

**A WEB BASED PROJECT OF ECOMMERCE SITE FOR SHORT AND MEDIUM  
ENTERPRISE**

**BY**

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**This Report Presented in Partial Fulfillment of the Requirements for the Degree of  
Bachelor of Science in Computer Science and Engineering**

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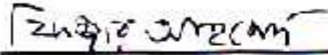
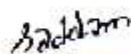
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**DECEMBER 2019**

## **APPROVAL**

This Project/internship titled "A Web Based Ecommerce Site For Small To Medium Enterprises (SME)", submitted by Abrar Sakib, ID No: 151-15-5178 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 06/12/2019

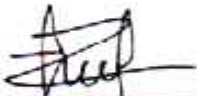
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## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Masud Rabbani, Lecturer, Department of CSE, Daffodil International University**. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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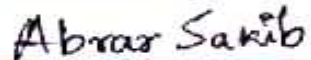
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## **ABSTRACT**

**This project “Ecommerce site for SME” is a web project that can change the Ecommerce by adding the Small to Medium Enterprises in the same competitive game of Ecommerce business. This E commerce site is very low cost that means it can be developed very easily by spending a less amount of money compared to the other established companies. This site is fully customizable and it can be customized easily by admin. This E commerce site is very simple and easy to use. All the products are categorized. Moreover, a new product can be added very easily without any hassle. Even the site color and category name can be updated through the admin panel by an admin without any developer. Most of the E commerce sites are very complex and a new user gets confused using that site. However this site is simple, easy and flexible to customize. This site is affordable to every SME (Small to Medium Enterprises). By using this site, they can also be part of modern ecommerce business and it will bring a significant change in our economy as well.**

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

This is a web based project and it is an ECOMMERCE SITE FOR SME (Small to medium Enterprises). There are many Ecommerce sites on the web. However this E commerce site is very low cost and fully customizable. This Ecommerce site is very simple and easy to use. All the products are categorized. Moreover, a new product can be added very easily without any hassle. Everything on this site can be customized by an admin. Even the site color and category name can be updated through the admin panel by an admin without editing the script.

Most of the Ecommerce sites are very complex and a new user gets confused using that site. However In this simple, easy and flexible to customize easily. None but admin will have to manage, delete or update the products and their details if needed.

### 1.2 Motivation

Ecommerce sites is a modern and digital place to do shopping from anywhere in the world. These Ecommerce is filled with various products. Managing this product is very complex and customizing the site without a developer is close to impossible. The developers have to work manually, if they want to change ant category name or any text or background color. It is so much difficult for an ADMIN and time consuming. Our application will reduce this difficulties and time cost.

In order to solve all this difficulties, our application has been developed. It also can be used flawlessly by the user as well as the ADMIN. Anyone with an access can change whatever he/she wants to change or update. Basically this site has been developed specifically for small to medium enterprises. The aim of this project is to make E commerce site accessible and spread the use universally as it is very cheap at cost to develop.

### 1.3 Objectives

In order to discuss about Ecommerce site, we are getting a system that can be easily controlled by admin for any online based business place such as clothing, electronics and online services and so on.

It takes a huge amount of capital and time to develop a commercial Ecommerce site. On the other hand it is quite difficult to maintain the site as well. This is the reason why we have developed this site. This site can be used for multiple companies as it is fully customizable. By using this system, every company can compete in the online universe and this will help them to grow fast and effectively.

#### **1.4 Expected Outcome:**

Every content, resource, existing sections like "Latest products", "Featured Products", "Popular Brands" or even slider bar color of this site can be customized. An ADMIN can add, edit or delete product from this site. Admin can change or delete slider images. Products can be categorized by the brand and ADMIN can add new brand and set the image and these brands can be edited or can be deleted if needed. An ADMIN can see the order list and the customer details along with Address and ZIP code. ADMIN can see customer ordered list along with the quantity that a customer has created. The availability of a product can be changed by the ADMIN. There is a search option to check the availability of a product in the inventory. An Automatic INVOICE will be created along with shipping cost and vat after the approval of ADMIN. ADMIN can see the customer selected payment method among three existing payment methods.

As mentioned earlier that developing an Ecommerce site is very expensive and critical to maintain for the small and medium enterprises, this Ecommerce site will help to overcome the challenges in the current system.

#### **1.5 Report Layout**

We organize our report as follows. Chapter 2: Background- Introduction, Related Works, Comparative Studies, Scope of the Problem, Challenges. Chapter 3: Requirement Specification- Business Process Modeling, Requirement Collection and Analysis, Use Case Modeling and Description, Design Requirements. Chapter 4: Design Specification. Chapter 5: Implementation and Testing, Chapter 6: Conclusion and Future Scope.

# **CHAPTER 2**

## **BACKGROUND**

### **2.1 Introduction**

Normally editing site and inserting data in an Ecommerce site is managed manually. As we know most of the online commercial companies have their own Ecommerce site and these are very complex to maintain but from now, using this fully customizable Ecommerce site, it will not be difficult. Considering the budget and manpower of SME, it is more complex. As mentioned, our developed Ecommerce site can be customized and handled easily. It will help small to medium enterprises manage the site management comfortably. Moreover, it also will be helpful for both new business comer and competitor to stand in the equal line. It is a comprehensive Ecommerce management solution for SME which helps to overcome the challenges in current system.

### **2.2 Related Works**

Before starting of our work we really need to gather sufficient amount of information about Ecommerce sites. We have detailed research many types of websites. We have also gone through the popular Ecommerce site's product management system and updating process. We have researched about SME related problems and to overcome those problems which step should be more helpful and also learned scripting languages. Such as we came to know how we could change color and edit background directly from Admin panel without taking any look from the script itself. So we have studied a lot, spent as much time as we could about this and worked a lot of time on this. We have checked every details and every errors and worked on various experiments to complete this.

### **2.3 Comparative Studies**

We have visited many websites and compared that with our project idea. Some of websites as Daraz, Bagdoom, Picaboo have some limitation like we need to insert product data manually, no automated option available and also no specific user type. They just developed a system which has only the option to update database which means it just makes the bridge to change product details, add new product and make a checkout payment method and that's all. All the existing systems are fully manually controlled while updating the site such as change color of text, background, add or remove new or existing category

and so on. So, all the data in that system is fully dependent on manually imported data. We have managed to automate our system and advanced functionalities on this where every user has different actions of benefits. Some of the existing Ecommerce site's interface is very complex. Which is difficult to understand and very hard to operate. But in our system we have tried to do all these things. We have faced many problems and restrictions. And we've successfully cope with all the challenges to develop the system. We also have worked to user interface which is user friendly and easy to understand.

## **2.4 Scope of the Problem**

We have faced different types of problems while doing this. Most significant problem was the database. As our site is capable to customize the site just using the database, it was very difficult to design the database. We have spent huge chunk of time designing, implanting and fixing the database. Another difficult part of this project was planning and designing the UI/UX. We wanted to keep our site as simple as possible. However, this simple looking website should contain all the important contents that a well-established Ecommerce site is famous for. This is the reason why we have faced problem in this field. Managing all the important data in a very small and light weighted website is very challenging. We tried to make the UI as simple as we could, so that a new user visiting this site for the very first time, can find easily whatever he/she is finding on this site and also observe the site more appealing compared to other sites. Here comes another challenge to make it more flexible and easier to maintain from the Admin side.

## **2.5 Challenges**

A project is incomplete without any challenges. During this project work, we have faced some challenges and down below we have listed out some of them:

- Designing the database.
- Creating a simple and user friendly UI/UX
- Making the site compatible. However, it can show products as much as it can at a glance.
- Auto generating Invoice.
- Creating a fully customizable Admin Panel.

# CHAPTER 3

## REQUIREMENT SPECIFICATION

### 3.1 Business Process Modeling

Business process modeling, often called process modeling is the analytical representation or illustration of an organization's business processes. Along with business process discovery, process modeling is widely viewed as a critical component in successful business process management (BPM). The following figure 3.1 shows Business Process model:

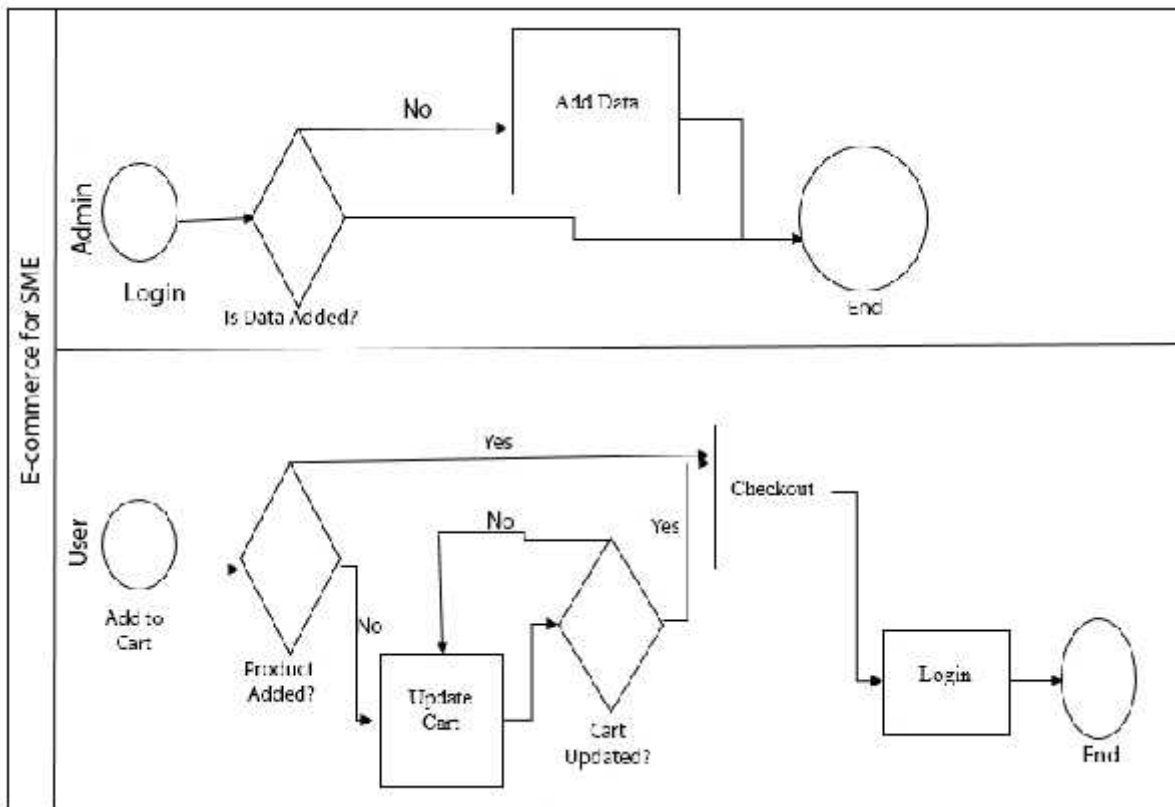


Figure 3.1: Business Process model.

### **3.2 Requirement Collection and Analysis:**

Collecting requirements and analyzing them for any project is the most important part because the whole system is based on this knowledge. No project can be start without planning the project requirements. Majority of the failed projects have failed due to the wrong or insufficient requirements gathering. If the project team fails to capture all the necessary requirements for the solution, the project will be running with a risk. This may load many problems in future such as a result the full project can be damaged. After collecting all the requirements and analyzing them, we have found the necessary features that our application needs. It provides all the specifications of the system in details which is very effective for every user.

There are a lots of e-commerce platform which are popular but those are not good for user who doesn't have technical understanding. All these has quite difficult interface to understand for regular user. So our main target is to improve UX for all kind of user so that they can understand and main the website and their products easily.

There are many different methods in requirement collection and analysis. Every method will have benefits and difficulty also. Cost and time are the two important factors when choose which method will be used. The method in collecting the requirements may vary depending on the situation but using the various methods it will be very helpful to collect the complete requirements.

### **3.3 Use Case Modeling and Description**

A use case is a software and system engineering term that describes how a user uses a system to accomplish a particular goal. A use case acts as a software modelling technique that defines the features to be implemented and the resolution of any errors that may be encountered. The system is used by 2 types of users. They are Admin and Visitors. The model in Fig 3.2 is usually short yet description.

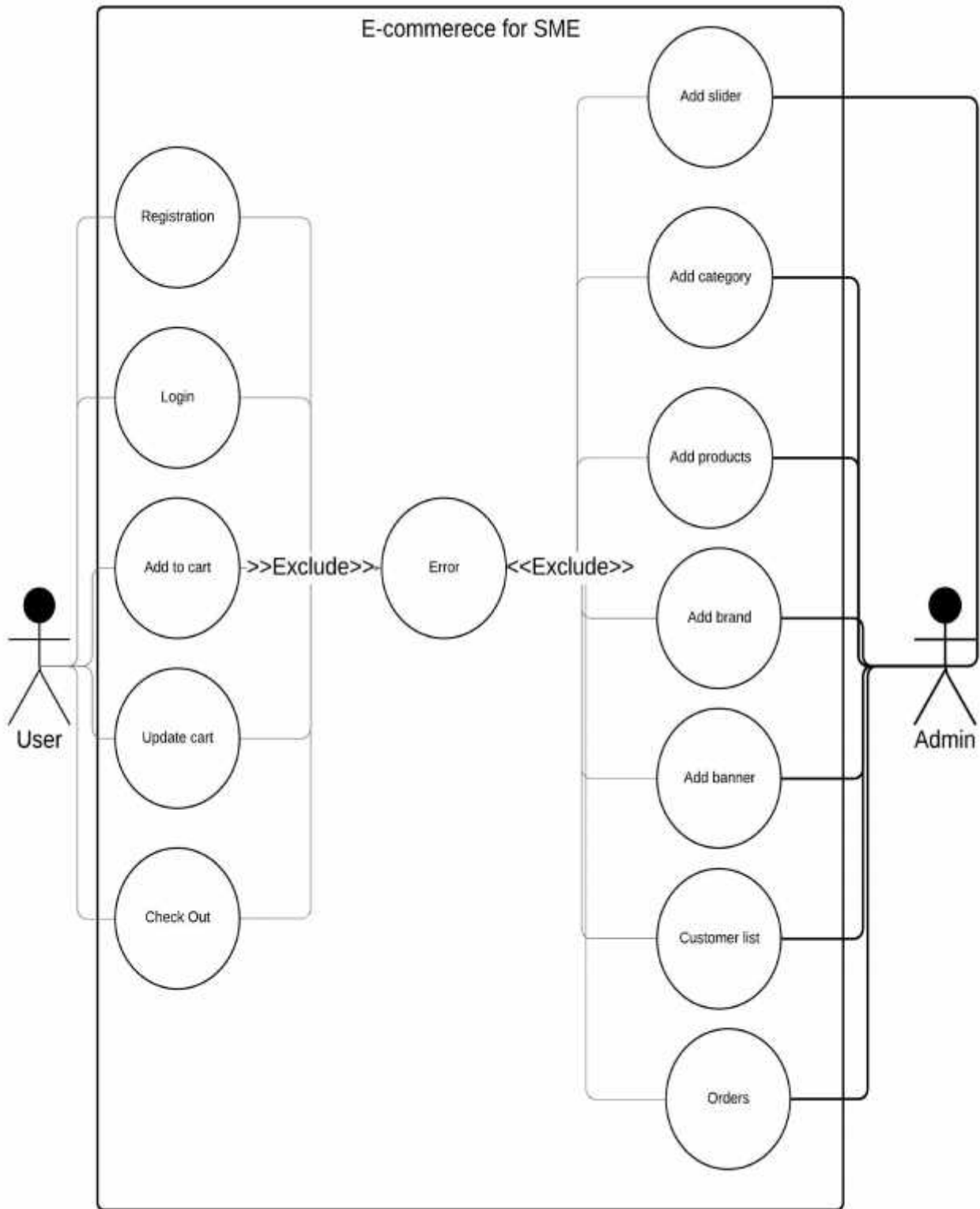


Figure 3.2: Use Case Model.



## User use case details:

**Table 3.3.1- Use Case of Admin Login**

Use Case name: Admin Login	
Use case details	Login to the admin page and access all Functionalities of an admin.
Precondition	Open application and browse login page.
Actor	Admin
Normal flow	1. Enter Username 2. Enter Password
Alternative flow	Invalid Username & Password
Post-condition	Admin redirected to the admin homepage.

The following table **3.3.1** represents the use case diagram of Admin Login. Username and password is required to login and alternative flow is invalid username or password.

**Table 3.3.2- Use Case of Add Category**

Use Case name: Add Category	
Use case details	Add category for products
Precondition	Admin must be logged in
Actor	Admin
Normal flow	Add Category
Alternative flow	Category add error
Post-condition	Admin redirected to the add category page

The following table **3.3.2** represents the use case diagram of Add Category. Category name is required to add category and alternative flow is category add error.

**Table 3.3.3- Use Case of Add Sub-Category**

Use Case name: Add Sub-Category	
Use case details	Add sub-category for products
Precondition	Admin must be logged in& category should be added
Actor	Admin
Normal flow	Add Sub-Category
Alternative flow	Sub-Category add error
Post-condition	Admin redirected to the add sub-category page

The following table3.3.3 represents the use case diagram of Add sub category. Sub category name is required to add sub category and alternative flow is sub-category add error.

**Table 3.3.4- Use Case of Add Brand**

Use Case name: Add Brand	
Use case details	Add Brand for products
Precondition	Admin must be logged
Actor	Admin
Normal flow	1. Add Brand 2. Add Image
Alternative flow	Brand add error
Post-condition	Admin redirected to the add Brand page

The following table3.3.4 represents the use case diagram of Add Brand. Add brand and image are required to add brand and alternative flow is brand add error.

**Table 3.3.5- Use Case of Add Slider**

Use Case name: Add Slider	
Use case details	Add Sliderfor Homepage
Precondition	Admin must be logged
Actor	Admin
Normal flow	1. Add Slider name 2. Add Image
Alternative flow	Slideradd error
Post-condition	Admin redirected to the add Sliderpage

The following table3.3.5 represents the use case diagram of Add slider. Add slider name and add image are required to add slider and alternative flow is slider add error.

**Table 3.3.6- Use Case of Add Product**

Use Case name: Add Product	
Use case details	Add Slider for products
Precondition	Admin must be logged & Category, brand should be added.
Actor	Admin
Normal flow	1. Add Product name 2. Add Product Image 3. Price 4. Quantity 5. Description
Alternative flow	Product add error
Post-condition	Admin redirected to the add product page

The following table3.3.6 represents the use case diagram of Add product. Add product name, add product image, price, quantity and description are required to add product and alternative flow is product add error.

**Table 3.3.7- Use Case of Add Banner**

Use Case name: Add Banner	
Use case details	Add Slider for Banner
Precondition	Admin must be logged
Actor	Admin
Normal flow	Add Banner Image
Alternative flow	Banner add error
Post-condition	Admin redirected to the add Banner page

The following table 3.3.7 represents the use case diagram of add Banner. Add Banner image is required to add banner and alternative flow is add banner error.

**Table 3.3.8- Use Case of Settings**

Use Case name: Change Site	
Use case details	Change site information settings
Precondition	Admin must be logged
Actor	Admin
Normal flow	<ol style="list-style-type: none"> <li>1. Logo change</li> <li>2. Social links change</li> <li>3. Address change</li> <li>4. Payment information change</li> <li>5. Shipping cost change</li> <li>6. Primary, secondary color change</li> </ol>
Alternative flow	Settings change error
Post-condition	Admin redirected to the settings page

The following table 3.3.8 represents the use case diagram of setting. Logo change, social link change, address change, payment information change, shipping cost change, color change are required to change settings and alternative flow is setting change is error.

**Table 3.3.9- Use Case of User Registration**

Use Case name: User registration	
Use case details	User registration for buying products
Precondition	Browse application and visit registration page
Actor	User
Normal flow	<ol style="list-style-type: none"> <li>1. Enter user email</li> <li>2. Enter password</li> <li>3. Full name</li> <li>4. Address</li> <li>5. Phone</li> </ol>
Alternative flow	Login error
Post-condition	Admin redirected to the registrationpage

The following table 3.3.9 represents the use case diagram of Registration. Enter user name, enter password, full name, address and phone number is required for registration and alternative flow is login error.

**Table 3.3.10- Use Case of User Login**

Use Case name: User login	
Use case details	User login for buying products
Precondition	Browse application and visit login page
Actor	User
Normal flow	1. Enter user email 2. Enter password
Alternative flow	Login error
Post-condition	Admin redirected to the login page

The following table 3.3.10 represents the use case diagram of User login. User email and password are required to login and alternative flow is login error.

**Table 3.3.11- Use Case of Add to Cart**

Use Case name: Add to cart	
Use case details	Products add to cart to buy
Precondition	Browse products and click to cart option
Actor	User
Normal flow	User choice products and click add to cart button
Alternative flow	Product already added
Post-condition	Admin redirected to the product page

The following table 3.3.11 represents the use case diagram of Add to cart. User choice product and click add to cart button are required to add to cart and alternative flow is product already added.

**Table 3.3.12- Use Case of Update Cart**

Use Case name: Update cart	
Use case details	Update cart products to buy
Precondition	Browse cart and products must be added on cart
Actor	User
Normal flow	User update added products on cart. They can increase or decrease the number of products.
Alternative flow	Product updates error.
Post-condition	Admin redirected to the cart page

The following table 3.3.12 represents the use case diagram of Update cart. User update added products on cart. They can increase or decrease the number of products are required and alternative flow is product updates error.

**Table 3.3.13- Use Case of Wish list**

Use Case name: Wish list	
Use case details	Add products to wish list to buy.
Precondition	Browse products to buy and must be logged in.
Actor	User
Normal flow	User adds products to wish list so that they can buy it later.
Alternative flow	Product adds on wish list error.
Post-condition	Admin redirected to the wish list page

The following table 3.3.13 represents the use case diagram of Wish list. Click on specific product and add to wish list is required and alternative flow is add product on wish list is error.

**Table 3.3.14- Use Case of Check Out**

Use Case name: Check Out	
Use case details	Check out products from cart
Precondition	Products must be added on cart.
Actor	User
Normal flow	User goes to check out to confirm the products to buy.
Alternative flow	Check out error
Post-condition	Admin redirected to the login

The following table 3.3.14 represents the use case diagram of check out. The required activity to check out is to confirm the product to buy and alternative flow is check out error.

**Table 3.3.15- Use Case of Payment**

Use Case name: Payment	
Use case details	Payment for products
Precondition	Products must be added on cart and checked out and logged in with address.
Actor	User
Normal flow	User goes to check out to confirm the products to buy and select payment method.
Alternative flow	Payment error.
Post-condition	Admin redirected to the checkout page.

The following table **3.3.15** represents the use case diagram of payment. The required activity is check out to confirm the products to buy and select payment method and alternative flow is payment error.

**Table 3.3.16- Use Case of Search**

Use Case name: Search	
Use case details	Search products by name or category
Precondition	Search field must not be emptied.
Actor	User
Normal flow	User goes to search bar and provide name or category.
Alternative flow	Search error.
Post-condition	Admin redirected to the search result page.

The following table **3.3.16** represents the use case diagram of search. The required flow is user goes to search bar and provide name or category and alternative flow is search error.

### 3.4 Logical Data Model / Data Flow Diagram:

The following figure 3.3 represents logical data model.

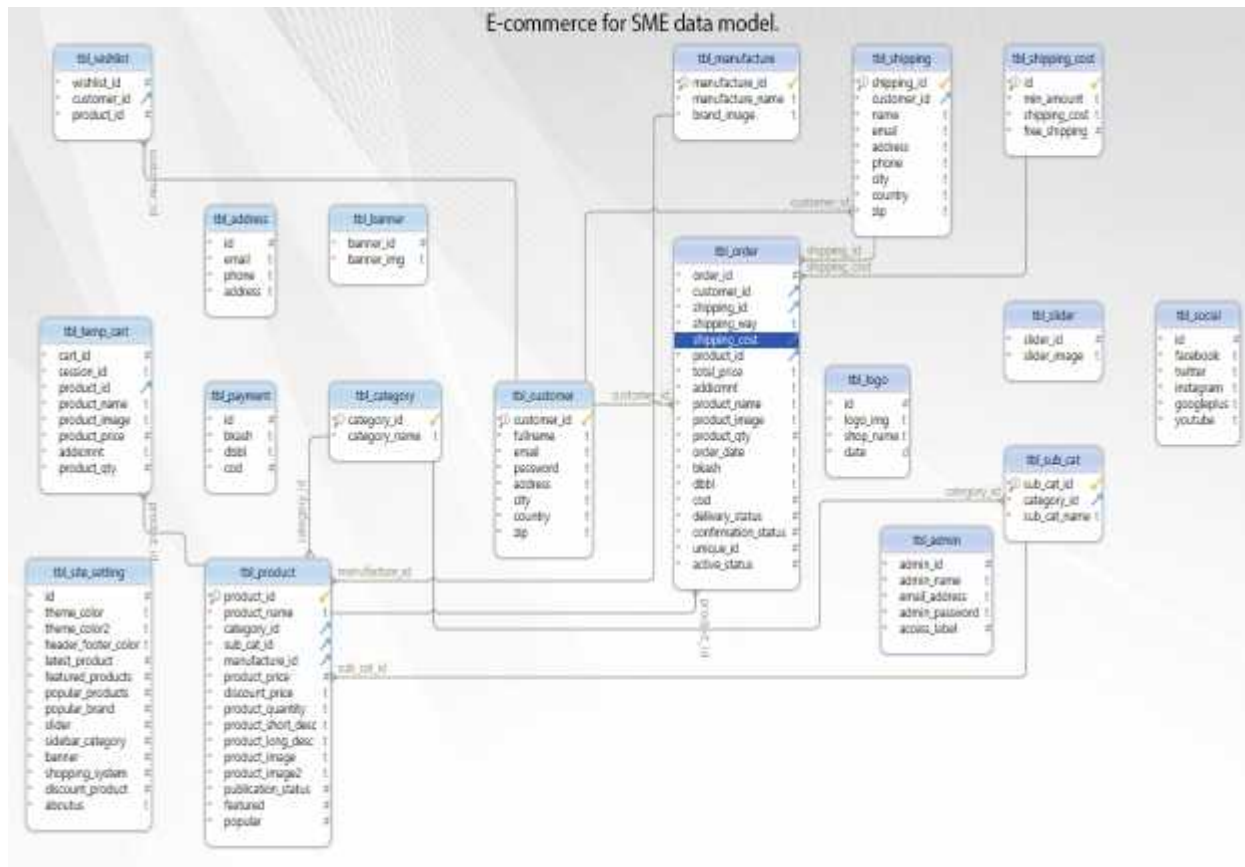


Figure 3.3- Logical Data Model

### 3.5 Design Requirements

Design requirements state is the important characteristics that our design must meet in order to be successful. It makes an application more users friendly. To make an application straight forward and easy to understand we must need Design requirement. For this project, the following requirements must be addressed to reach our goal.

Design requirements for the Admin:

- Login
- Category
- Delete category
- Sub-category
- Delete sub-category
- Banner



- Delete banner
- Brand
- Delete brand
- Add Products
- View Products
- Edit Products
- Delete Products
- Order List
- Delete order
- Confirm order
- Active and delivery status change
- Invoice generate
- Customer information
- Color Change
- Logo change
- Address change
- Payment method declare
- Shipping cost customize
- Social links change

#### Design requirements for Visitors-

- Registration
- Login
- View products
- Add products to cart
- Add products to wish list
- Search products by name and category
- View products by Category and sub-category
- Update cart items
- Check out
- Select Payment method
- Update profile information

# CHAPTER 4

## DESIGN SPECIFICATION

### 4.1 Front-end Design:

Front-end design refers to the design work completed as part of project planning done before more detailed design. Front-end design is early and basic design to accurately discover resources that will be needed. The initial stage of detailed planning is known as Front-end Engineering Design.

When we launch or hit the URL first page user can see is Home Page. In this page, User can choose products, add products to cart, login to their account, sign up, search products and so on.

The following figure 4.1.1 is the layout of homepage when user will enter into the site.

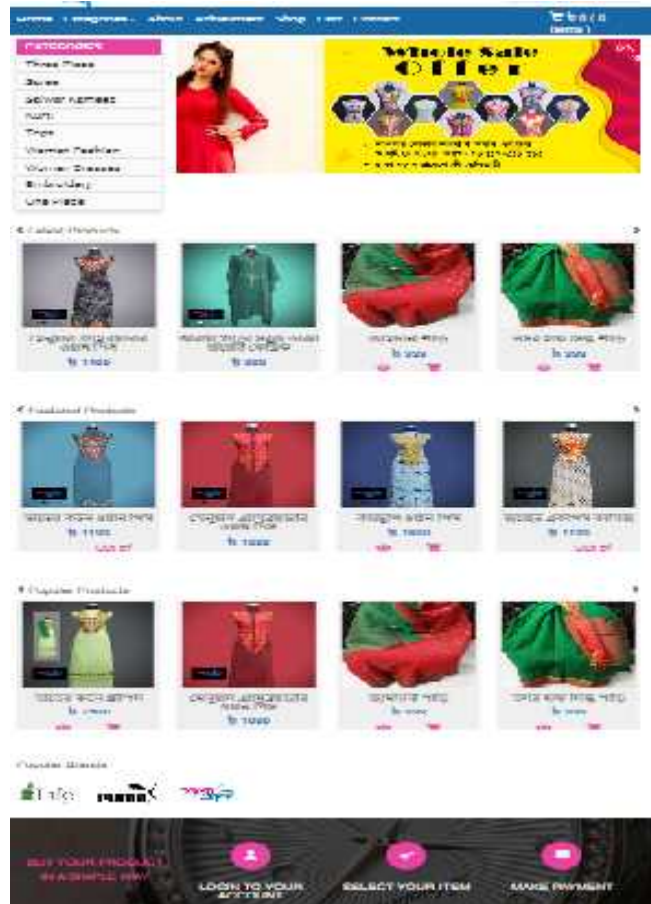


Figure 4.1.1- Homepage

When Login/Signup button is clicked then User Login page will be appeared.

The following figure 4.1.2 is the layout of User Login Page.

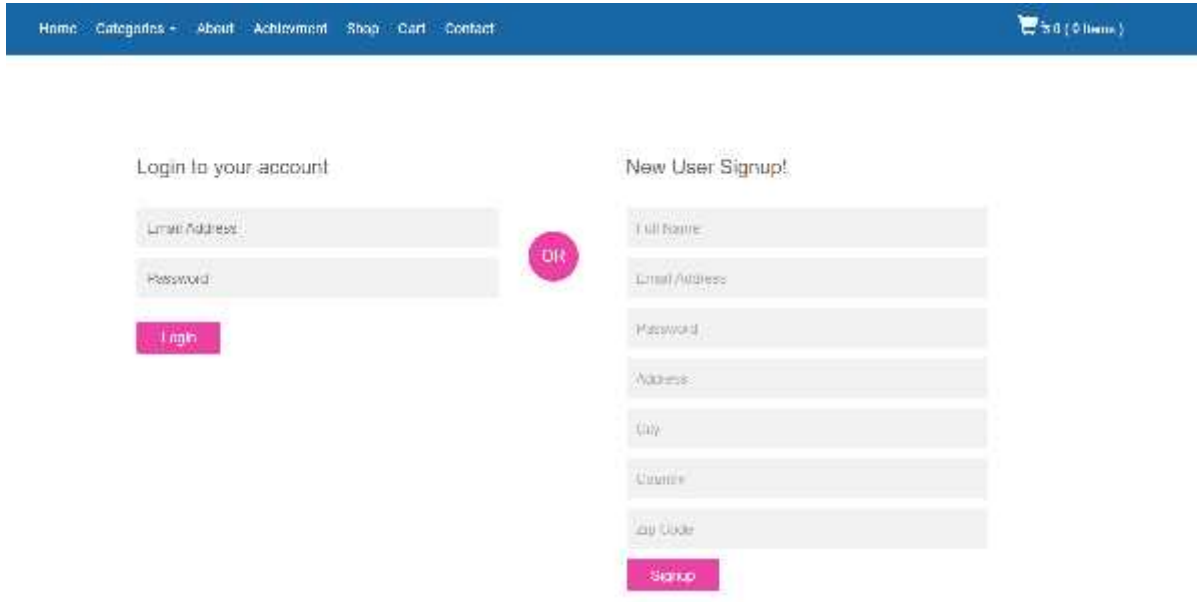


Figure 4.1.2- User Login

In the database table if any user exists then he/she can Login to their account. Otherwise user has to register and then login.

The following figure 4.1.3 is the layout of User Registration page.

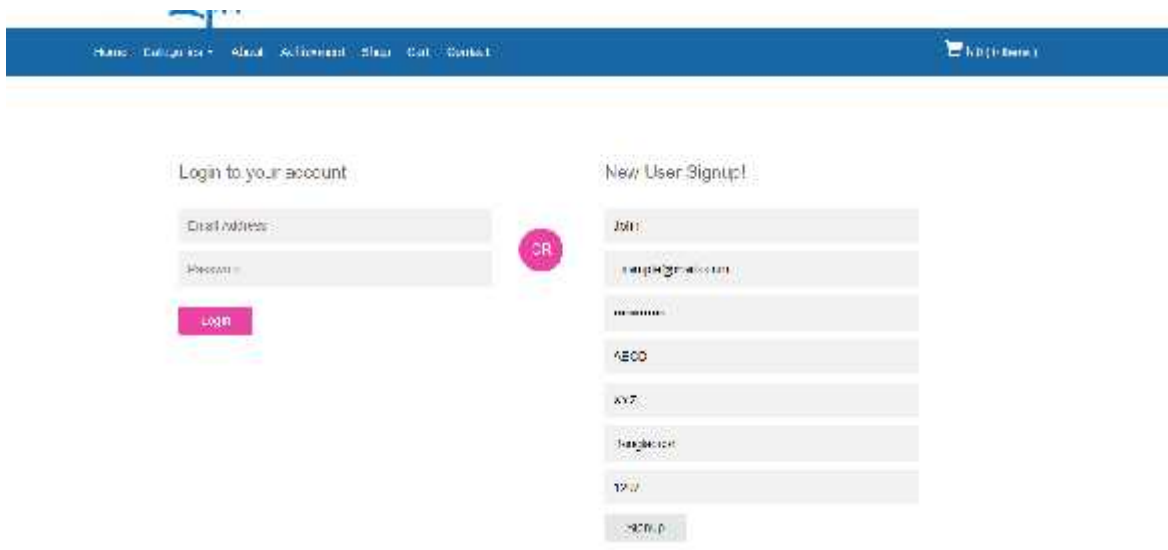


Figure 4.1.3- User Signup

After completing the registration and User can search product category wise. .

The following figure 4.1.4 is the layout of Category search.

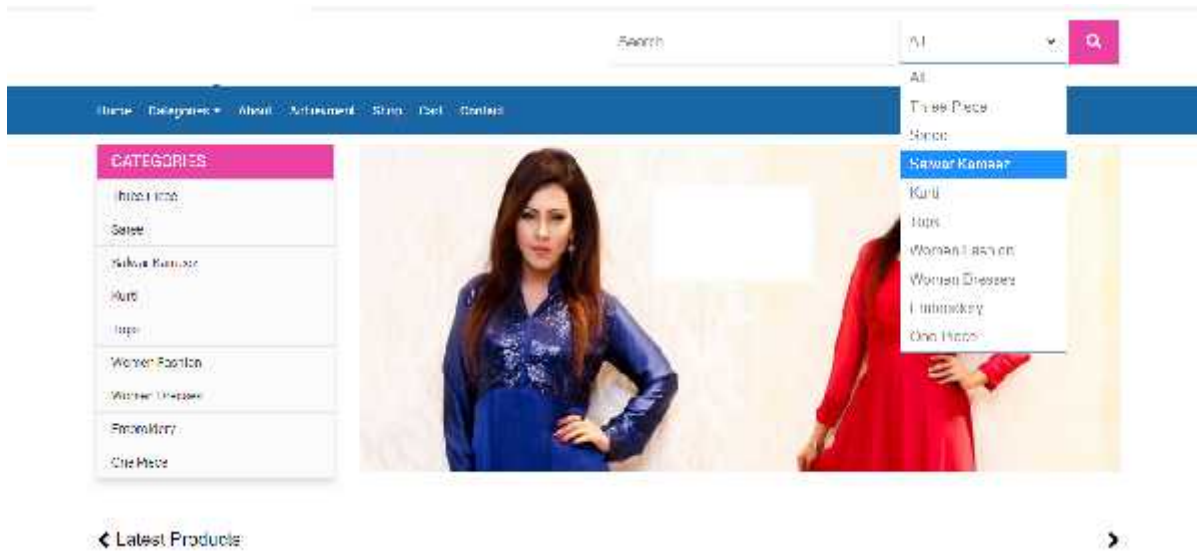


Figure 4.1.4- Category search

In the Home page, there is an “About Us” option. User can read article about the site or the company by clicking the button “About Us”. This will bring the user to about us Page.

The following figure 4.1.5 is the layout of about us.



Figure 4.1.5- About Us

In the Home page, there is a “Shop” option. User can see all the products on the site at once. By clicking the button “Shop” on homepage. This will bring the user to “Shop” Page.

The following figure 4.1.6 is the layout of “Shop” page.

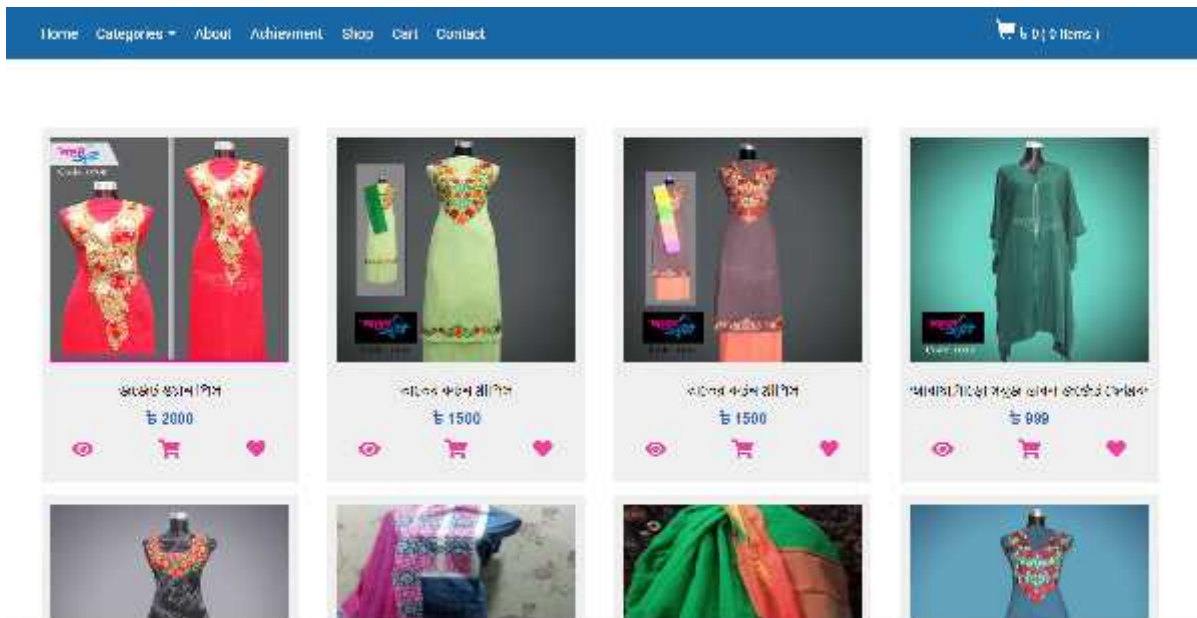


Figure 4.1.6- Shop page

If a User add any product to the cart. It will be found in the cart option in the home page. If the cart is empty, it will show that ‘the cart is empty’.

The following figure 4.1.7 is the layout of Empty Cart page.



Figure 4.1.7- Empty Cart page

On the other hand, if the cart is not empty, it will show the total amount, added products and option to remove the product. User can update the quantity.

The following figure 4.1.8 is the layout of cart.

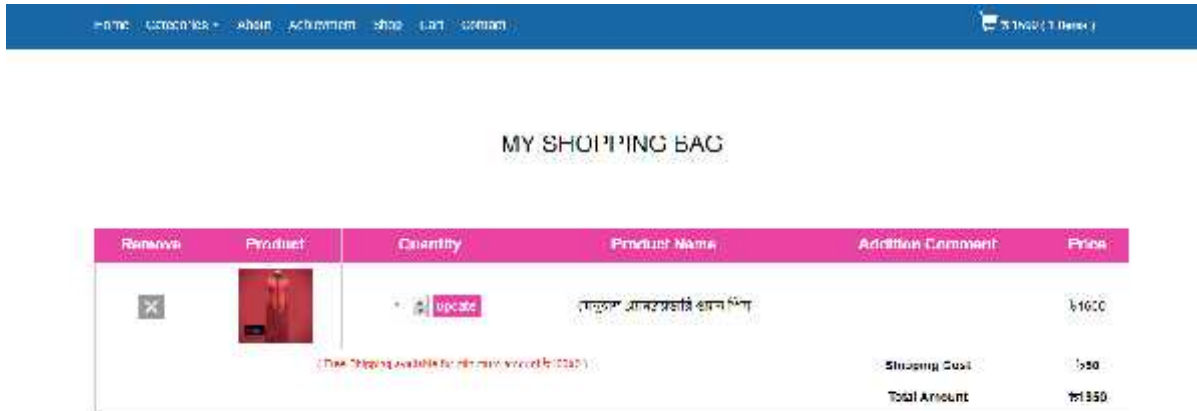


Figure 4.1.8- cart

In the navigation bar there is a cart logo on top. If the user hover on the logo, “checkout” option will appear.

The following figure 4.1.9 is the layout of Checkout.

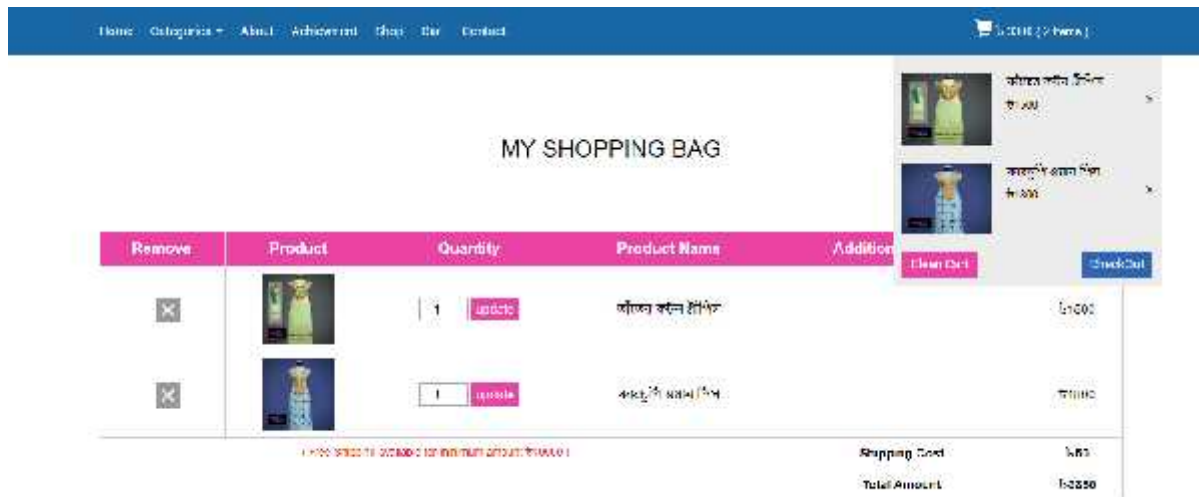
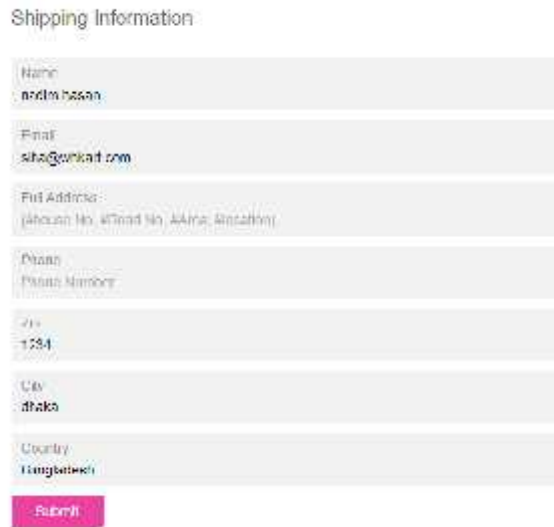


Figure 4.1.9- Checkout

When customer clicks the checkout button, a shipping information list will show up.

The following figure 4.1.10 is the layout of shipping information.



Shipping Information

Name  
nedim hassan

Email  
siba@winkat.com

Full Address:  
(House No, Street No, Area, Location)

Phone  
Phone Number

Pin  
1534

City  
dhaka

Country  
Bangladesh

Submit

Figure 4.1.10- Shipping Information

After clicking the submit button in the shipping information, it will redirect to the cart page and will show the payment methods. After the payment method is selected, customer can confirm the order.

The following figure 4.1.11 is the layout of confirm order.



Shopping cart summary

	কালসুখি স্যান সিল	৳1800
Shipping cost		৳50
Total Amount		৳2350

Select your Payment method:

Rkash No: 00000000000000000000

DRFI No: 21516616656252

Cash On Delivery

Confirm Order

Figure 4.1.11- Confirm order

Let's get into the Admin panel. Admin has to login by using the username and password

The following figure 4.1.12 is the figure of Admin Panel.

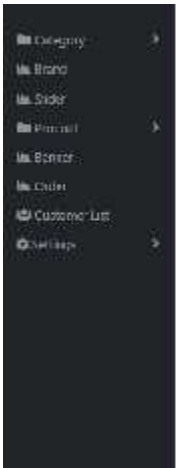


Figure 4.1.12- Admin panel

If an admin wants to change the category or sub category, the admin has to click on the category option. Here admin can search, edit category name, delete category and add category.

The following figure 4.1.13 is the Edit Category/sub category option.



Figure 4.1.13- Category/Sub category option



Admin can also edit brand, if needed. Admin can edit brand name, change brand image, delete brand, add new brand along with image choosing option.

The following figure 4.1.14 is the layout of Brand.

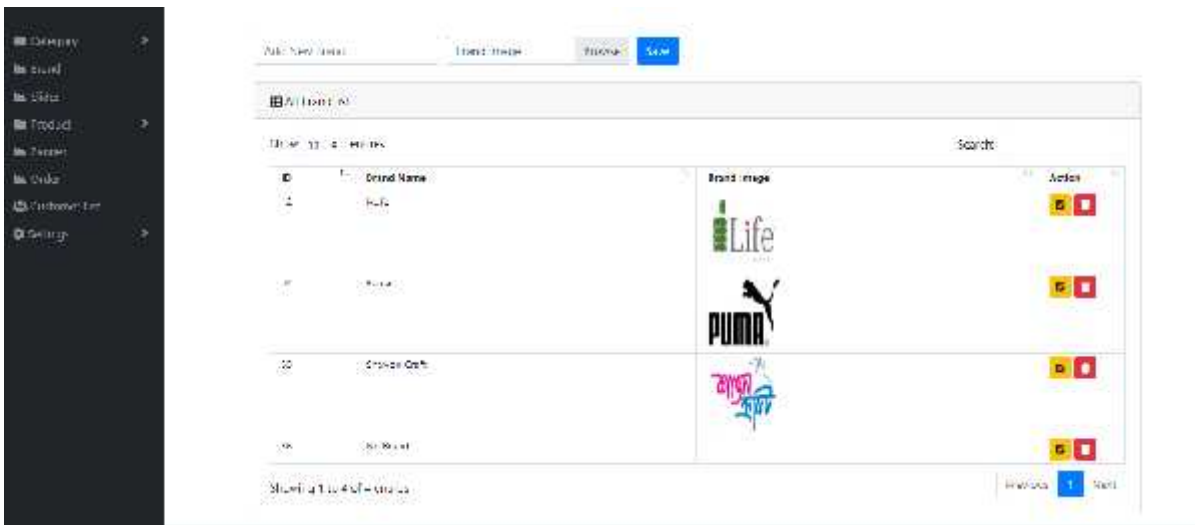


Figure 4.1.14- Brand

Admin can control the slider images. Slider image can be changed, edited by the admin. Admin can search the slider image and delete slider image as well.

The following figure 4.1.15 is the layout of Slider.

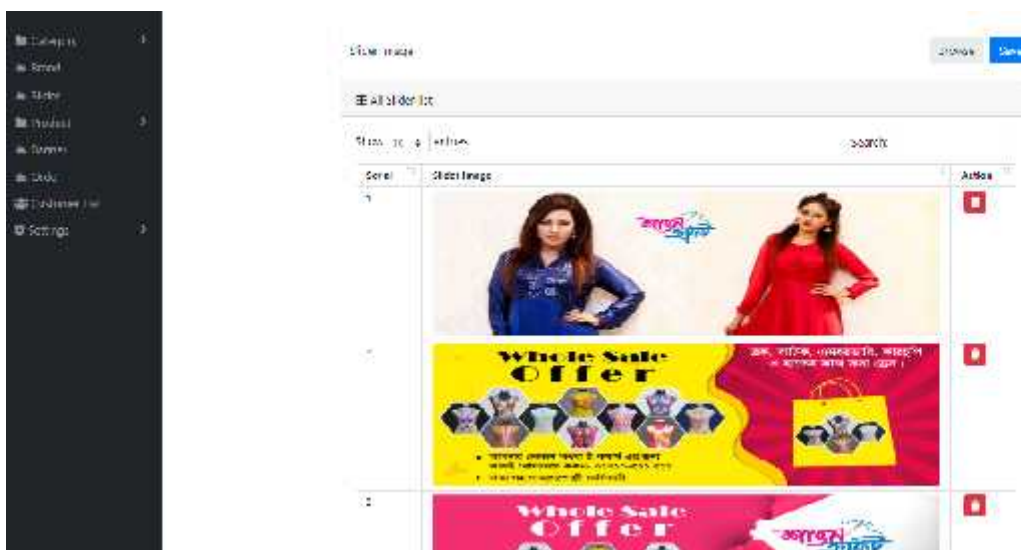
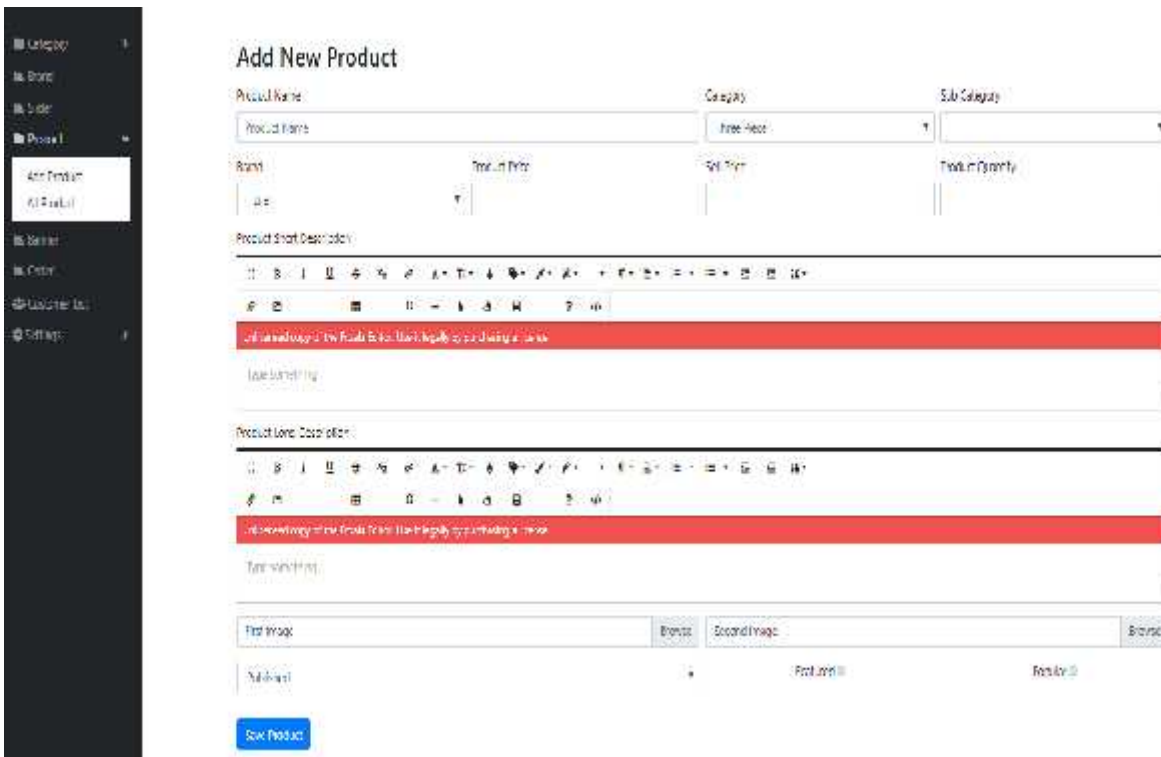


Figure 4.1.15- Slider

In the product section, admin can add new product. Adding a new product is very easy. While adding product, admin can insert product name, select category and sub category, add brand of the product, add product price, sell price, product quantity, Write product description both short and long and select image. Admin have the authority to tag this product to featured or popular product section. Admin can also decide, it can be published or keep it remain unpublished.

The following figure 4.1.16 is the layout of Product (Add New Product).



The screenshot shows the 'Add New Product' form. It has a dark sidebar on the left with navigation options like 'Category', 'Brand', 'Product', 'Add Product', 'All Product', 'Admin', 'Order', 'User Role', and 'Settings'. The main form area is titled 'Add New Product' and contains the following fields and sections:

- Product Name:** A text input field with the placeholder 'Product Name'.
- Category:** A dropdown menu with 'Tree Node' selected.
- Sub Category:** A dropdown menu.
- Brand:** A dropdown menu with 'Brand' selected.
- Product Price:** A text input field.
- Sell Price:** A text input field.
- Product Quantity:** A text input field.
- Product Short Description:** A rich text editor with a red warning banner that says 'The description of the Product is not complete. It is mandatory to fill the description.' Below the editor is a 'Turn short description' link.
- Product Long Description:** A rich text editor with a red warning banner that says 'The description of the Product is not complete. It is mandatory to fill the description.' Below the editor is a 'Turn long description' link.
- Image Uploads:** Four buttons labeled 'First Image', 'Brand', 'Second Image', and 'Brand' for uploading product images.
- Product Status:** Radio buttons for 'Published' and 'Unpublished'.
- Save Product:** A blue button at the bottom left.

Figure 4.1.16- Product (Add New Product).

In the All Product section, Admin can see all the products that have been uploaded into the database. Here, Admin can change the publish status and can also edit if he/she wants to tag it as featured/popular product. Admin can action to every products here. Such as view, edit and delete. Here, every product is shown via its product ID. Admin can Search product by its ID, Product Name, Category Name, Sub category name, Brand Name and Price. This feature is very helpful to edit the product details fast and easily.

The following figure 4.1.17 is the layout of Product (All Product).

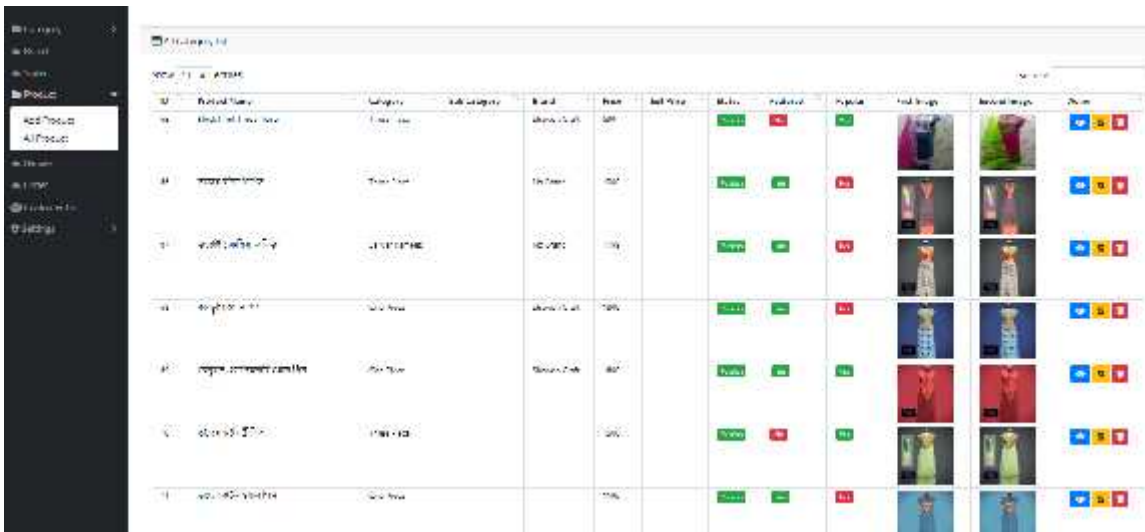


Figure 4.1.17- Product (All Product).

Along with the product button, there is button named as Banner. Admin can add Banner for any special offers into the site.

The following figure 4.1.18 is the layout of Banner.



Figure 4.1.18- Banner

Admin can also see the orders that have been placed by the customers. Admin can see the customer name, shipping address, total price, shipping cost, order date, payment method, confirmation status and

delivery status. Admin can change confirmation status and delivery status. Admin can also see the auto generated invoice and can print the invoice directly. These orders can be deleted if the admin wants.

The following figure 4.1.19 is the layout of Order.

NO	Customer Name	Shipping Address	Total Price	Shipping Cost	Order Date	Payment	Confirmation Status	Delivery Status	Action
1	Abhi	Name: Abhi Email: abhi@gmail.com Phone: 9876543210 Address: Unnamed ZIP: 12345 City: India	3740	30	27/05/2020	cash on delivery	Confirmed	Delivered	[Edit] [Delete]

Figure 4.1.19- Order

Admin can see the customer list. Customers who are signed up in this site are listed in this list. Admin can Search any customer by the name, email address, city, country or ZIP code. Admin can delete customer from this section.

The following figure 4.1.20 is the layout of Customer List.

ID	Customer Name	Email	Address	City	Country	Zip	Action
4	Mahesh Kumar	maheshkumar@gmail.com	West Bengal	Delhi	India	700001	[Delete]
5	Abhi	abhi@gmail.com	Delhi	Delhi	India	110001	[Delete]

Figure 4.1.20- Customer List

Admin can set some settings on this site. Admin can Change Site logo from here.

The following figure 4.1.21 is the layout of LOGO.



Figure 4.1.21- LOGO

Admin can also change the social media link such as Facebook, Twitter, Instagram, Google Plus and YouTube from the settings option.

The following figure 4.1.22 is the layout of All Social Link.

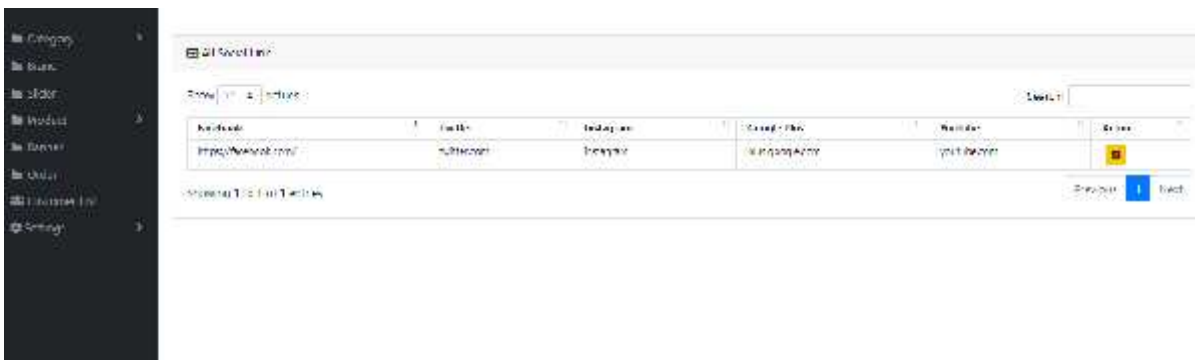


Figure 4.1.22- All Social Link

Admin can also change the address of the Companies Address, Phone Number and Address.

The following figure 4.1.23 is the layout of Address.



Figure 4.1.23- Address

In the Settings option, admin can Enable, disable, Update or change account numbers in the payment method.

The following figure 4.1.24 is the layout of Payment method.

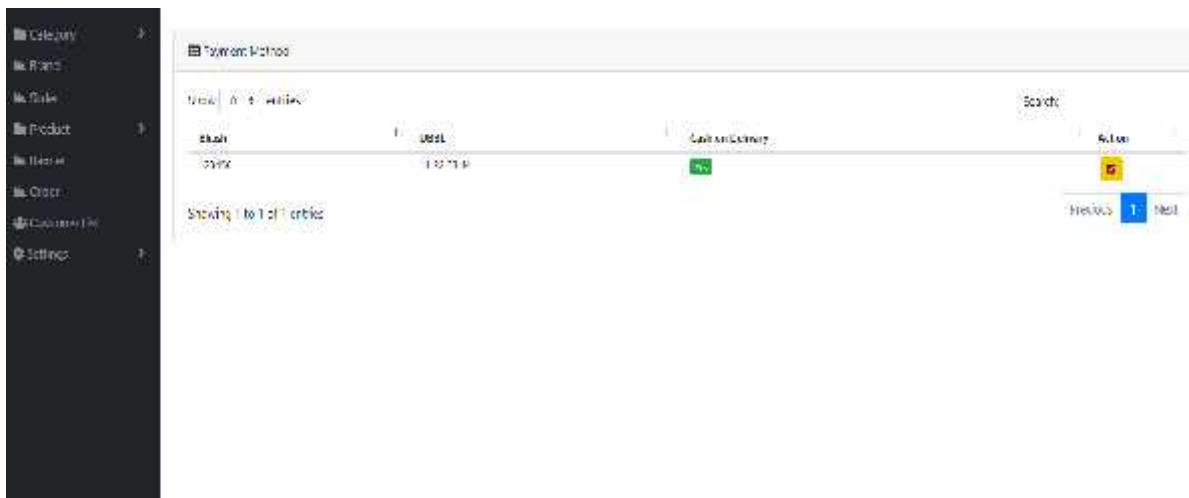


Figure 4.1.24- Payment Method

Shipping cost can be changed from the settings option. Admin can also Enable or disable the Free shipping service from here.

The following figure 4.1.25 is the layout of shipping cost

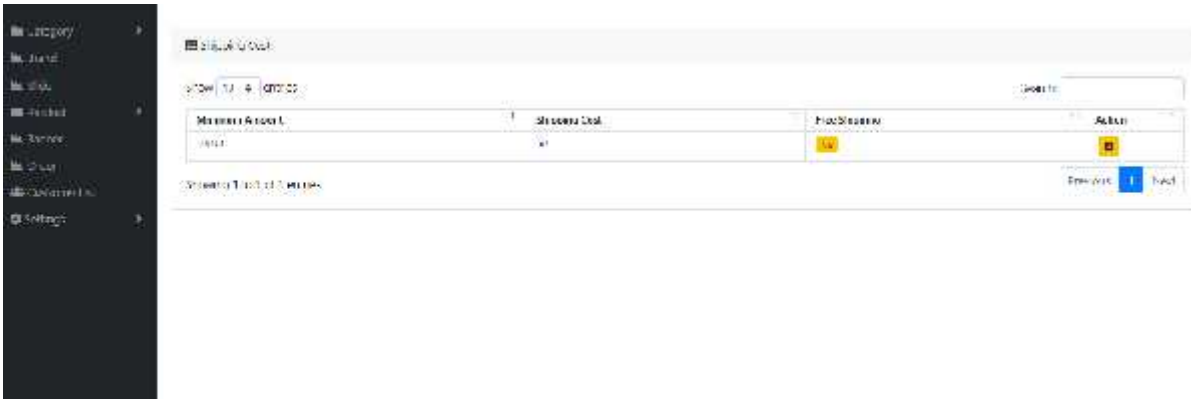


Figure 4.1.25- Shipping cost

Admin can customize the website from the Website setting option. Admin can choose theme primary/second color, header/footer color, Turn ON/OFF the different product sections and can Edit ABOUT Us Page content.

The following figure 4.1.26 is the layout of Website Settings.

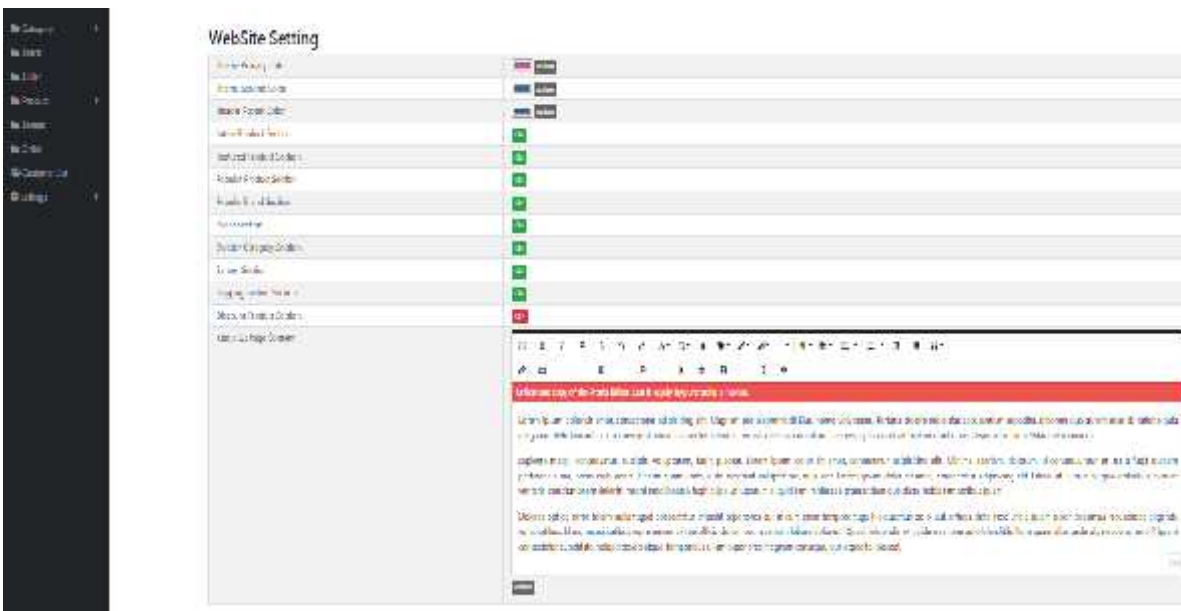


Figure 4.1.25- Website Setting

## 4.2 Back-end Design

In the back-end of this application we have worked with php, MySQL, Ajax for the user interface and interaction with front-end to database. We have designed database according to the design and user interactivity. Every option and UI customizable from admin panel which has done in back-end. Cart add and update price calculation, shipping cost calculation everything is calculated in back-end.

```
<?php
if ($result_sc['free_shipping']==1) {
    $_SESSION['totalAmount'] = $total;
    $_SESSION['shipping_way']=1;
    $_SESSION['shipping_cost'] = 0;

    ?>

    <td colspan=""><b>Free Shipping</b></td>
    <td colspan=""><b>₹0</b></td>

<?php }
else {
    if ($total>=$result_sc['min_amount']) {
        $_SESSION['totalAmount'] = $total;
        $_SESSION['shipping_way']=0; $_SESSION['shipping_cost'] = 0; ?>
        <td colspan=""><b>Free Shipping</b></td>
        <td colspan=""><b>₹0</b></td>
        <?php }
    else {
        $total = $total + $result_sc['shipping_cost'];
        $_SESSION['totalAmount'] = $total;
        $_SESSION['shipping_way']=0;
        $_SESSION['shipping_cost'] = $result_sc['shipping_cost']; ?>
        <td colspan=""> <b>Shipping Cost</b></td>
        <td colspan=""><b>₹<?php echo $result_sc['shipping_cost']; ?></b></td>

        <?php }
    }?>
```

Figure 4.2.1- Cart Calculation

### 4.3 Interaction Design and UX:



User experience design (UX) is the process of enhancing user satisfaction with a product by improving the usability, accessibility, and pleasure.

UX design is the process of designing (digital or physical) products that are useful, easy to use, and delightful to interact with. It's about enhancing the experience that people have while interacting with your product, and making sure they find value in what you're providing. This is the process of creating products that provide meaningful and relevant experiences to users. This involves the design of the entire process of acquiring and integrating the product, including aspects of branding, design, usability, and function.

A user might not know how to handle a device properly. Thinking on this prospect our application is designed so simply that a user can use it easily.

The following figure 4.3.1 represents Admin activity

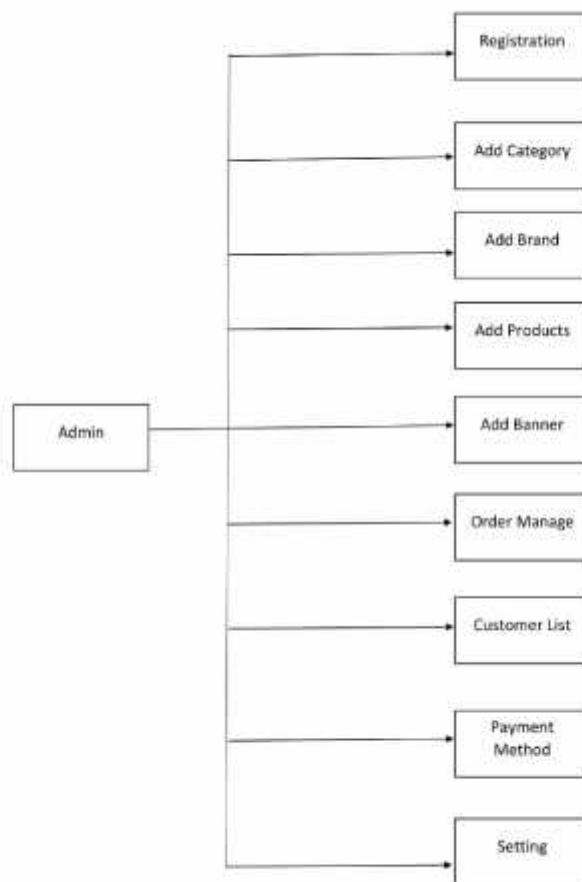


Figure 4.3.1- Admin Activity

The following figure 4.3.2 represents Customer activity.

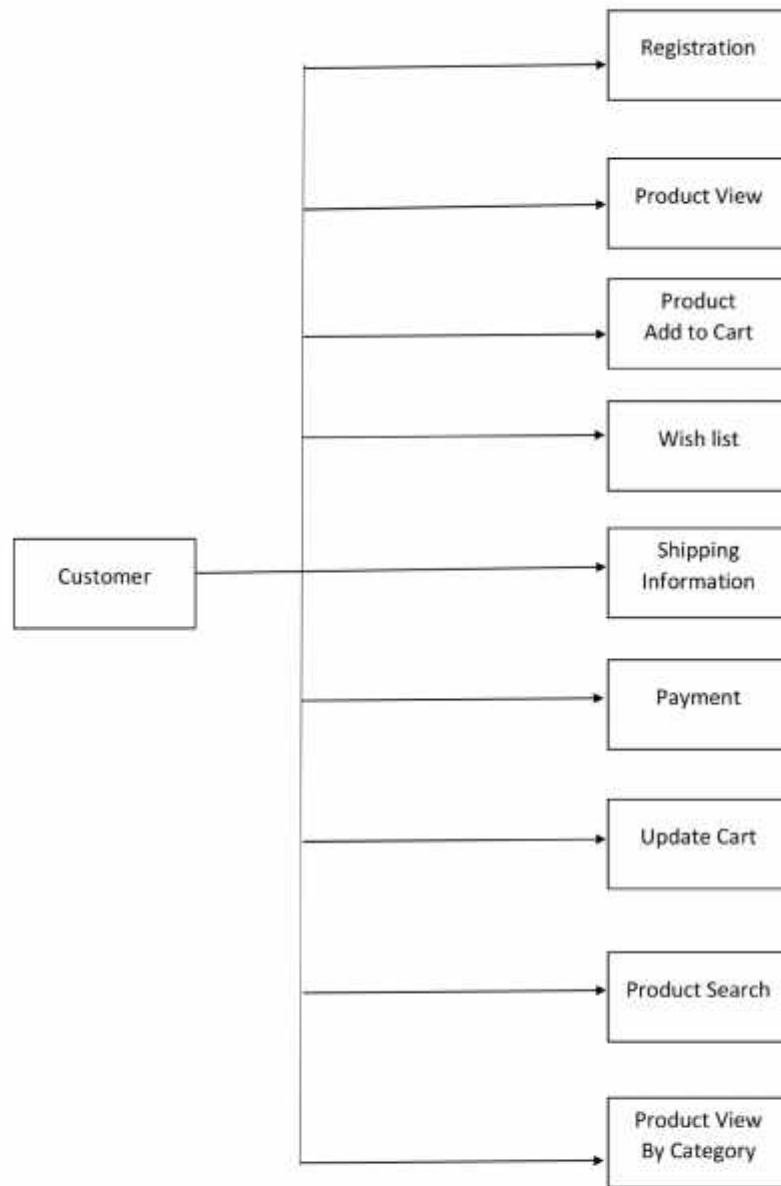


Figure 4.3.2- Customer Activity

#### **4.4 Implementation Requirements:**

Implementation is the carrying out, execution, or practice of a plan, a method, or any design, idea, model, specification, standard or policy for doing something. As such, implementation is the action that must follow any preliminary thinking in order for something to actually happen.

For an implementation process to be successful, many tasks between different departments need to be accomplished in sequence.

The followings things are required to implement this application.

1. Domain
2. Hosting
3. Internet
4. Device ( Computer/Mobile )

This application is a dynamic application. That's why internet is required to syncing data from the database and server. This application has online JAVASCRIPT CDN for which internet is required.

# CHAPTER 5

## IMPLEMENTATION AND TESTING

### 5.1 Implementation of Database

For managing data we used MySQL database mostly for server. We can use MySQL data is in JSON format.

The following table 5.1.1 represents the admin table attribute for MySQL database to use data locally.

**Table 5.1.1- Admin Table**

admin_id	int
admin_id	Varchar
admin_name	Varchar
email_address	Varchar
admin_password	varchar

The following table 5.1.2 represents Company contact table attribute for MySQL database to use data locally.

**Table 5.1.2- Company Contact**

id	int
email	Varchar
phone	Varchar
address	Varchar

The following table 5.1.3 represents Promotion Banner table attribute for MySQL database to use data locally.

**Table 5.1.3- Banner Table**

banner_id	int
banner_img	Varchar

The following table 5.1.4 represents category table attribute for MySQL database to use data locally.

**Table 5.1.4- Category Table**

category_id	int
category_name	Varchar

The following table 5.1.5 represents customer information table attribute for MySQL database to use data locally.

**Table 5.1.5- Customer information**

customer_id	int
fullname	Varchar

email	Varchar
password	Varchar
address	Varchar
city	Varchar
country	Varchar
zip	Varchar

The following table 5.1.6 represents company details table attribute for MySQL database to use data locally.

**Table 5.1.6- Company details**

id	int
logo_img	Varchar
shop_name	Varchar
date	TIMESTAMP

The following table 5.1.7 represents the brand table attribute for MySQL database to use data locally.

**Table 5.1.7- Brand Table**

manufacture_id	int
manufacture_name	Varchar
brand_image	Varchar

The following table 5.1.8 represents the payment table attribute for MySQL database to use data locally.

**Table 5.1.8- payment Table**

id	int
bkash	Varchar
dbbl	Varchar
cod	tinyint

The following table 5.1.9 represents the order table attribute for MySQL database to use data locally.

**Table 5.1.9- order Table**

order_id	int
customer_id	int
shipping_id	int
shipping_way	Varchar
shipping_cost	Varchar

product_id	int
total_price	Varchar
addicmnt	text
product_name	Varchar
product_image	Text
product_qty	Int
order_date	Varchar
bkash	Varchar
dbbl	Varchar
cod	Tinyint
delivary_status	Tinyint
confirmation_status	Tinyint
unique_id	int
active_status	Tinyint

The following table 5.1.10 represents the product table attribute for MySQL database to use data locally.

**Table 5.1.10- Product Table**

product_id	int
product_name	Varchar
category_id	int
sub_cat_id	int
manufacture_id	int
product_price	Varchar
discount_price	Varchar
product_quantity	Tinyint
product_short_desc	Text
product_long_desc	Text
product_image	Text
product_image2	Text
publication_status	Tinyint
featured	Tinyint
popular	Tinyint

The following table 5.1.11 represents the shipping information table attribute for MySQL database to use data locally.

**Table 5.1.11- Shipping information Table**

shipping_id	int
name	Varchar
customer_id	int
email	Varchar
address	Varchar

phone	Varchar
city	Varchar
country	Varchar
zip	Varchar

The following table 5.1.12 represents the shipping cost table attribute for MySQL database to use data locally.

**Table 5.1.12- Shipping cost Table**

id	int
min_amount	Varchar
shipping_cost	Varchar
free_shipping	Tinyint

The following table 5.1.13 represents the site settings table attribute for MySQL database to use data locally.

**Table 5.1.13- Site settings Table**

id	int
theme_color	Varchar
theme_color2	Varchar
header_footer_color	Varchar
latest_product	Tinyint
featured_products	Tinyint
popular_products	Tinyint
popular_brand	Tinyint
slider	Tinyint
sidebar_category	Tinyint
banner	Tinyint
shopping_system	Tinyint
discount_product	Tinyint
aboutus	Text

The following table 5.1.14 represents the slider table attribute for MySQL database to use data locally.

**Table 5.1.14- Slider Table**

slider_id	int
slider_image	Varchar

The following table 5.1.15 represents the social information table attribute for MySQL database to use data locally.

**Table 5.1.15- Socialinformation Table**

id	int
facebook	Varchar
twitter	Varchar
instagram	Varchar
googleplus	Varchar
youtube	Varchar

The following table 5.1.16 represents the sub-category table attribute for MySQL database to use data locally.

**Table 5.1.16- Sub-category Table**

sub_cat_id	Int
category_id	Int
sub_cat_name	Varchar

The following table 5.1.17 represents the temporary cart table attribute for MySQL database to use data locally.

**Table 5.1.17- Temporary cart Table**

cart_id	int
session_id	int
product_id	int
product_name	Varchar
product_price	Varchar
product_image	Varchar
addicmnt	Text
product_qty	Tinyint

The following table 5.1.18 represents the wishlist table attribute for MySQL database to use data locally.

**Table 5.1.18- Wishlist Table**

wishlist_id	Int
customer_id	Int
product_id	Int

## 5.2 Implementation of Front-end Design:

After gathering all the information and research about Exam seat management we came up with the implementation process. We gathered all data and made a demonstration design as PSD file. After completing demonstration designing we started working on front-end design. We have used HTML, CSS, Bootstrap and JavaScript to design the front-end. After a conversion about our project and according to my capability we did the following procedure.

## 5.3 Implementation of Interactions:



Here to make my system interactive I have implemented responsive UI for better user experience. In the cases make things easy we use icon, text link and button. The system design of my application is user friendly. The architecture of a software system defines that system in terms of components and interactions among those components.

In real world, interaction can found almost everywhere. Interaction is the key to make a system dynamic and attractive to user. It's very necessary to make a system interactive and we also try to. As mentioned in earlier, we also include some unique feature to interact our system. Only admin has access to create another admin for the admin panel.

## 5.4 Testing Implementation

System Testing is a level of the software testing where complete and integrated software is tested. The purpose of this test is to evaluate the system's compliance with the specified requirements. Definition by ISTQB. System testing: The process of testing an integrated system to verify that it meets specified [17]. Testing implementation is process of testing for implementation of a system, where a tester or system architect will see cases and specification, is it implementable or have limitations to develop this system.

Test Case	Test Input	Expected Outcome	Obtained Outcome	Tested on
Admin login	Username & Password	Login Successful	Successful	28-08-2019
Add Category	Category name	Category added	Successful	28-08-2019
Add sub-category	Sub-category name & Category name	Sub-category added	Successful	28-08-2019
Delete Category	Category ID	Category deleted	Successful	01-09-2019
Delete sub-category	Sub-category ID	Sub-category Deleted	Successful	01-09-2019
Add Brand	Brand name & image	Brand added	Successful	01-09-2019
Edit Brand	Brand name & image	Brand Edited	Successful	03-09-2019
Delete Brand	Brand ID	Brand deleted	Successful	03-09-2019
Add slider	Slider title & Image	Slider added	Successful	03-09-2019
Delete Slider	Slider ID	Slider deleted	Successful	04-09-2019
Add products	Product information	Product added	Successful	04-09-2019
View Products	View product page	List of all product	Successful	07-09-2019
View Individual product	Product ID	Details of individual product	Successful	07-09-2019

Edit product	Product information & ID	Product updated	Successful	10-09-2019
Delete product	Product ID	Product deleted	Successful	10-09-2019
Edit Banner	Banner Image	Banner edited	Successful	10-09-2019
Order	Order page URL	List of all order	Successful	10-09-2019
View order details	Order ID	Individual order details	Successful	12-09-2019
Invoice	Order ID	Invoice for individual order	Successful	12-09-2019
Customer list	Customer list URL	All customer List	Successful	12-09-2019
Settings	Individual Settings page URL and Settings Data	Settings Updated	Successful	20-09-2019
Add to cart	Product ID	Product added to cart	Successful	20-09-2019
Product view	Product ID	Individual product view	Successful	20-09-2019
Wishlist	Product ID	Product added on wishlist	Successful	27-09-2019
Customer Login	Username & Password	Login successful	Successful	27-09-2019
Customer registration	Customer information	Registration successful	Successful	28-09-2019
View cart	Cart URL	List of cart	Successful	02-10-2019
Update cart	Product quantity	Cart updated	Successful	02-10-2019
Checkout	Shipping information	Payment page	Successful	05-10-2019
Payment	Select payment method	Order successful	Successful	05-10-2019
Search product	Product name or category	Search result	Successful	05-10-2019

### 5.5 Test Results and Reports

Test report is needed to reflect testing results in a formal way, which gives an opportunity to estimate testing result quickly. It is a document that records data obtained from an evaluation experiment in an organization manner, describe the environmental or operating conditions, and shows the comparison of test results with objectives.

In the previous chapter I have shown that all the test case test input, expected output, actual output and finally we find our results and the test result was quite successful. Our application is satisfied by the user. Usability testing examines the following feature of my application.

1. How easy it is to use the application?
2. How easy it is to learn the application?
3. How convenient is the application to end-user?

So at the end of the development we can carry out the results as the benefits of usability testing to the end of the user or learner.

1. Better quality application.
2. Application is easier to use.
3. Application is more readily accepted by users.
4. Shortens the information for the new users.
5. Better UI for interaction.
6. Some innovative idea for the teacher and student.

## CHAPTER 6

### CONCLUSION AND FUTURE SCOPES

#### 6.1 Discussion and Conclusion:

The aim was to reduce the troubles and problems maintaining an Ecommerce site for the small and medium Enterprises by this system. Anyone with basic knowledge can maintain and can update the site without any trouble and any type of hustle. However, only admin controls the whole system. An admin can manage products, their price, quantity, category background images, advertise image and so on.

This is a very user friendly Ecommerce site. Any new user can find whatever he/she is looking on this site. It is well organized and because of its engaging look, it can draw any user's attention onto this site. It is very easy to use and it is time and effort consuming. This system will be loved to everyone along with the customers as well as the Admin without any pressure. So, I think that, it will give a very effective result.

#### 6.2 Limitations

1. This Ecommerce site has only a single theme. That means it will look the same and maintain the same appearance pattern varies from company to company.
2. Limited to the payment method. This site contains only three types of payment method and these are Bkash, DDBL and cash on Delivery. It cannot attempt any other payment method without these three payment method.
3. The User interface contains less contents. UI is another limitation that this site has.

### **6.3 Scope for Future Development**

1. It is an aim is to make this system as advanced as the current system of popular Ecommerce site.
2. Overcome all the limitations.
3. Implement more natural and engaging theme onto this site.
4. Make the UI/UX more user friendly and make it more responsive so that user from any devices can have the best experience surfing this site.
5. Add the most popular and universal transaction methods like Mobile Banking, MasterCard, visa card and other payment methods which is popular in our country as well as the other region.

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# APPENDICIES

## Appendix A: Project Reflection

The purpose of this appendix is to provide an introduction to Project Reflection. This project was very challenging and enjoyable to us. We enjoyed while developing it. We understood many things during the developing period. We were constantly developing and refining one another's ideas. It was fascinating just how productive our group meetings were. The time seemed to fly and yet we always got a lot done and managed to help another along the way towards the endpoint of having a substantive policy

The following table A1 represents the real life user experience:

Name	No. of User	Rating	Feedback
Ecommerce site for SME	20	4.5	<ol style="list-style-type: none"><li>1. User Friendly.</li><li>2. Useful application.</li><li>3. Effective and Unique idea.</li><li>4. UI could be better.</li></ol>

# ECOMMERCE SITE FOR SME

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## ORIGINALITY REPORT

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25%

10%

0%

25%

SIMILARITY INDEX

INTERNET SOURCES

PUBLICATIONS

STUDENT PAPERS

---

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

---

18%

★ Submitted to Daffodil International University

Student Paper

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Exclude quotes

Off

Exclude matches

Of

Exclude bibliography

Off



