric ecommerce platforms. "eShop," the product of our dedicated development team, stands as a testament to this evolution. This abstract provides a concise overview of "eShop", highlighting its key features, technological underpinnings, and the vision driving its creation.

Key Features:

- **User-Centric Design:** "eshop" prioritizes an intuitive and visually appealing design, ensuring a seamless and enjoyable shopping experience for users.
- **Product Catalog Management:** The platform offers a versatile and organized catalog management system, accommodating a diverse range of products for businesses of all sizes.
- **Secure Transactions:** Security is paramount, and "eshop" integrates robust protocols to safeguard user data, instilling confidence in online transactions.
- **Responsive Across Devices:** Recognizing the prevalence of mobile devices, "eShop" is designed to be fully responsive, providing a consistent experience across various screen sizes.
- **Database Management:** To ensure proper management of information about user, products, stock, order, payment system and so on using database management system like Apache.

The development of "eShop" is grounded in cutting-edge technologies and industry best practices. From a scalable backend infrastructure to secure payment gateways, every aspect is meticulously engineered to deliver a reliable and future-ready ecommerce solution. In conclusion, eshop is not merely a website; it embodies our dedication to crafting digital solutions that elevate the online shopping experience.

1 Introduction

"eShop" is a cutting-edge ecommerce website designed to redefine the online shopping experience. We developed it as a complete dynamic system which is also responsive across any device. "eShop" boasts an intuitive and visually appealing design, ensuring a delightful and immersive browsing experience for users. "eShop" enables businesses to showcase their products in a dynamic and organized manner. The platform supports an extensive range of product types, ensuring flexibility for businesses of all sizes and industries. We tried our best to ensure secured transaction. In an era dominated by digital transformations, consumers increasingly turn to the convenience of virtual marketplaces and to fulfil this demand our website will be a great option as it provides secured online-based multi-purpose shopping facilities.

1.1 Background

The background of the e-commerce concept is rooted in the evolution of commerce and technology. The concept of electronic commerce (e-commerce) and online shopping has roots dating back to the 1970s and 1980s. However, the establishment of the first true ecommerce shop is often attributed to the "Internet Shopping System" developed by Michael Aldrich in 1979.

As the internet became more prevalent, businesses sought new ways to reach a global audience and offer their products or services beyond physical storefronts. Ecommerce emerged as a solution, enabling companies to establish a digital presence and conduct transactions online. Recognizing this demand, we have diligently crafted "eShop" – a cutting-edge ecommerce website designed to redefine the online shopping experience which will provide online-based, secured, reliable shopping experience.

1.2 Objectives

- Provide users a flexible and great UI experience
- Ensure high-level data security
- Integrate different users (admin, buyer, seller) in a single application.
- Provide mobile responsiveness.
- Implement clear and intuitive navigation to find products easily.
- Ensure the highest level of security for online transactions.
- Implement a robust search feature.
- Integrate personalization features based on user preferences and behavior.

1.3 Scope

- Our service and products: we provide service for both customers and sellers and products of all categories can be sold. This will attract a large amount of audience.
- Our target audience: our target audience is people of any ages. As it is online based so people using any device can shop here.
- User experience (UX) and User Interface (UI): We are providing a great user-experience, this website is easy to use also attractive.
- Mobile responsiveness: people can browse from any mobile device.
- Security and reliability: We ensure a high level of data security and secure payment method.
- Feedback and review: As we implemented review system and feedback method it will be helpful for the users to buy a reliable product.

1.4 Project Planning

Technologies we want to use for our project:

- Laravel
- XAMPP

- HTML/CSS
- JavaScript
- MySQL Database (for storing data of products, users, orders)
- Bootstrap (for making responsive)
- Twilio (for sending message as notification)
- Stripe (for Payment Method)
- Mailtrap (for sending mail as feedback)

There will be two panels.

1. Admin panel (for seller)
2. User panel (for customers)

2 Related Works

2.1 Related Works

2.1.1 *Amazon*

Amazon is one of the largest and most well-known e-commerce and technology companies globally. Amazon is primarily known for its massive online marketplace, where customers can purchase a vast array of products, including electronics, books, clothing, household items, and more. In addition to selling its own products, Amazon allows third-party sellers to use its platform to reach customers, contributing to the extensive selection available on the site.

2.1.2 *Daraz*

Daraz is an online marketplace that operates in several countries in South Asia. Daraz operates as an online marketplace, connecting buyers and sellers. It provides a platform for a wide range of products, including electronics, fashion, beauty, appliances, and more. Daraz typically

provides multiple payment options, including cash on delivery, online payments, and other methods depending on the region.

2.1.3 *Shajgoj*

Shajgoj is an e-commerce platform based in Bangladesh that specializes in beauty and personal care products. Detailed product information, including descriptions, prices, and customer reviews, is commonly provided to assist users in making informed purchasing decisions. E-commerce platforms prioritize secure online transactions, often implementing secure payment gateways. Shajgoj likely provides multiple payment options, including online payment methods, cash on delivery, or other methods based on customer preferences.

3 System Design

3.1 Analysis of the system

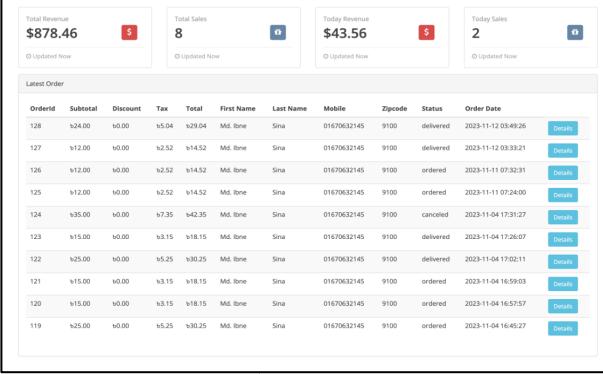
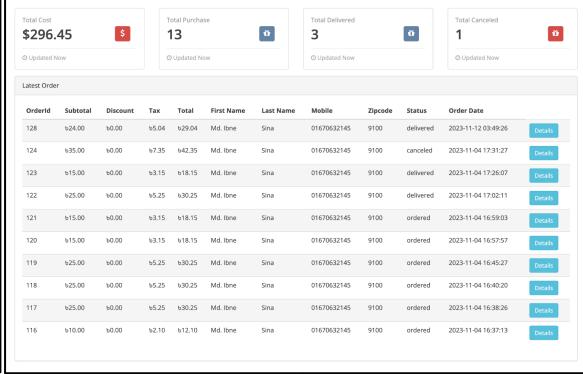
"eShop" is a dynamic ecommerce website designed to provide online shopping experience.

Admin

Admin can purchase products of different categories from different sellers, sell them at a different price with profit to the customers. Admin can maintain overall product information, order information others related to products customers and payment.

Customers

Customers can see products, search for products according to their demands, add product to wish-list and also can add to cart and buy them using reliable payment methods like card payment or cash on delivery system. Users can get great experience and find the interface much appealing while browsing the website. as the website is responsive, people can browse from any device.

Admin Dashboard

Total Revenue	\$878.46	Updated Now									
Total Sales	8	Updated Now									
Today Revenue	\$43.56	Updated Now									
Today Sales	2	Updated Now									
Latest Order											
OrderID	Subtotal	Discount	Tax	Total	First Name	Last Name	Mobile	Zipcode	Status	Order Date	Details
128	\$24.00	\$0.00	\$5.04	\$29.04	Md.	Ibne	Sina	01670632145	9100	delivered	2023-11-12 03:49:26
127	\$12.00	\$0.00	\$2.52	\$14.52	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-12 03:33:21
126	\$12.00	\$0.00	\$2.52	\$14.52	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-11 07:32:31
125	\$12.00	\$0.00	\$2.52	\$14.52	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-11 07:24:00
124	\$35.00	\$0.00	\$7.35	\$42.35	Md.	Ibne	Sina	01670632145	9100	canceled	2023-11-04 17:31:27
123	\$15.00	\$0.00	\$3.15	\$18.15	Md.	Ibne	Sina	01670632145	9100	delivered	2023-11-04 17:26:07
122	\$25.00	\$0.00	\$5.25	\$30.25	Md.	Ibne	Sina	01670632145	9100	delivered	2023-11-04 17:02:11
121	\$15.00	\$0.00	\$3.15	\$18.15	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:59:03
120	\$15.00	\$0.00	\$3.15	\$18.15	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:57:57
119	\$25.00	\$0.00	\$5.25	\$30.25	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:46:27

Customer Dashboard

Total Cost	\$296.45	Updated Now									
Total Purchase	13	Updated Now									
Total Delivered	3	Updated Now									
Total Canceled	1	Updated Now									
Latest Order											
OrderID	Subtotal	Discount	Tax	Total	First Name	Last Name	Mobile	Zipcode	Status	Order Date	Details
128	\$24.00	\$0.00	\$5.04	\$29.04	Md.	Ibne	Sina	01670632145	9100	delivered	2023-11-12 03:49:26
124	\$35.00	\$0.00	\$7.35	\$42.35	Md.	Ibne	Sina	01670632145	9100	canceled	2023-11-04 17:31:27
123	\$15.00	\$0.00	\$3.15	\$18.15	Md.	Ibne	Sina	01670632145	9100	delivered	2023-11-04 17:26:07
122	\$25.00	\$0.00	\$5.25	\$30.25	Md.	Ibne	Sina	01670632145	9100	delivered	2023-11-04 17:02:11
121	\$15.00	\$0.00	\$3.15	\$18.15	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:59:03
119	\$25.00	\$0.00	\$5.25	\$30.25	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:57:57
118	\$25.00	\$0.00	\$5.25	\$30.25	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:45:27
117	\$25.00	\$0.00	\$5.25	\$30.25	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:38:26
116	\$10.00	\$0.00	\$2.10	\$12.10	Md.	Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:37:13

Figure 3.1: Shows Dashboard (activities) of admin and customer

3.2 Software Development Lifestyle Model

As it was our first time developing a system, we decided to choose a basic SDLC model. After discussing the pros and cons of different SDLC models we selected the Waterfall SDLC model for our system. Waterfall is the oldest and most straightforward of the structured SDLC methodologies finish one phase, then move on to the next. Each stage relies on information from the previous stage and has its own project plan. Waterfall is easy to understand and simple to manage. We tried to maintain the model throughout our system development, completing one phase, documenting everything, and move to the next phase. But we had to go back sometime and re-implement some steps which happened due to our lack of experience in system development.

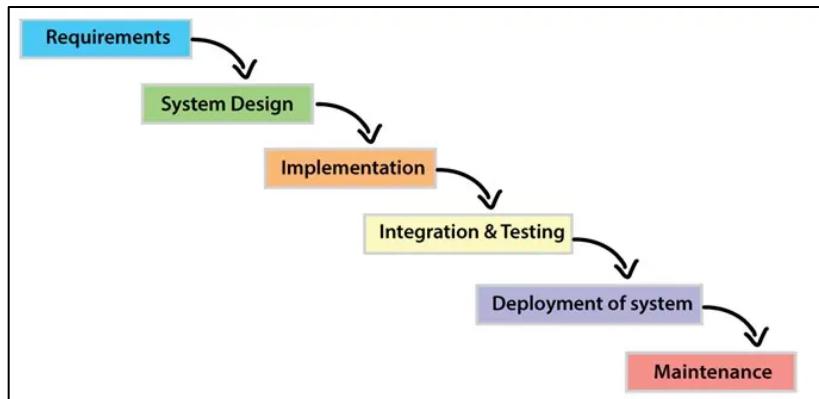


Figure 3.2: Software Development Life Cycle (Water Fall model)

3.2.1 Requirement Analysis

In a real-life environment, we usually get the requirements from clients. But in this project, we had no client, so we took another approach. We studied some works and discussed what should be done according to today's demand. We tried to find out what features for an e-commerce website are a must, what limitations they faced, what kind of technology is used etc. Together with this knowledge and our ideas we tried to make a requirement list for the project. Then we took public opinion, which was done on a small scale.

3.2.2 System Design

After the initial requirements were set, it was time for the System Design phase. Using the data flow diagrams and class diagrams, we designed the system.

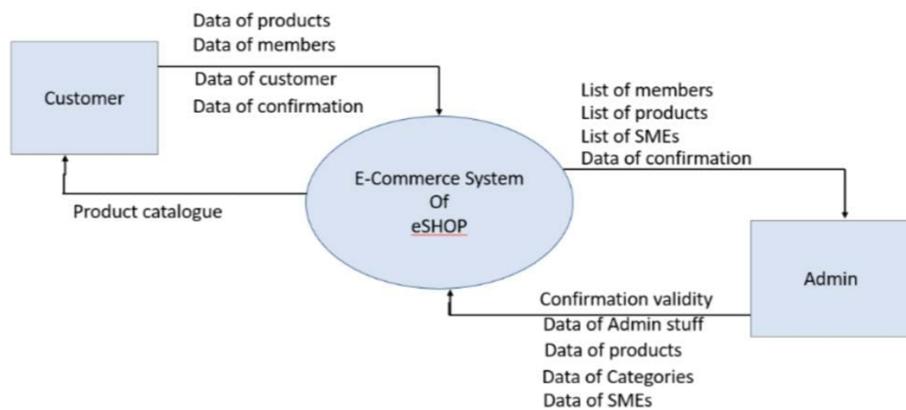


Figure 3.2.2: Context Level Data Flow Diagram with primary components

3.2.3 Implementation

The most time-consuming phase of the development was implementation. Everything that has been designed so far was implemented in this phase. The different parts of the system that could be made independently were worked on simultaneously.

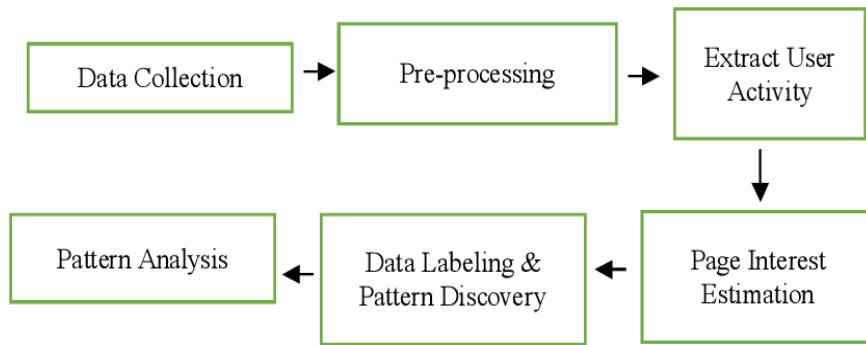


Figure 3.2.3: Methodology of implementation

3.2.4 Testing

After the implementation phase, the whole system was tested in different scenario by using android testing module. Few simulations of the whole system were done by some beta tester to ensure the system works accurately in all different cases.

3.3 System Architecture

The architectural model used in the system is Three-Tier Architectural Model. Three tier architecture is a well-established software application architecture that organizes applications into three logical and physical computing tiers: the presentation tier, or user interface; the application tier, where data is processed; and the data tier, where the data associated with the application is stored and managed. The chief benefit of the three-tier architecture is that because each tier runs on its infrastructure, each tier can be developed simultaneously by a separate development team, and can be updated or scaled as needed without impacting the other tier.

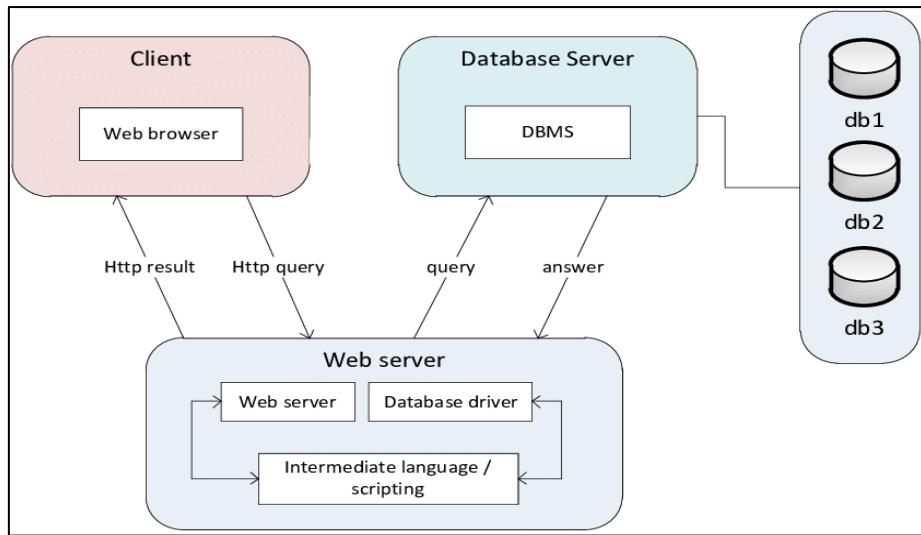


Figure 3.3: Three tier Architecture

3.4 Summary of Used Tools and Technologies

- **PHP Laravel:** it follows the Model-View-Controller (MVC) architectural pattern. Laravel provides an elegant syntax and a set of tools for tasks commonly needed in modern web development.
- **XAMPP:** it is a free and open-source cross-platform web server solution stack package developed by Apache Friends
- **phpMyAdmin:** phpMyAdmin is a free and open-source web-based application written in PHP, designed to handle the administration of MySQL
- **HTML/CSS:** HTML is used for structuring the content on the web page, while CSS is used for styling and layout.
- **JavaScript:** It's an essential part of web development and is supported by all major browsers
- **MySQL Database:** we used this database via phpMyAdmin.
- **Bootstrap:** for formatting purpose.
- **Twilio:** For sending notification via message.
- **Stripe:** a popular online payment processing platform
- **Mailtrap:** for sending confirmation mail.

4 Project Implementation

4.1 Static Model: Class Diagram or ER Diagram

The classes and their relationships are shown in below class diagram:

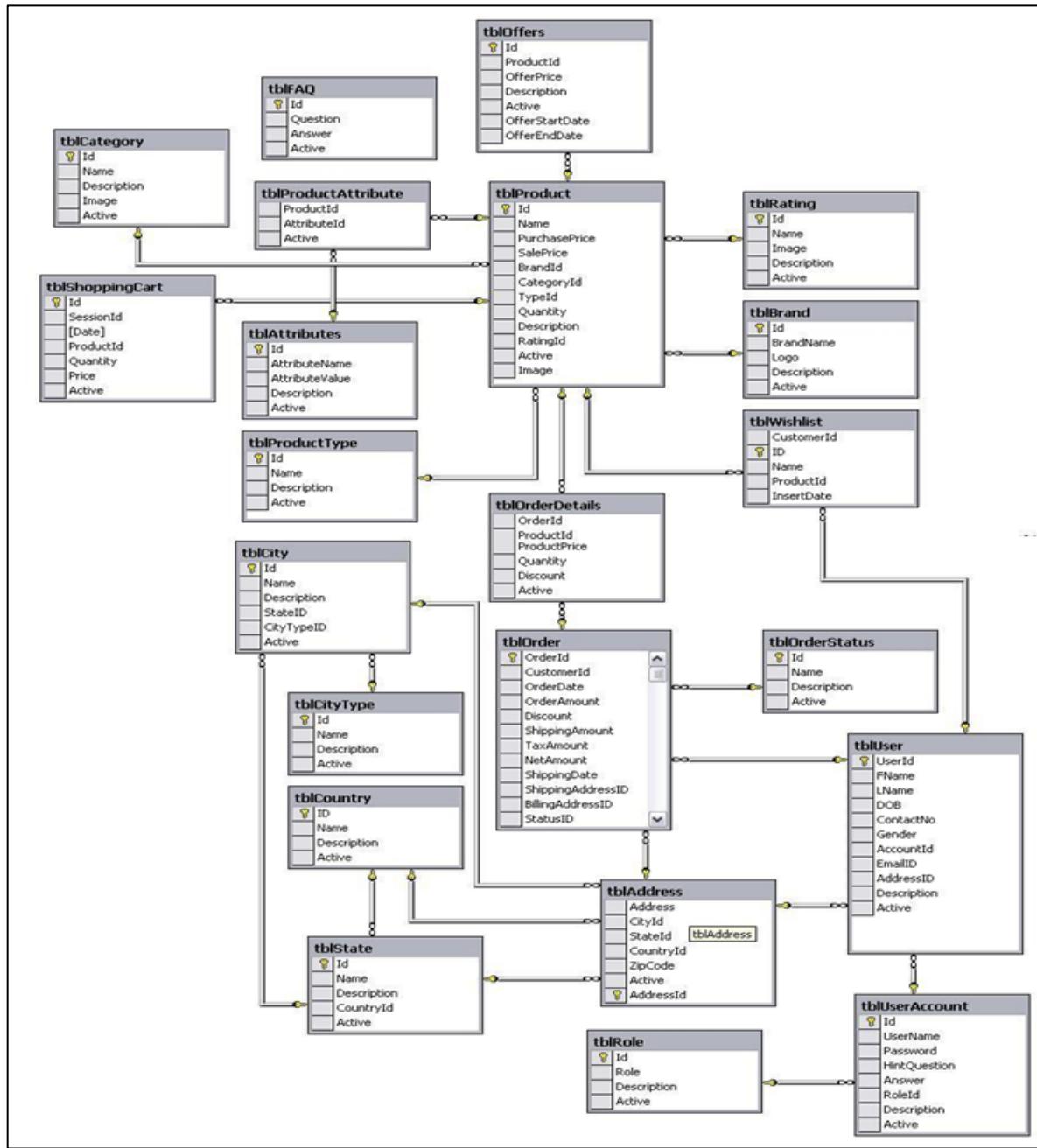


Figure 4.1: ER Diagram

4.2 Dynamic Model: Flow Diagram

The flow of the system is shown using the flowchart diagram:

4.2.1 Admin Flow Diagram

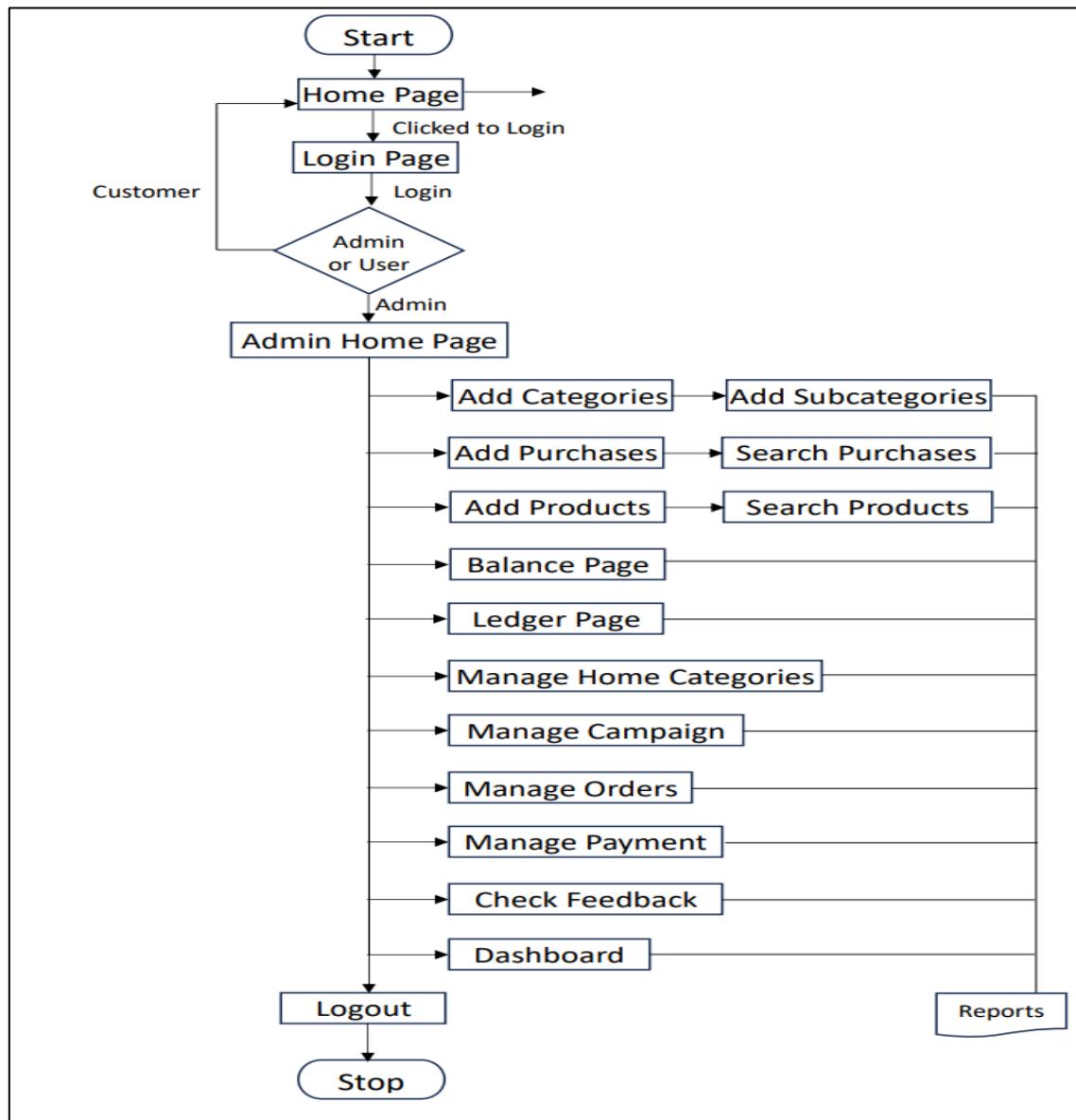


Figure-4.2.1: Admin Flow Diagram

4.2.2 User Flow Diagram

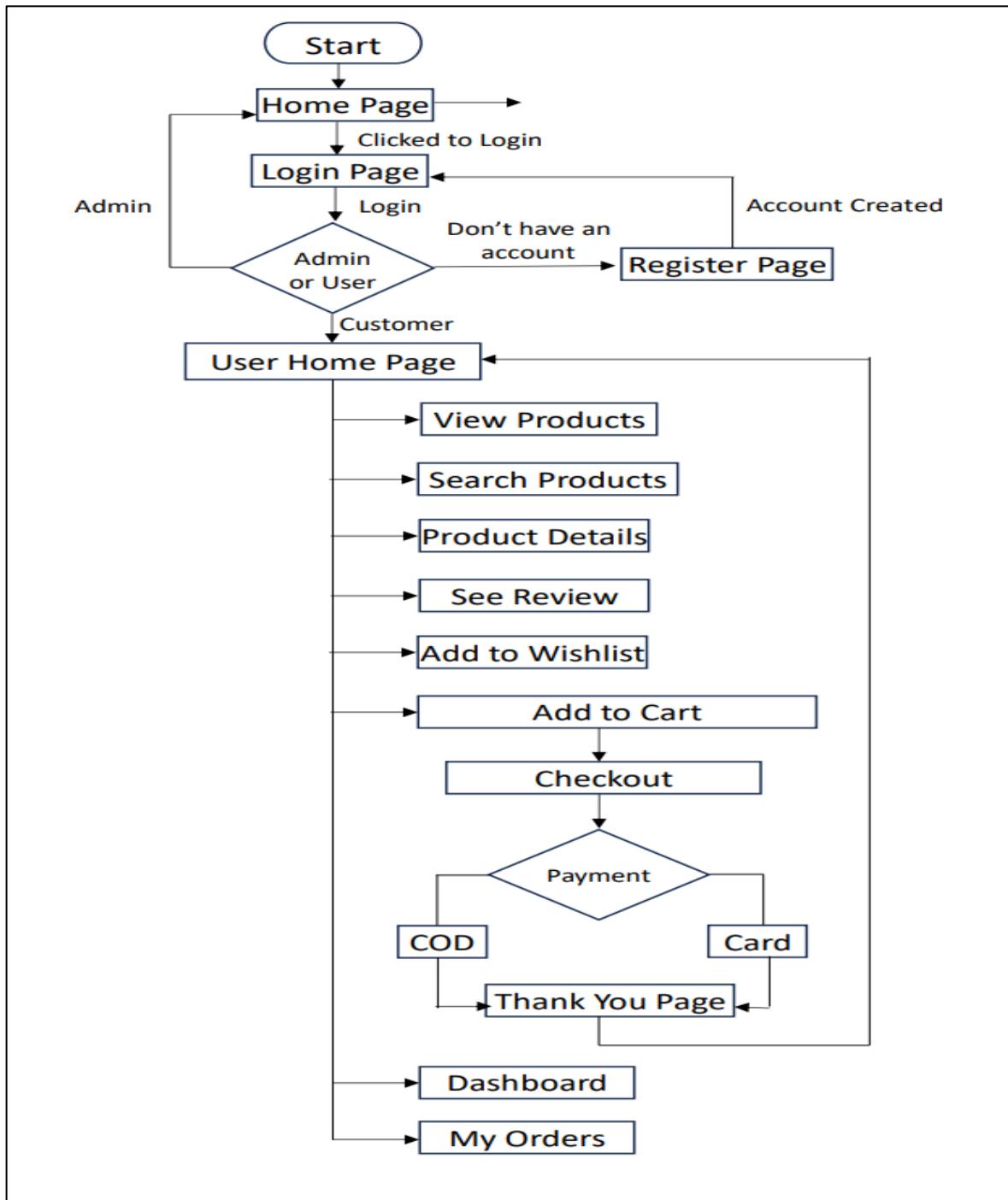


Figure 4.2.2: User Flow diagram

5 User Interface (UI) Design

5.1 Admin Panel

5.1.1 How to become an Admin

Firstly, we have to go to the Sign Up/ Register page. After filling all the necessary information (i.e. name, email & password), he has to click the “Register” button. Then the admin has to contact with the developer to make him an Admin.

The screenshot shows a registration form titled "CREATE AN ACCOUNT". The fields are as follows:

- Name*: Input field containing "Admin".
- Email Address*: Input field containing "support@admin.com".
- Password *: Input field showing ".....".
- Confirm Password *: Input field showing ".....".
- Register: A dark blue button at the bottom.

Figure 5.1.1: Admin's Sign-Up Process

As it a single vendor e-commerce shop, so the developer would set the user-type manually as “ADM”. For rest of the sign-ups, the user-type will be “USR” which is considered as User/Customer.



Figure 5.1.2: Schematic diagram of “user_type” column (on Users table)

5.1.2 Admin's Login and Role Checking

After Login, the admin can identify himself as admin from the top right corner.

The image shows a login form titled "LOG IN TO YOUR ACCOUNT". It has fields for "Email Address" containing "support@admin.com" and "Password" containing ".....". There is a "Remember me" checkbox and a "Forgotten password?" link. A large "Login" button is at the bottom.

Figure 6.1.3: Admin's Login Process

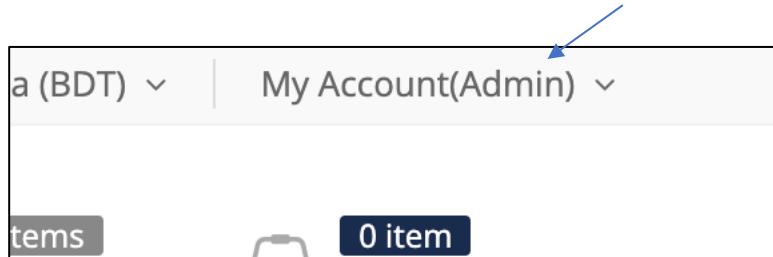


Figure 6.1.4: Admin's Role Checking

5.2 Admin Features

5.2.1 Purchase products

Admin can purchase products from different seller at a price manage purchase details then fixed a different price for the products and showcase the products in the website category wise.

Add New Purchase

All Products

Products	Select Product
Product Name	Yellow T-shirt
SKU	ts5
Price	200
Quantity	15
Category	Men's Fashion
Category ID	2

Submit

Figure 5.3.1: Admin purchase products

5.2.2 Purchase Table

Admin maintains a purchase table with all the information of the products like price, no of products (stock) and so on.

All Products

Add New

Search...

Voucher No.	Name	SKU	Quantity	Price (\$)	Category	Date
72	STYLISH EXCLUSIVE DRESS SET	kd5	5	100	Kid's Zone	2023-11-11 16:43:36
71	(T-SHIRT & HALF PANT)	kd4	5	100	Kid's Zone	2023-11-11 16:41:50
70	Cute fashionable baby frock	kd3	5	100	Kid's Zone	2023-11-11 16:40:02
69	Baby & girls By Dream World	kd2	4	100	Kid's Zone	2023-11-11 16:38:49
68	Tulle Party Formal Dress	kd1	4	100	Kid's Zone	2023-11-11 16:35:50
67	Super Bass In Ear Earphones	hp2	20	100	Gadgets	2023-11-11 16:33:12
66	C Super Bass Earphone	hp1	20	100	Gadgets	2023-11-11 16:31:04
65	Dual Mini Wireless 4.1 Bluetooth	mb2	20	700	Gadgets	2023-11-11 16:29:00
64	M10 TWS Earphone 9D	mb1	15	700	Gadgets	2023-11-11 16:24:33
63	Realme C55 - (6GB/128GB)	m3	5	500	Mobile & Laptop	2023-11-11 16:21:03

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Showing 1 to 10 of 32 results

< 1 2 3 4 >

Figure 5.3.2: Admin purchase table

5.2.3 *Ledger Table*

- If Admin Purchase products, it will be added in the Debit section.
- If Customer buy any product, it will be added in the credit section.

Products Ledger							
Memo No.	Description	SKU	Category	Debit	Credit	Balance	Date
11	Tussore Silk Saree purchased	a14	Women's Fashion	20		20	2023-11-04 15:26:35
12	Tussore Silk Saree purchased	a14	Women's Fashion	5		25	2023-11-04 15:34:23
14	Tussore Silk Saree sold	a14	Women's Fashion		1	24	2023-11-04 17:02:11
15	Tussore Silk Saree sold	a14	Women's Fashion		1	23	2023-11-04 17:26:07
16	Long Sleeve T-Shirt purchased	a15	Men's Fashion	10		10	2023-11-04 17:30:23
17	Long Sleeve T-Shirt sold	a15	Men's Fashion		2	8	2023-11-04 17:31:27
18	Tussore Silk Saree sold	a14	Women's Fashion		1	22	2023-11-04 17:31:27
19	Pink Script T-Shirt purchased	a50	Women's Fashion	7		7	2023-11-04 19:53:53
20	Pink Script T-Shirt sold	a50	Women's Fashion		1	6	2023-11-11 07:24:00
21	Pink Script T-Shirt sold	a50	Women's Fashion		1	5	2023-11-11 07:32:31

Figure 5.3.3: Admin Ledger table

5.2.4 *Balance Table*

- If Admin Purchase products, it will be added with its Amount and Rate.
- If Customer buy any product, the balance will be decreased.

Products Balance					
Serial No.	Name	SKU	Category	Amount	Rate (\$)
11	Tussore Silk Saree	a14	Women's Fashion	22	12.00
12	Long Sleeve T-Shirt	a15	Men's Fashion	8	5.00
13	Pink Script T-Shirt	a50	Women's Fashion	5	7.14
14	Embroidered Muslin Saree	s1	Women's Fashion	15	13.33
15	Endi Silk Saree	s2	Women's Fashion	10	15.00
16	Purple Nakshi Kantha	s3	Women's Fashion	12	12.50
17	Viscose Shalwar Kameez	sc1	Women's Fashion	12	15.00

Figure 5.3.4: Admin Balance table

5.2.5 Add Categories & sub-categories

Admin can add, edit and delete Categories and Subcategories.

Add New Category

Category Name: Sharee

Category Slug: sharee

Parent Category: Women's Fashion

Submit

All Categories

Figure 5.3.5: Admin add Category & Subcategory Page

Add New Category					Add New
Id	Category Name	Slug	Subcategory	Action	
1	Women's Fashion	womens-fashion	►Sharee <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Salwar Kamiz <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Kurti <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Tops <input checked="" type="checkbox"/> <input type="button" value="X"/>	<input type="button" value="Edit"/> <input type="button" value="Delete"/>	
2	Men's Fashion	mens-fashion	►Panjabi <input checked="" type="checkbox"/> <input type="button" value="X"/> ►T-shirt <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Shirt <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Pants <input checked="" type="checkbox"/> <input type="button" value="X"/>	<input type="button" value="Edit"/> <input type="button" value="Delete"/>	
3	Kid's Zone	kids-zone	►Boys <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Girls <input checked="" type="checkbox"/> <input type="button" value="X"/>	<input type="button" value="Edit"/> <input type="button" value="Delete"/>	
4	Electronics	electronics	►Rice Cooker <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Iron <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Electric Kettle <input checked="" type="checkbox"/> <input type="button" value="X"/>	<input type="button" value="Edit"/> <input type="button" value="Delete"/>	
5	Mobile & Laptop	mobile-laptop	►Mobile <input checked="" type="checkbox"/> <input type="button" value="X"/> ►Laptop <input checked="" type="checkbox"/> <input type="button" value="X"/>	<input type="button" value="Edit"/> <input type="button" value="Delete"/>	

« Previous Showing 1 to 5 of 13 results

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Figure 5.3.6: All Categories and Subcategories Page

			id	name	slug	category_id	created_at	updated_at
<input type="checkbox"/>	 Edit	 Copy	 Delete	2 Lipstick	lipstick	16	2023-11-10 00:00:34	2023-11-11 05:32:18
<input type="checkbox"/>	 Edit	 Copy	 Delete	3 Eye Liner	eye-liner	16	2023-11-10 00:45:20	2023-11-11 05:32:38
<input type="checkbox"/>	 Edit	 Copy	 Delete	4 Sharee	sharee	1	2023-11-10 00:46:08	2023-11-11 05:32:48
<input type="checkbox"/>	 Edit	 Copy	 Delete	5 Salwar Kamiz	salwar-kamiz	1	2023-11-10 00:47:09	2023-11-11 05:32:59
<input type="checkbox"/>	 Edit	 Copy	 Delete	7 Kurti	kurti	1	2023-11-11 15:10:40	2023-11-11 15:10:40

Figure-5.2.7: “category” table on database

			id	name	slug	created_at	updated_at
<input type="checkbox"/>	 Edit	 Copy	 Delete	1 Women's Fashion	womens-fashion	2023-09-09 12:22:42	2023-09-09 12:22:42
<input type="checkbox"/>	 Edit	 Copy	 Delete	2 Men's Fashion	mens-fashion	2023-09-09 13:35:58	2023-09-09 13:35:58
<input type="checkbox"/>	 Edit	 Copy	 Delete	3 Kid's Zone	kids-zone	2023-09-09 13:36:14	2023-09-09 13:36:14
<input type="checkbox"/>	 Edit	 Copy	 Delete	4 Electronics	electronics	2023-09-09 13:36:31	2023-09-09 13:36:31

Figure 5.3.8: “subcategory” table on database

5.2.6 Manage Home Categories

Admin can manage which categories will be shown in the home page.

Manage Home Categories

Choose Categories	<input type="text" value="Women's Fashion"/> <input type="text" value="Men's Fashion"/> <input type="text" value="Kid's Zone"/> <input type="text" value="Electronics"/> <input type="text" value="Mobile & Laptop"/> <input type="text" value="Mother & Baby"/> <input type="text" value="Gadgets"/> <input type="text" value="Makeup Kits"/>
No. of Products	<input type="text" value="8"/>
Save	

Figure 5.3.9: Manage Home categories

5.2.7 Add Products

Admin can add only the products those are purchased. Also, can update product details and delete products.

All Products								
	Add New	Search...						
ID	Image	Name	Stock	Price (\$)	Sale Price (\$)	Category	Date	Action
38		STYLISH EXCLUSIVE DRESS SET	instock	50.00	0.00	Kid's Zone	2023-11-11 16:44:16	 
37		(T-SHIRT & HALF PANT)	instock	40.00	35.00	Kid's Zone	2023-11-11 16:42:58	 
36		Cute fashionable baby frock	instock	30.00		Kid's Zone	2023-11-11 16:41:04	 
35		Baby & girls By Dream World	instock	30.00		Kid's Zone	2023-11-11 16:39:21	 
34		Tulle Party Formal Dress	instock	40.00	35.00	Kid's Zone	2023-11-11 16:37:35	 
33		Super Bass In Ear Earphones	instock	10.00		Gadgets	2023-11-11 16:33:56	 
32		C Super Bass Earphone	instock	10.00		Gadgets	2023-11-11 16:32:03	 
31		Dual Mini Wireless 4.1 Bluetooth	instock	30.00		Gadgets	2023-11-11 16:29:37	 
30		M10 TWS Earphone 9D	instock	70.00	60.00	Gadgets	2023-11-11 16:25:22	 
29		Realme C55 - (6GB/128GB)	instock	120.00	0.00	Mobile & Laptop	2023-11-11 16:22:18	 
« Previous		Next »	Showing 1 to 10 of 28 results					
	1	2	3					

Figure 5 .3.10: Add Product page

Add New Product All Products

Products	STYLISH EXCLUSIVE DRESS SET
Product ID	stylish-exclusive-dress-set
Short Description	CASUAL STYLISH EXCLUSIVE DRESS SET (T-SHIRT & HALF PANT)
Description	HALF PANT), CASUAL STYLISH EXCLUSIVE DRESS SET (T-SHIRT & HALF PANT).
Regular Price	50.00
Sale Price	Sale Price
SKU	kd5
Stock	In Stock
Featured	No
Quantity	5
Product Image	<input type="button" value="Choose file"/> 1699721056.png 
Category	Kid's Zone
Sub Category	Boys
Submit	

Figure 5.3.11: Details of product stored

5.2.8 Manage Campaign

Admin can set duration for campaign and set discount on specific product items.

Sale Setting

Status	Active
Sale Date	2023-11-23 10:30:00
Update	

Figure 5.3.12: Manage Campaign

5.2.9 Manage orders

Admin manages all order information. Keep track of each order.

- If a placed order successfully delivered then admin changes its status to “delivered”
- If a placed order is cancelled by customer, then the status is “cancelled”.

Also, there is order details page for each order.

The screenshot shows a table titled 'All Orders' with columns: OrderId, Subtotal, Discount, Tax, Total, First Name, Last Name, Mobile, Zipcode, Status, Order Date, and Action. There are five rows of data. To the right, a callout box labeled 'Status of a order' points to a zoomed-in view of the 'Status' column's dropdown menu. The menu has two options: 'Delivered' and 'Canceled'.

All Orders											
OrderId	Subtotal	Discount	Tax	Total	First Name	Last Name	Mobile	Zipcode	Status	Order Date	Action
128	৳24.00	৳0.00	৳5.04	৳29.04	Md. Ibne	Sina	01670632145	9100	delivered	2023-11-12 03:49:26	<button>Details</button> <button>Status</button>
127	৳12.00	৳0.00	৳2.52	৳14.52	Md. Ibne	Sina	01670632145	9100	delivered	2023-11-12 03:33:21	<button>Details</button> <button>Status</button>
126	৳12.00	৳0.00	৳2.52	৳14.52	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-11 07:32:31	<button>Details</button> <button>Status</button>
125	৳12.00	৳0.00	৳2.52	৳14.52	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-11 07:24:00	<button>Details</button> <button>Status</button>
124	৳35.00	৳0.00	৳7.35	৳42.35	Md. Ibne	Sina	01670632145	9100	canceled	2023-11-04 17:31:27	<button>Details</button> <button>Status</button>

Figure 5.3.8: List of orders

The screenshot shows the 'Order Details' page for Order ID 128. It includes sections for 'Order Details', 'Ordered Items', 'Order Summary', 'Billing Details', and 'Transaction Details'. The 'Ordered Items' section shows a product named 'Edition T Shirt -Youniverse' with a price of ৳12.00 and quantity 2. The 'Order Summary' section shows the breakdown of costs: Subtotal ৳24.00, Tax ৳5.04, Free Shipping, and Total ৳29.04. The 'Billing Details' section lists the buyer's information: First Name (Md. Ibne), Last Name (Sina), Phone (Md. Ibne), Email (ibnesina13@gmail.com), Address (KUET, Khulna), Province (Khulna), Zipcode (9100). The 'Transaction Details' section shows the mode (cod), status (pending), and date (2023-11-12 03:49:26).

Figure 5.3.8: Order details page

5.2.10 Manage Payment

We implemented two payment method.

Cash on Delivery

Customer can order a product and pay after getting their ordered product. This ensures a secured payment method.

Card payment

Card payment method is implemented using Stripe Payment Method. This also ensures a secured payment method.

The screenshot shows a payment options interface. On the left, under 'PAYMENT METHOD', there is a list with 'Credit Card (saved)' at the top, followed by two empty checkboxes for 'Cash on Delivery' and 'Debit / Credit Card'. Below this is a line of text 'Total : ট 24.20'. At the bottom is a dark blue button labeled 'Place order now'. On the right, under 'SHIPPING METHOD', it shows 'Flat Rate' with 'Fixed ৳ 0.00' below it. The entire interface is contained within a light gray rectangular frame.

Figure 5.3.8: Payment options

The screenshot shows the Stripe Payment Method interface. It features a green header bar with the text 'Pay with link' and a right-pointing arrow. Below this is a section labeled 'Or pay with card'. It includes fields for 'Email' (ibnesina13@gmail.com), 'Card information' (a card number ending in 4242, with a VISA logo and a lock icon), 'Cardholder name' (Md. Ibne Sina), and 'Country or region' (Bangladesh). There is also a checkbox for 'Securely save my information for 1-click checkout' with the note 'Pay faster on Md. Ibne Sina and everywhere Link is accepted.' At the bottom is a large blue 'Pay' button with a lock icon. The footer includes links for 'Powered by stripe', 'Terms', and 'Privacy'.

Figure 5.3.8: Stripe Payment Method

5.2.11 Check feedback

If any customer gives any feedback through review or contact with the admin for any type of question or query or giving feedback, Admin can check all of these feedbacks.

<input type="checkbox"/>	Edit Copy Delete	4	Md. Ibne Sina	ibnesina13@gmail.com	01670632145	Having some trouble on ordering! Can you please so...	2023-11-10 19:21:38 2023-11-10 19:21:38

Figure 5.3.8: Feedback of customers

Customer can write Reviews on Delivered Products so that they can share their experience with the product.

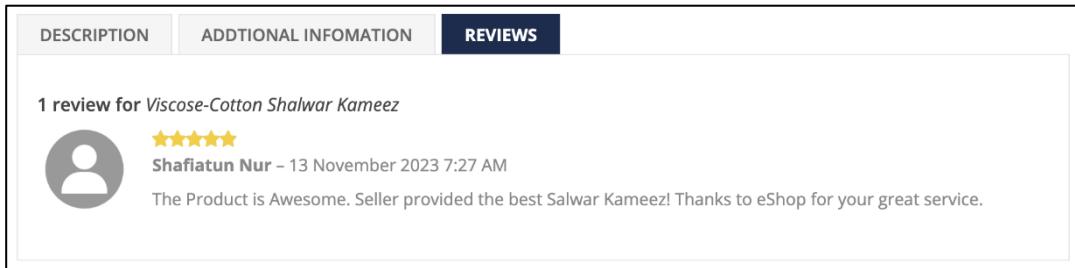
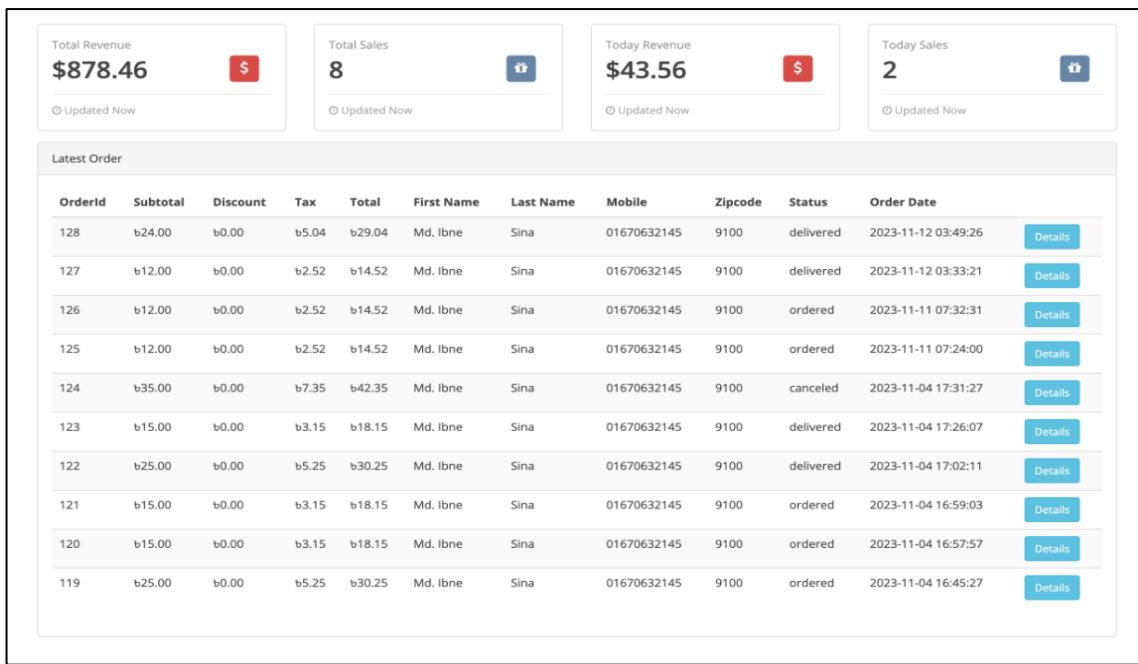


Figure 5.3.8: Customer's review is shown

5.2.12 Admin Dashboard

Admin's overall activities are shown here. Admin can see Total Revenue, Total Sales, Daily Revenue and Daily Sales from here. This helps admin to keep track of all products, stock, revenue and thus he can take decision easily which product is to buy and which to sell at which price.

**Figure 5.3.8:** Admin's Dashboard

5.3 User Panel

5.3.1 How to be a user?

A new user can create his/her account using his name, e-mail address and a password. We have made this process easy so that people don't feel it a lengthy process.

The form is titled "CREATE AN ACCOUNT". It contains the following fields:

- Name*: Input field containing "Shimu".
- Email Address*: Input field containing "shimu@gmail.com".
- Password *: Input field showing five asterisks ("*****").
- Confirm Password *: Input field showing five asterisks ("*****").
- Register**: A dark blue button at the bottom.

Figure 5.1.1: User's Sign-Up Process

As it a single vendor e-commerce shop, so the developer would set the user-type manually as “ADM”. For rest of the sign-ups, the user-type will be “USR” which is considered as User/Customer.

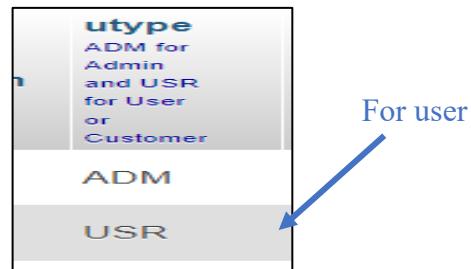


Figure 5.1.2: Schematic diagram of “user_type” column (on Users table)

5.3.2 User login

Existing users can Login from here by providing Email & Password. If a user doesn't log into his account, he can get all the services except buying anything. To buy any product he/she must log into his account.

LOG IN TO YOUR ACCOUNT

Email Address:

Password:

Remember me [Forgotten password?](#)

Login

Figure 5.2: User login page

5.4 Home page

5.4.1 Header & Footer

Both header and footer are common features of all the pages. header contains a search-bar, Cart icon, Wish list icon. Footer contains necessary contact information.



Figure 5.2: Header

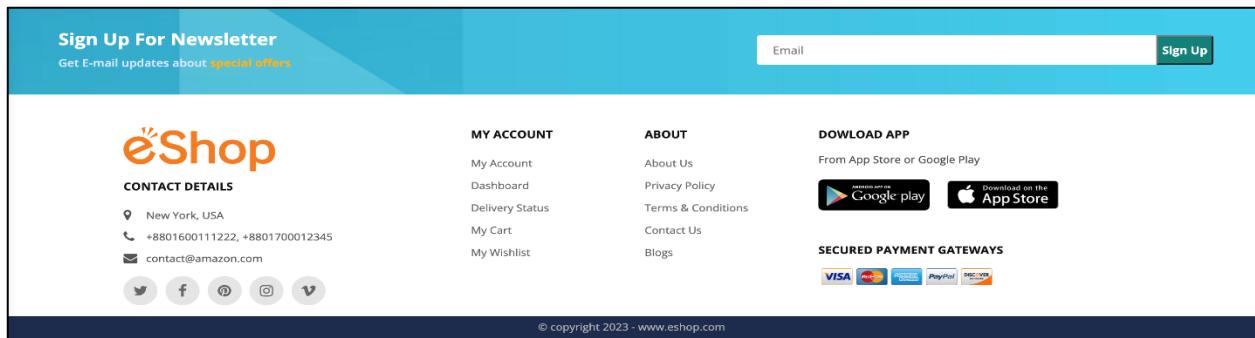


Figure 5.2: Footer

5.4.2 Categories

All categories are shown on left upper corner of the homepage.



Figure 5.2: Categories on left upper corner

5.4.3 Banners

Home page contains some banners for business purpose. Banners are responsive and slider.

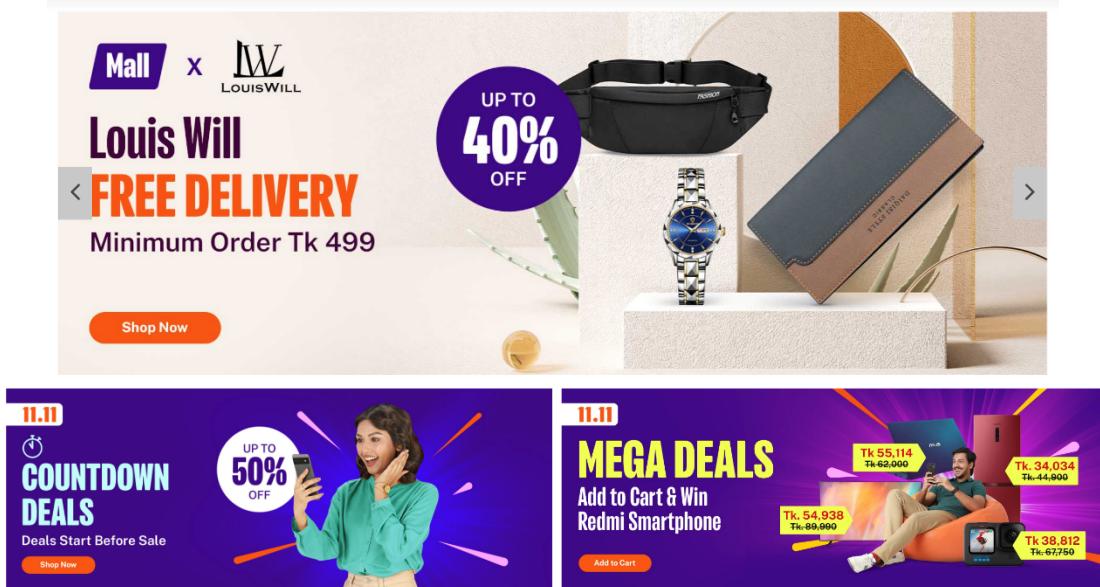


Figure 5.2: Some Banners

5.4.3 Featured Products

Some of the products are featured on the homepage.

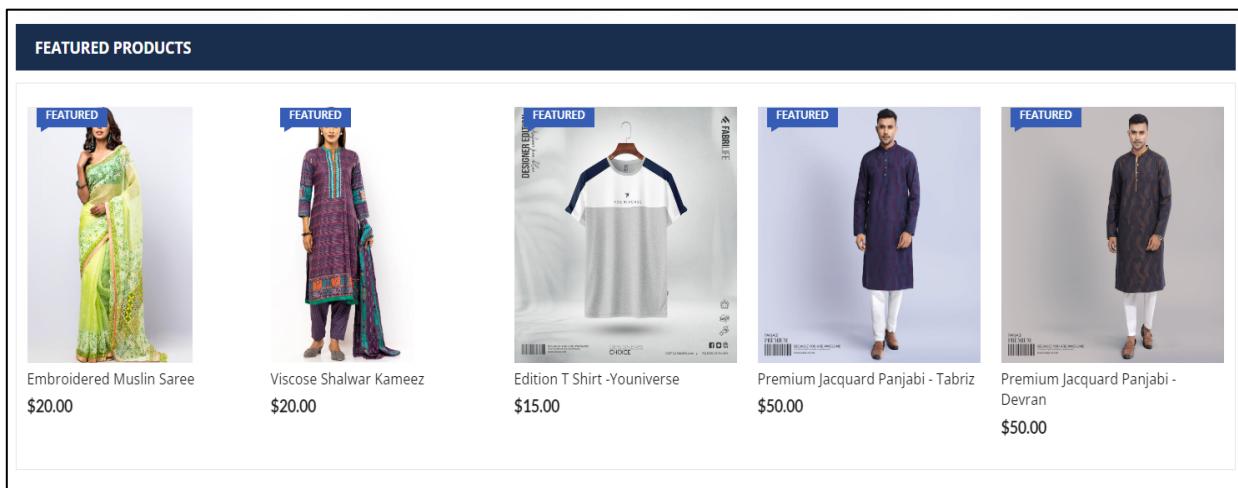


Figure 5.2: Featured Products

5.4.4 Discount Products

Sale duration set by admin and those products which are on sale displayed in this section.

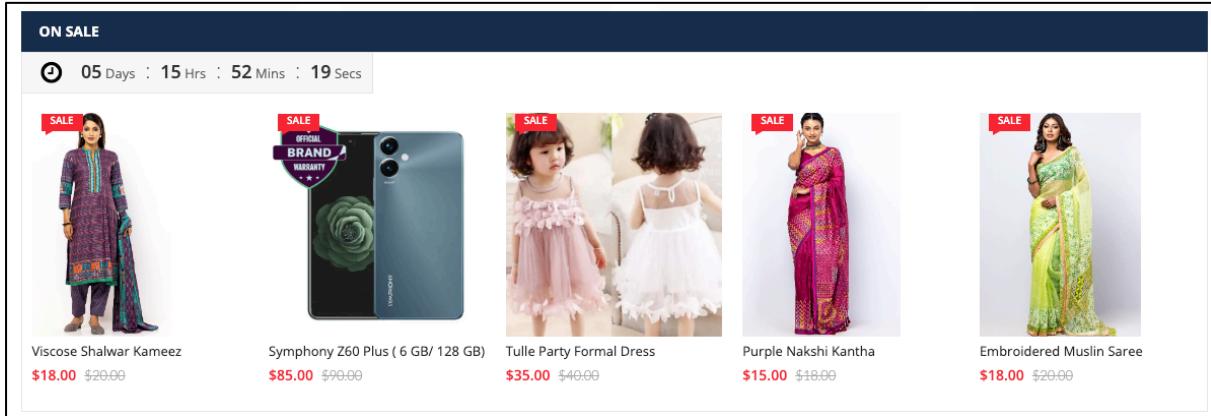


Figure 5.2: Discount Products

5.4.4 Latest Products

Newly arrived products are shown in this section.

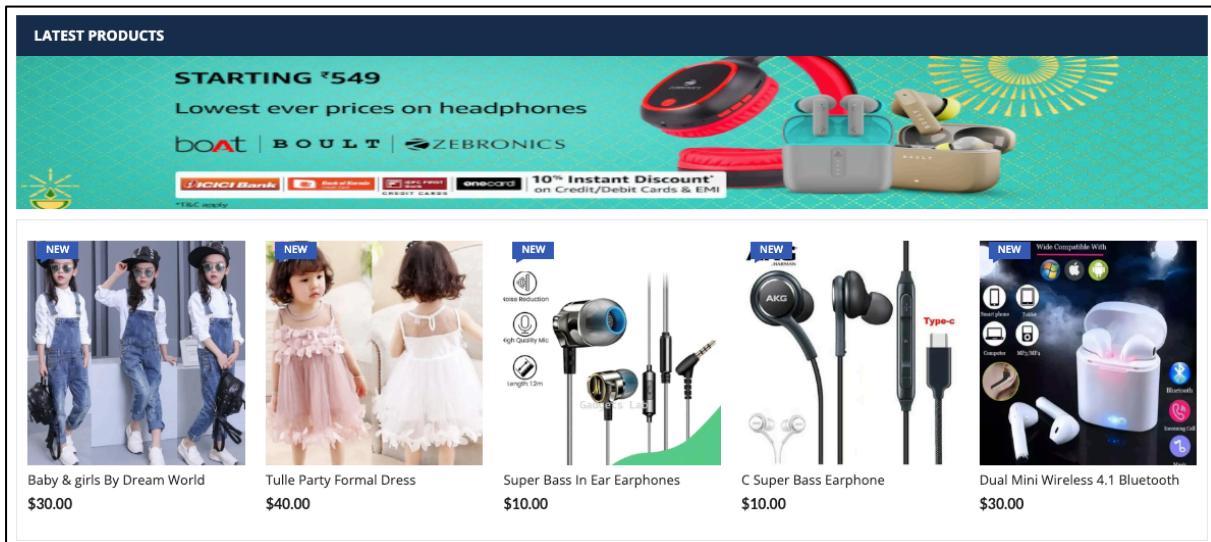


Figure 5.2: Latest Products

5.4.5 Category wise products

Category can be swapped and products of each category can be showed separately.

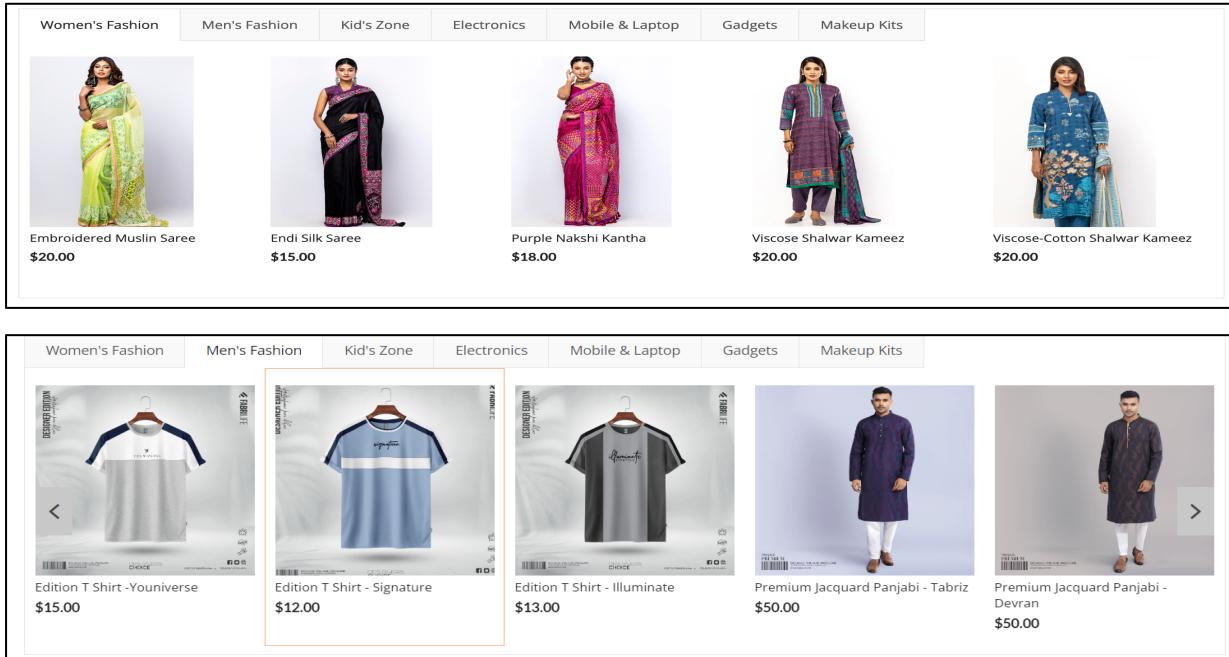


Figure 5.2: Category wise Products

5.5 Product Page

5.5.1 Sort products

Products can be sorted in 3 ways (sort by newness, sort by price- low to high, sort by price – high to low)

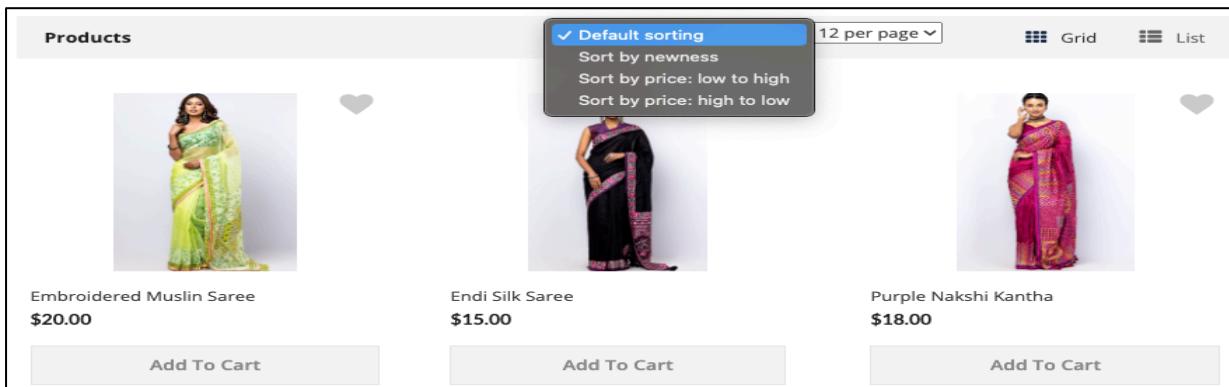


Figure 5.2: Sorting Products

5.5.2 Customize page size

Customers can customize the number of products that they want to see in a single page.

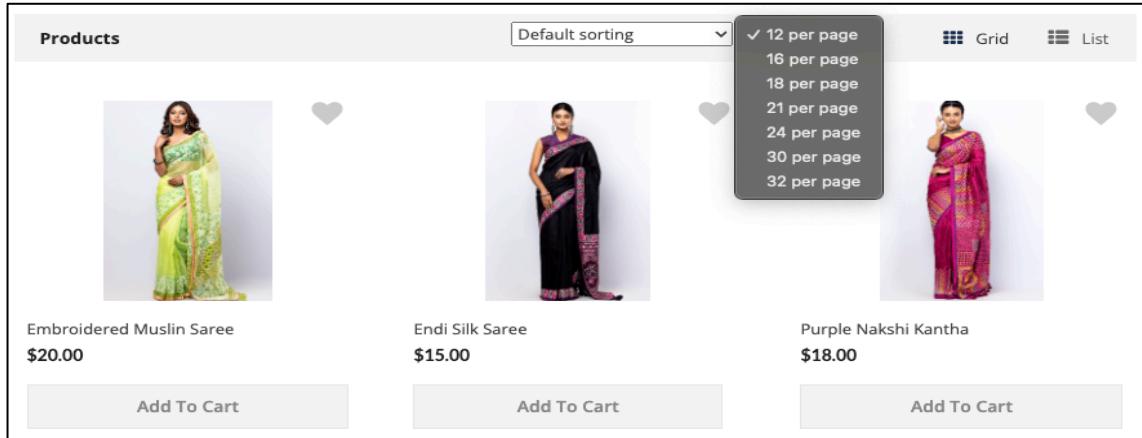


Figure-5.2: Customize no. of Products per page

5.5.3 Price range wise Filtering

Customers can filter the products according to price range.

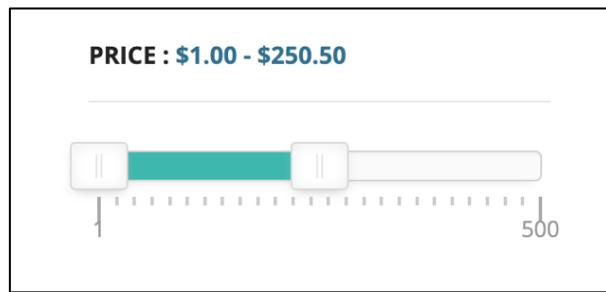


Figure 5.2: Filter products according to price range

5.5.4 Popular products

The popular products will be appeared in here under this banner.

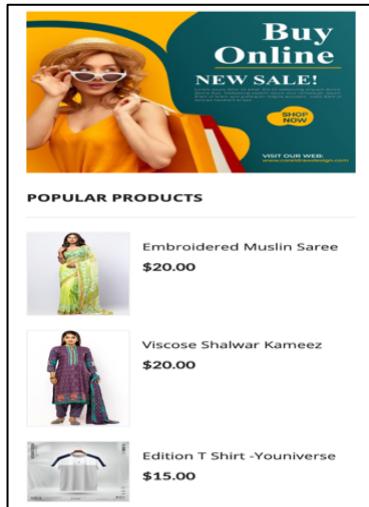


Figure 5.2: Popular products

5.5.4 Categories and Sub-Categories

We can search product according to category in two ways.
One on the left upper corner and other from search bar.

ALL CATEGORIES	
Women's Fashion	+
Men's Fashion	+
Kid's Zone	+
Electronics	+
Mobile & Laptop	+
Groceries	+
TV & Home Appliances	+
Watch, Bags & Jewellery	+
Home & Lifestyle	+
Sports & Outdoors	+
Mother & Baby	+
Gadgets	+
Makeup Kits	+

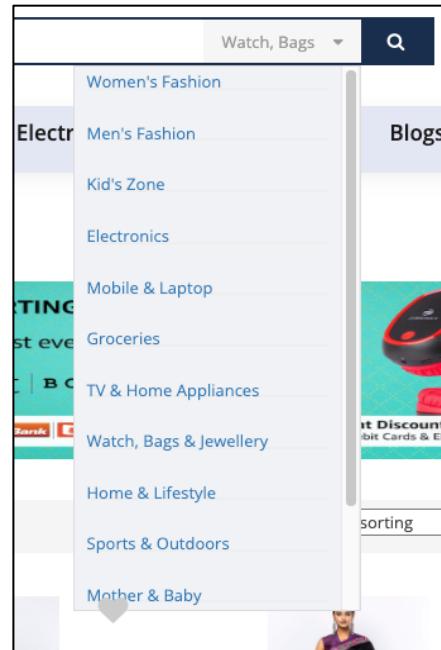


Figure 5.2: Categories and Subcategories

Figure 5.2: categories on search bar

5.5.4 Search Products

There are three ways to search products.

1. Category Wise
2. Sub Category Wise
3. Searching by product name

Figure 5.2: Categories wise product page

Figure 5.2: Sub-Categories wise product page

Figure 5.2: Products search by name

5.6 Product Details page

This page contains details of a product when customer clicks on that product.

5.6.1 *Details of clicked product*

This contains detailed information of a product such as more clear and larger image, price, short description, in stock or not, how many of that products customer wants to buy.

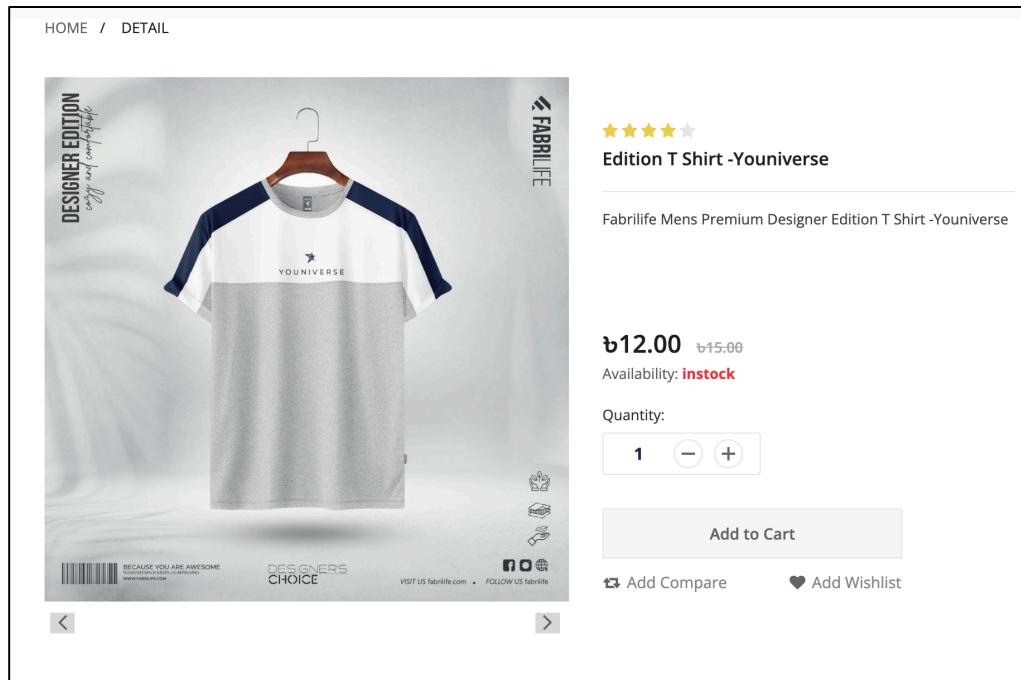


Figure-5.2: Product Image and Price

5.6.2 *Description*

Product code, name, quantity all are shown in table.

DESCRIPTION	ADDITIONAL INFORMATION	REVIEWS
Code :	ts1	
Name :	Edition T Shirt -Youniverse	
Category :	2	
Stock :	20	
Speciality :	Fabrilife Mens Premium Designer Edition T Shirt -Youniverse	

Figure-5.2: Product Description

5.6.3 Additional Information

Additional description of a product is shown here.

DESCRIPTION	ADDITIONAL INFOMATION	REVIEWS
	Fabrilife Mens Premium Quality t-shirt that offers a much smoother, silky feel and more structured, mid-weight fit than the regular t-shirts . The t-shirts are made with finest quality Combed Compact Cotton , features astonishing -175 GSM on just 26's cotton which gives a smooth and compact construction. The compact finish guarantees that the t-shirt length and width will not change over wash or months of usage. Detailed Specification: Organic Ringspun Combed Compact Cotton 100% Cotton Regular fit, Crew Neck Mid-weight, 5.16 oz/yd ² (~175GSM) Reactive Dye, enzyme and silicon washed Preshrunk to minimize shrinkage	

Figure 5.2: Product's Additional Information

5.6.3 Review

All the reviews added by customers are shown in this review section.

DESCRIPTION	ADDITIONAL INFOMATION	REVIEWS
		<p>1 review for Edition T Shirt -Youniverse</p>  <p>★★★★★ Ibne Sina - 12 November 2023 3:35 AM Very nice Product. But Price is high!</p>

Figure 5.2: Product Reviews

5.6.3 Related Products

All related products are shown in this section.

RELATED PRODUCTS				
 <p>NEW Edition T Shirt -Youniverse ₹15.00</p>	 <p>NEW Premium Jacquard Panjabi - Tabriz ₹50.00</p>	 <p>NEW Edition T Shirt - Illuminate ₹13.00</p>	 <p>NEW Premium Jacquard Panjabi - Ilhan ₹40.00</p>	 <p>NEW Premium Jacquard Panjabi - Devran ₹50.00</p>

Figure 5.2: Related Products

5.6.4 Popular products

Popular products are also shown in this section on left corner of the page.

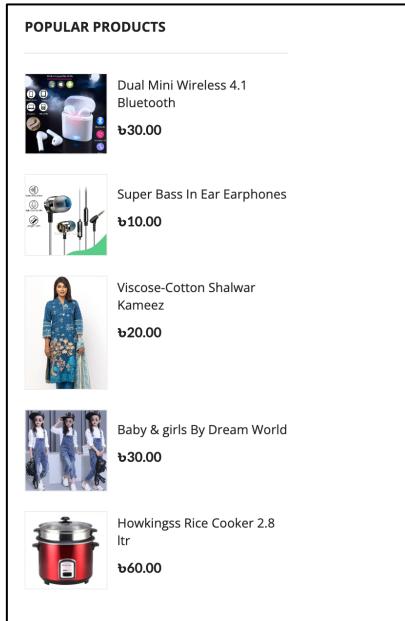


Figure 5.2: Popular Products

5.6.4 Displaying features

Displaying website features like free shipping, Special gift offer, order return in this section.

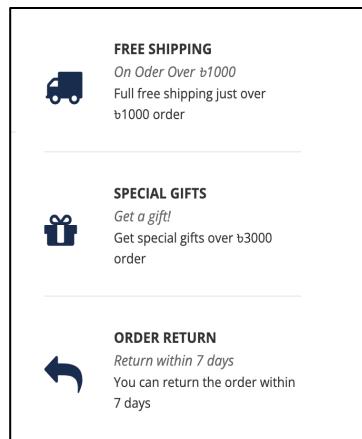


Figure 5.2: Website Features

5.7 Wish List Page

Product can be added to wish list to buy certain product later. Can be moved from wish list to Cart page by clicking “Move to Cart” button.



Figure 5.2: Add to Wishlist

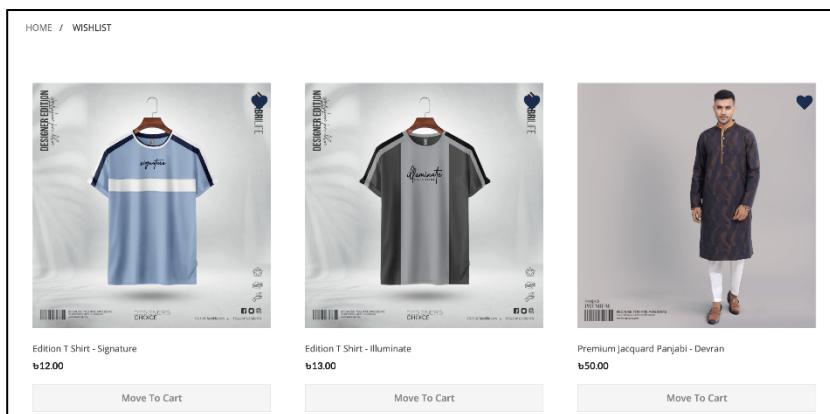


Figure 5.2: Wish list products

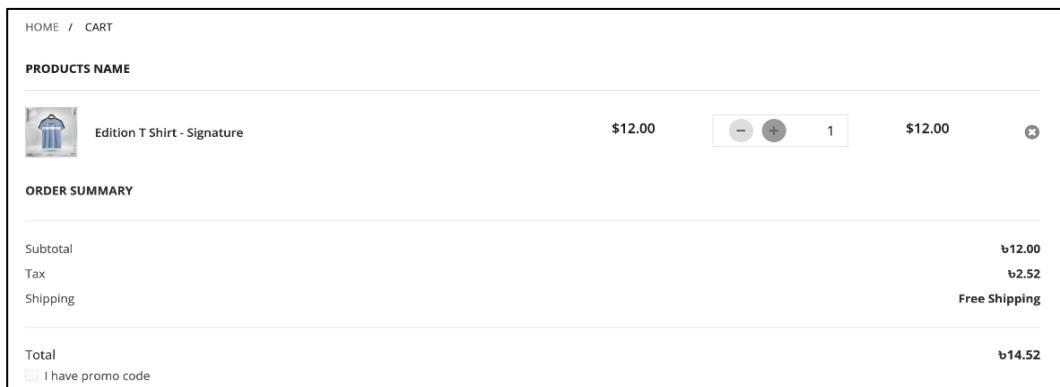


Figure 5.2: product added to cart page

5.8 Cart Page

All the products added to cart by customer can be seen here. This page shows the total amount of money including product price, vat and delivery charge.

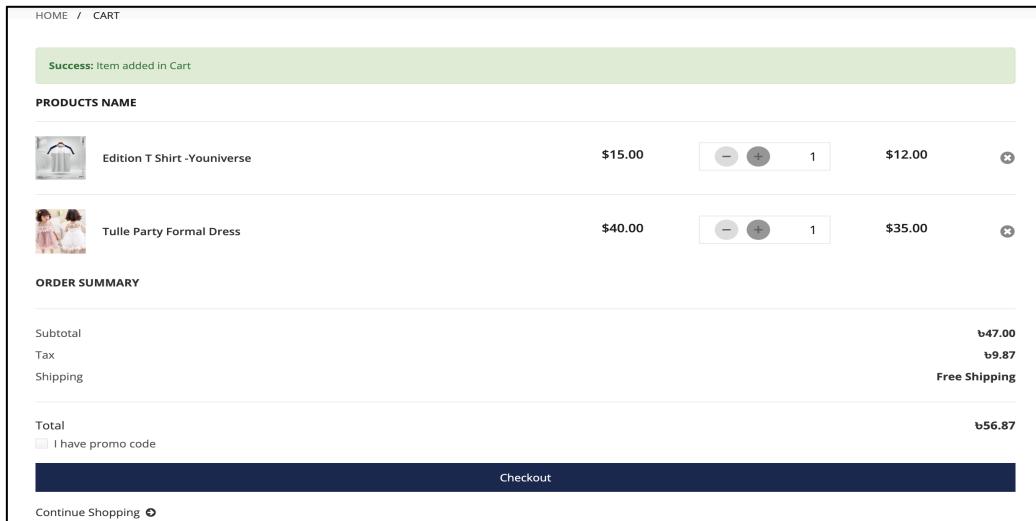


Figure 5.2: Cart Page

5.9 Check Out Page

After clicking checkout button, customer come to this page and provide necessary information and payment method are selected.

The screenshot shows a checkout form. At the top, there's a "BILLING ADDRESS" section with the following fields:

First name*	Last name*
Md. Ibne	Sina
Email Address:*	Phone number*
ibnesina13@gmail.com	01670632145
Address:*	Address Details:
KUET, Khulna	KUET, Khulna
Country*	Province*
Bangladesh	Khulna
Town / City*	Postcode / ZIP:*
Khulna	9100

Below the address fields is a checkbox for "Ship to a different address?".

At the bottom left is the "PAYMENT METHOD" section, which includes:

- Credit Card (saved)
- Cash on Delivery
- Debit / Credit Card
- Payment By Card

The "Total : \$ 42.35" is displayed below the payment methods.

At the bottom right is the "SHIPPING METHOD" section, which shows "Flat Rate Fixed to 0.00".

At the very bottom is a "Place order now" button.

Figure 5.2: Check out Page

5.10 Payment Page

If the customer selects the Card (Debit/Credit) payment method and click on “Place order now”, he/she will go to the Stripe payment method gateway.

The screenshot shows a payment method selection interface. On the left, under 'PAYMENT METHOD', there are three options: 'Credit Card (saved)', 'Cash on Delivery' (unchecked), and 'Debit / Credit Card' (checked). Below these is a note 'Payment By Card'. A total amount of 'Total : ট 42.35' is displayed. On the right, under 'SHIPPING METHOD', it shows 'Flat Rate' with a cost of 'Fixed ০ 0.00'. At the bottom is a dark blue button labeled 'Place order now'.

Figure 5.2: Payment Method Selection

After filling the card information, if the customer clicks on “Pay” button, the order will be completed.

The screenshot shows a Stripe payment gateway. At the top left is a back arrow, the name 'Md. Ibne Sina', and a 'TEST MODE' indicator. In the center, it displays 'Total Bill: \$42.35'. To the right, there's a green button labeled 'Pay with link' with a right-pointing arrow, followed by 'Or pay with card'. Below this are fields for 'Email' (ibnesina13@gmail.com), 'Card information' (a masked card number 4242 4242 4242 4242, expiration 12/28, and CVC 123), 'Cardholder name' (Md. Ibne Sina), 'Country or region' (Bangladesh), and a checkbox for 'Securely save my information for 1-click checkout' with the note 'Pay faster on Md. Ibne Sina and everywhere Link is accepted.' At the bottom is a large blue 'Pay' button with a lock icon.

Figure 5.2: Payment by Stripe Payment Gateway

5.11 Confirmation Mail and Message

After confirming the order, a confirmation SMS will be sent to the customer's mobile phone.

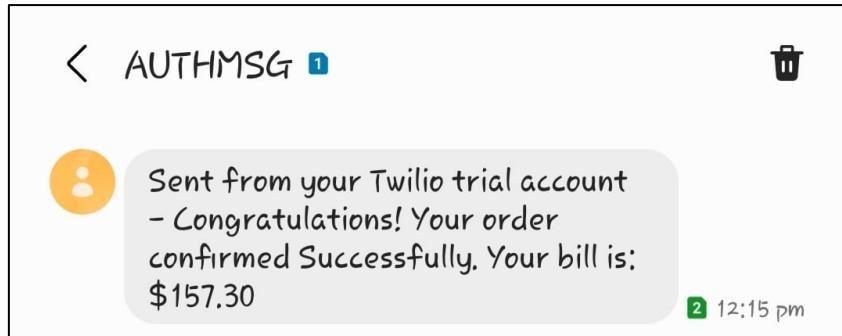


Figure 5.2: Order Confirmation SMS

Also, a confirmation email will be sent to the customer's email with the order details.

The image shows an order confirmation email. The header includes the subject 'Order Mail' and the recipient's email address. The body of the email starts with a greeting and a success message. Below this, there is a table listing the ordered items, including their names, quantities, and prices. At the bottom, there is a summary of the total cost.

Image	Name	Quantity	Price
	Long Sleeve T-Shirt	2	20
	Tussore Silk Saree	1	15

Subtotal: \$35.00
 Tax: \$7.35
 Shipping: Free Shipping
Total: \$42.35

Figure-5.2: Order Confirmation Mail

5.12 Customer Order Details Page

The customers can see any particular order information in the Order Details page. He/she can see order date, status, delivered date. Also, he/she can check the billing information, order summary and transaction details.

Order Details
My Orders

Order ID :	128	Order Date :	2023-11-12 03:49:26	Status :	delivered	Delivered Date :	2023-11-12
------------	-----	--------------	---------------------	----------	-----------	------------------	------------

Ordered Items

PRODUCTS NAME							
	Edition T Shirt -Youniverse	৳12.00	2	৳24	Write a Review		

ORDER SUMMARY

Subtotal	৳24.00
Tax	৳5.04
Shipping	Free Shipping
Total	৳29.04

Billing Details

First Name	Md. Ibne	Last Name	Sina
Phone	Md. Ibne	Email	ibnesina13@gmail.com
Address	KUET, Khulna	Details Address	KUET, Khulna
City	Khulna	Province	Khulna
Country	Bangladesh	Zipcode	9100

Transaction Details

Transaction Mode	cod
Status	pending
Transaction Date	2023-11-12 03:49:26

Figure 5.2: Customer Order Details Page

5.13 Customer Dashboard

Customer can check different order information such as: Total cost, total purchase, total delivered and total canceled orders from the Customer Dashboard page.

Total Cost \$296.45		Total Purchase 13		Total Delivered 3		Total Canceled 1					
<small>🕒 Updated Now</small>											
Latest Order											
OrderId	Subtotal	Discount	Tax	Total	First Name	Last Name	Mobile	Zipcode	Status	Order Date	
128	৳24.00	৳0.00	৳5.04	৳29.04	Md. Ibne	Sina	01670632145	9100	delivered	2023-11-12 03:49:26	Details
124	৳35.00	৳0.00	৳7.35	৳42.35	Md. Ibne	Sina	01670632145	9100	canceled	2023-11-04 17:31:27	Details
123	৳15.00	৳0.00	৳3.15	৳18.15	Md. Ibne	Sina	01670632145	9100	delivered	2023-11-04 17:26:07	Details
122	৳25.00	৳0.00	৳5.25	৳30.25	Md. Ibne	Sina	01670632145	9100	delivered	2023-11-04 17:02:11	Details
121	৳15.00	৳0.00	৳3.15	৳18.15	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:59:03	Details
120	৳15.00	৳0.00	৳3.15	৳18.15	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:57:57	Details
119	৳25.00	৳0.00	৳5.25	৳30.25	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:45:27	Details
118	৳25.00	৳0.00	৳5.25	৳30.25	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:40:20	Details
117	৳25.00	৳0.00	৳5.25	৳30.25	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:38:26	Details
116	৳10.00	৳0.00	৳2.10	৳12.10	Md. Ibne	Sina	01670632145	9100	ordered	2023-11-04 16:37:13	Details

Figure 5.2: Customer Dashboard

5.14 Add Review

If the order is already delivered, a “Write a Review” will appear to the customer Order details page. Customers can write review there.

Order Details						My Orders							
Order ID :	130	Order Date :	2023-11-13 07:29:14	Status :	delivered	Delivered Date :	2023-11-13						
Ordered Items													
PRODUCTS NAME <table border="1"> <tr> <td></td> <td>Viscose-Cotton Shalwar Kameez</td> <td>৳18.00</td> <td>1</td> <td>৳18</td> <td>Write a Review</td> </tr> </table>									Viscose-Cotton Shalwar Kameez	৳18.00	1	৳18	Write a Review
	Viscose-Cotton Shalwar Kameez	৳18.00	1	৳18	Write a Review								

Figure 5.2: Add Review Option

If the customer wants to write a review, he/she will click on the “Write a Review” option and come to this page. Here, he can write a review and give a rating.

Add Review for
Viscose-Cotton Shalwar Kameez



Your review has been added Successfully!

Your rating


Your review *

The Product is Awesome. Seller provided the best Salwar Kameez! Thanks to eShop for your great service.

Submit

Figure 5.2: Customer Add Reviews

The review will be added to the corresponding products “Reviews” section.

DESCRIPTION	ADDITIONAL INFORMATION	REVIEWS
1 review for Viscose-Cotton Shalwar Kameez		
	 Shafiatun Nur – 13 November 2023 7:27 AM	The Product is Awesome. Seller provided the best Salwar Kameez! Thanks to eShop for your great service.

Figure 5.2: Review Added on Products

5.15 Contact Us page

Customers can contact with eShop Customer Care.



The screenshot shows the 'Contact Us' page. At the top left, there are links for 'HOME / CONTACT US'. Below this, a section titled 'LEAVE A MESSAGE' contains fields for 'Name*', 'Email*', 'Number Phone', and a large 'Comment' area. A 'Submit' button is located at the bottom left of this section. To the right, under the heading 'CONTACT DETAIL', there are three entries: 'Email' (support@admin.com), 'Phone' (+8801600111222), and 'Mail Office' (New York City, New York, USA). A map of Khulna is displayed in the background, showing the location of 'Khulna University of Engineering & T...' and various landmarks like 'TELIGATI', 'KDA NIBIR R/A', and 'CSD Ghat'.

Figure 5.2: Contact Us Page

Here is the Messages of the customers that is appeared in Admin panel.

Contact Messages					
SL.	Name	Email	Phone	Comment	Created At
1	Md. Ibne Sina	ibnesina13@gmail.com	01670632145	Having some trouble on ordering! Can you please solve this out?	2023-11-10 19:21:38
2	Shafiatu Nur	shafiatu@gmail.com	01711241311	When the next campaign will be lounged?	2023-11-12 02:34:21
3	Aftab Khan	aftabkhan@outlook.com	017223425212	I didn't receive my product. I ordered it on 20/10/2023. What's the issue? Order No: 231B21C.	2023-11-12 02:36:11

Figure 5.2: Admin Sees Feedback from Customers

5.16 About Us page

This page shows an Intro about eShop, its location, information about the organization, team and members, features of our website.

HOME / ABOUT US

Welcome to eShop - Where Shopping Meets Simplicity!

Established in 2023, eShop is your premier online destination for a seamless shopping experience. From fashion to electronics, we curate a diverse range of products, ensuring quality and style.

Why eShop:
Curated Selection: Discover handpicked items that exceed expectations.
Customer-Centric: Our support team is here for you, ensuring satisfaction from start to finish.
Secure Shopping: Shop with confidence; your data is our priority.

Join the eShop community today. Your satisfaction is our mission. Happy shopping!

1000 ITEMS IN STORE <small>We sell almost all types of Robotics Components</small>	95% OUR CUSTOMERS COMEBACK <small>Most of our customers again come to us for our premium services</small>	10000 USER OF THE SITE <small>Thousands of Customers visit our Website everyday</small>
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OUR TEAM MEMBERS

SHAFIATUN NUR SHIMU - Director	MD. IBNE SINA - Manager	ANDREW ANGE - Marketer	MAC ALISTER - Developer

Figure 5.2: About Us Page

5.17 Blog Page

Here the blogs will be uploaded by the admin and the users will able to watch these.

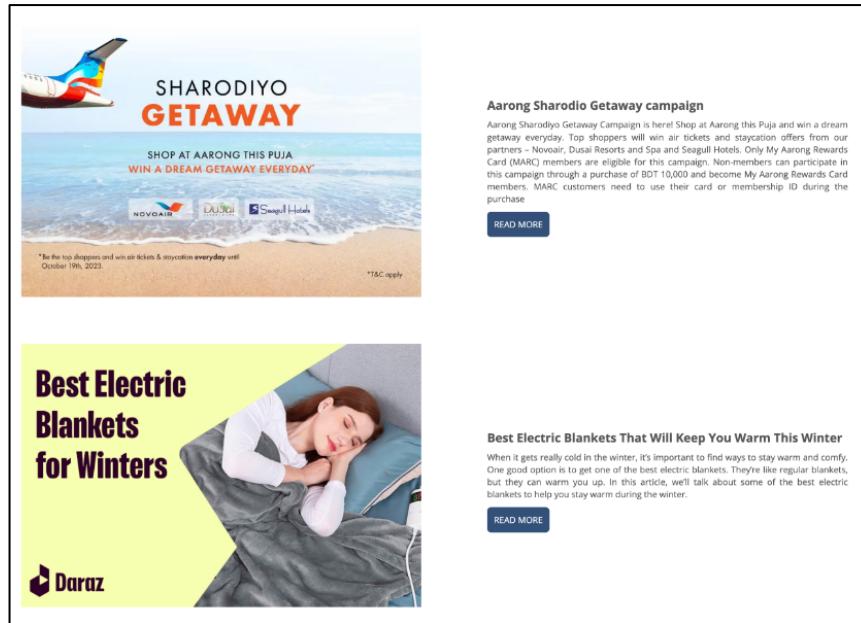


Figure 5.2: Blogs Page

After clicking read more button of any blog from blog page, we will enter the blog details page.



Figure 5.2: Blog Details Page

6 Description of the used tools

To build the complete ecommerce website, we need to follow the steps below:

- Install Xampp.
- Open Xampp.
- Start Appache Web Serber and MySQL database.
- Install composer for Laravel.
- Create a new Laravel project using composer.
- Connect Laravel project with Database.
- Create necessary tables.
- Write Views code for front end using HTML, CSS, JavaScript and Bootstrap.
- Write the Controller codes for backend codes using PHP.
- Create necessary Routes to connect Views and Controllers.
- Create a Twilio account and setup it our project for sending confirmation messages.
- Create a Mailtrap account and setup it our project for sending confirmation mails of order details.
- Create a Stripe Developer account for integrating payment system.

6.1 Laravel

A PHP framework known for its elegant syntax and MVC architecture. It offers a wide range of features like routing, authentication, middleware support, and ORM (Eloquent) for interacting with databases. Laravel simplifies complex tasks like authentication, caching, and queuing.



Figure: Laravel

6.2 XAMPP

A local development environment that bundles Apache, MySQL, PHP, and Perl. It provides an easy-to-install package for developers to set up a server on their local machines, facilitating PHP-based application development without the need for separate installations.



Figure: Xampp

6.3 HTML/CSS

HTML (HyperText Markup Language) structures the content of web pages, while CSS (Cascading Style Sheets) styles and designs these elements. HTML defines the page structure, and CSS defines how it looks and behaves across different devices and screen sizes.



Figure: HTML/CSS

6.4 JavaScript

A versatile scripting language used for creating dynamic and interactive elements on web pages. It enables functionalities like form validation, animations, and asynchronous communication with servers (AJAX).



Figure: JavaScript

6.5 MySQL Database

A popular relational database management system used for storing structured data. MySQL allows the creation of multiple tables, relationships between them, and querying data using SQL (Structured Query Language).



Figure: MySQL

6.6 Bootstrap

A front-end framework that provides a collection of pre-designed templates, components, and CSS styles. It enables developers to create responsive and mobile-first web applications quickly by using its grid system and UI components.



Figure: Bootstrap

6.7 Twilio

An API that allows integration of messaging, voice, and video capabilities into web applications. It enables sending SMS, MMS, and other communication features, often used for verification, notifications, and customer engagement.



Figure: Twilio

6.8 Stripe

A payment processing platform offering APIs for online transactions. It handles payments securely, supporting various payment methods, subscription billing, and integration with web applications for seamless checkout experiences.



Figure: Stripe

6.9 Mailtrap

A service designed for testing email notifications in a development environment. Mailtrap captures and displays outgoing emails, preventing them from reaching real inboxes and allowing developers to verify email functionality without spamming real users.



Figure: Mailtrap

7 Discussion

7.1 Technological Stack Integration:

- Integration of Laravel, XAMPP, HTML/CSS/JavaScript, MySQL, Bootstrap, Twilio, Stripe, and Mailtrap provided a comprehensive ecosystem for developing an eCommerce website.
- Laravel's MVC structure facilitated efficient backend development, while Bootstrap ensured a responsive and visually appealing frontend.
- Utilization of Twilio for notifications, Stripe for payments, and Mailtrap for email testing streamlined communication and transaction processes.

7.2 User Experience and Interface:

- Emphasis on user experience led to the implementation of a user-friendly interface with intuitive navigation.
- Bootstrap's responsive design ensured a consistent experience across various devices, enhancing accessibility for users.

7.3 Functionality and Database Management:

- Efficient product management using MySQL database allowed for easy browsing, searching, and adding items to the cart.
- Secure user authentication provided a safe environment for users to make purchases and manage their accounts.

7.4 Payment Processing and Communication:

- Stripe's integration facilitated secure and seamless payment transactions, enhancing user trust and reliability.
- Twilio's notification system ensured timely updates and communication with users, enhancing the overall customer experience.

7.5 Testing and Development Environment:

- XAMPP's local environment provided a controlled setup for development and testing, ensuring smooth deployment and functionality.
- Mailtrap's email testing functionality ensured error-free communication and feedback mechanisms without affecting real user inboxes during development.

7.6 Future Enhancements:

While the project successfully fulfills core eCommerce functionalities, future improvements could focus on scalability, advanced analytics, and additional integrations to further enrich the user experience.

7.7 Overall Achievements and Conclusion:

- The project represents a successful integration of diverse technologies to create a functional and secure eCommerce platform.
- Attention to user experience, security, and reliable communication contributes to a solid foundation for potential growth and adaptation to changing market demands.

Each aspect of the project, from technology integration to user experience and future enhancements, contributes to its success in providing a comprehensive and functional eCommerce solution.

8 Conclusion

The eCommerce website showcases a successful integration of various technologies, ensuring a user-centric platform. The project effectively utilized tools like Laravel, XAMPP, Bootstrap, Stripe, Twilio, and Mailtrap to create a seamless shopping experience.

8.1 Challenges Faced:

1. Integration Complexity: Coordinating multiple third-party services posed initial integration challenges.
2. Security Concerns: Ensuring robust security for user data and transactions demanded meticulous attention.
3. Scalability: Building for potential traffic surges required optimizing performance.
4. Learning Curve: Mastering diverse technologies involved a learning curve for the team.
5. Testing and Debugging: Thorough testing and debugging were crucial, especially for communication and transaction processes.

Despite these challenges, the project's success reflects dedication and collaborative problem-solving. Ongoing efforts in security, performance optimization, and tech evolution will further elevate the platform's competitiveness in the eCommerce market.

9 References

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