

**E-T: An Online Based Website for T-Shirt Collection**

**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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**DAFFODIL INTERNATIONAL UNIVERSITY**

**DHAKA, BANGLADESH**

**MAY 2021**

## **APPROVAL**

This Project titled “**E-T: An Online Based Website for T-Shirt Collection**”, submitted by Md. Mirazul Islam, ID No: 161-15-7143 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 3 June, 2021.

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## DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Aniruddha Rakshit, Senior Lecturer, Department of CSE** Daffodil International University. I 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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Finally, I must acknowledge with due respect the constant support and patients of my parent.

## **ABSTRACT**

Business is a very important thing in our life. Our daily necessities come through business. Technological advancement has changed many areas also in business areas. People now do business in internet which is e-commerce business. Here, a website project has been made which is an e-commerce project. It is divided into two part-admin part and customer part. Customer chooses products and confirm order. Customer has login module where he/she can see how many products have been bought by him/her in the dashboard. In the admin module, admin confirms orders which has been ordered by the customers. Admin can add/delete new products in the website. Admin can also add/delete categories.

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# CHAPTER 1

## Introduction

### 1.1 Introduction

Business is intimately related to every part of our life. Supplies of our daily necessities come through business. The form of business is changing day by day due to spread of technology. Besides traditional business, people are now prone to e-commerce business. Because it saves time of customers, variety of products can be found in one place, customer receives ordered products in home etc. So, it can be said that it has made business easier for both the customer and seller.

### 1.2 Motivation

Day by day business is becoming online based. To keep pace with this alternation this e-commerce project has been made. Besides, there are some advantages in e-commerce business such as home delivery system where in traditional business customers have to go destined place to collect desired products. Also, it is possible to get more customer in the e-commerce business. Moreover, in some situation like pandemic situation e-commerce is beneficial as customers can't go to the local market place.

### 1.3 Objectives

- Build an e-commerce web application for customers
- Make the application user friendly and effective
- Increasing compatibility of this web application by using data mining applications

## **1.4 Expected Outcomes**

To make a website where the customer can find his desired products without going to anywhere else.

## **1.5 Project Management and Finance**

This project has been managed individually. As it is a web based project and local server has been used primarily, there was no cost implementing the project.

## **1.6 Report Layout**

Following things will be written in this report:

- Background
- Requirements
- Design
  - Front-End
  - Back-End
- Implementation and Testing
- Future Scope

## **CHAPTER 2**

### **Background**

#### **2.1 Introduction**

Trading is an integral part of our daily life. If one has to buy things, he had to go to local market area. Technological development has come with many changes in various areas along with business area. By using Internet one can buy or sell necessary things sitting in home. Transactions can also be done through the internet. Such buying and selling in the internet is called e-commerce. Number of e-commerce business is growing in our country.

#### **2.2 Related Works**

There are many works or projects like this exist in online. Such as ajkerdeal.com, daraz.com.bd, bagdoom.com etc. Ajkerdeal and Daraz are online market place based e-commerce. Merchants sell products there.

#### **2.3 Comparative Analysis**

In online market place-based e-commerce, authority is not responsible about the quality of the products. Besides, different price of the same product is also seen. The reason behind this is, in this type of e-commerce, merchants supply the products and they also fix the price of the products.

But this e-commerce site is not market place rather it is an owner owned site. So, there will be no merchants here. Owner himself will supply products and determine price of the products.

## **2.4 Scope of the project**

Scope of the project means determining and documenting project goals, tasks, costs etc. Goal of this project is to build a single owner owned e-commerce web application. There are some tasks to be implemented in this project such as front-end and back-end design. As this is a web application based project and local server is used to work primarily, there was no cost implementing the project. [1]

## **2.5 Challenges**

- Loading Speed: Necessary steps have been taken to enhance loading speed.
- Security: Necessary steps have been taken to enhance security.

# CHAPTER 3

## Requirement specification

### 3.1 Business Process Modeling

Business Process Modeling Notation (BPMN) is a method of illustrating business processes in the form of a diagram similar to a flowchart. Bpmn of this e-commerce website: [6]

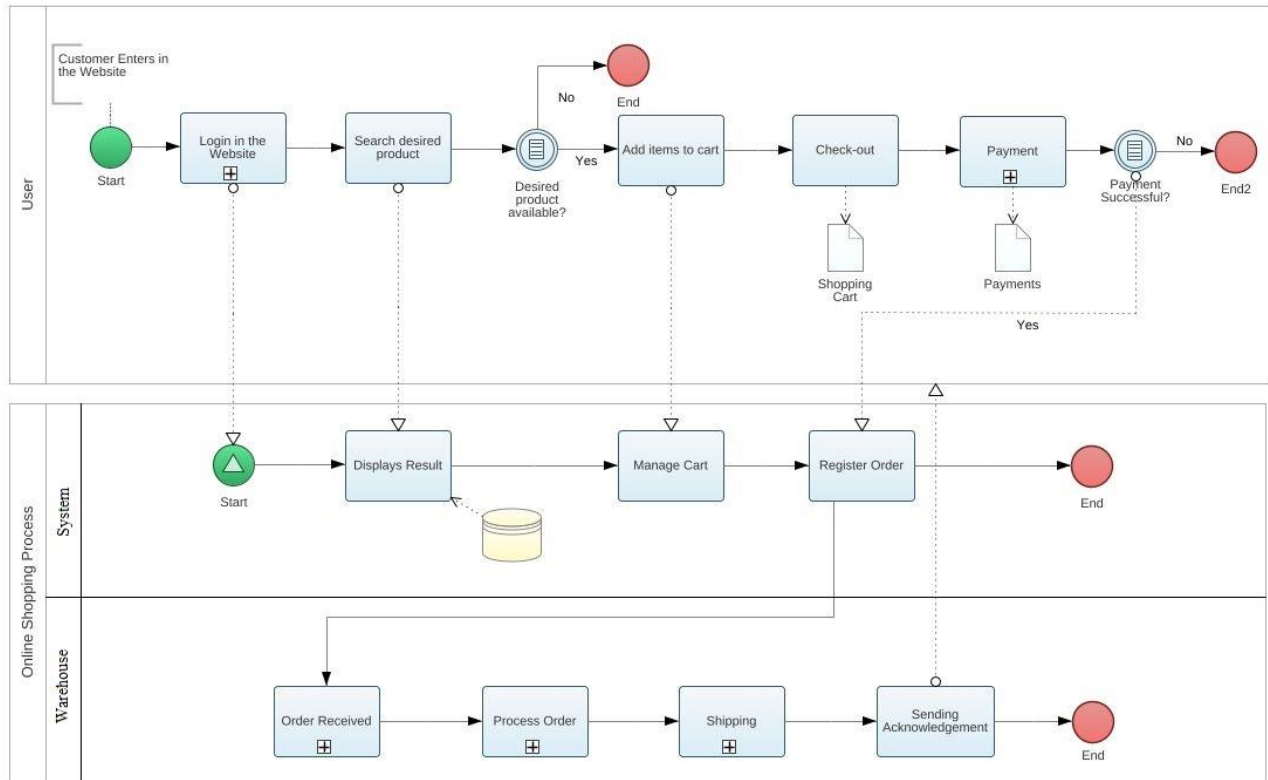


Figure 3.1.1: Business Process modeling

### 3.2 Requirement Collection and Analysis

Requirement collection is an essential part of developing a project. In this e-commerce project t-shirts are the products. 75 types of 6 categories t-shirts are available here. Here images of the t-shirts have been collected according to age and gender.

### 3.3 Use case Modeling and Description

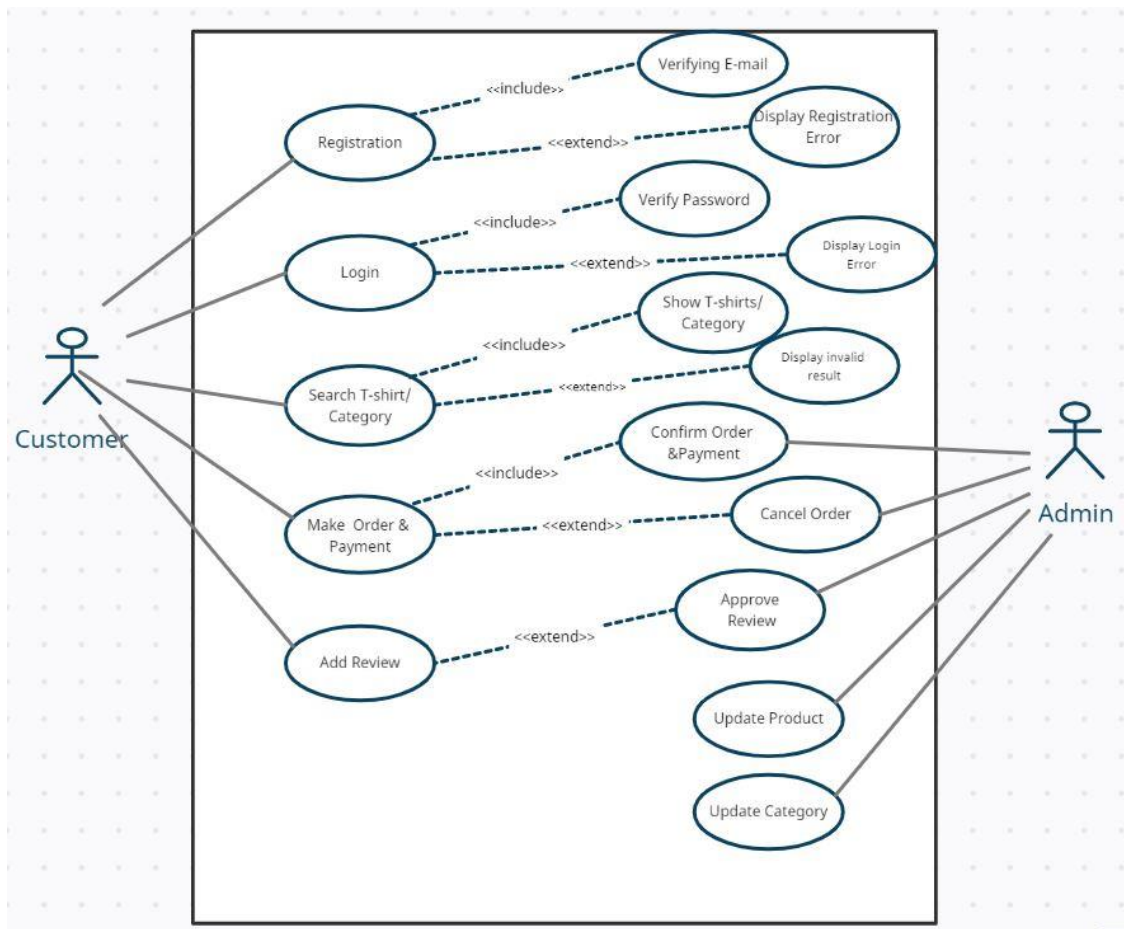


Figure 3.3.1: Use Case Modeling



Table 1: Use case Description

Use Case No	1.1
Use Case Name	Registration
Actor	Customer
Description	Allowing customers to register to the system.
Precondition	Customer should remain in the registration page.
Trigger	Click the “Registration” button.
Flow of Events	<ul style="list-style-type: none"> <li>• There are four text fields in the registration form- name, e-mail address, password, confirm password.</li> <li>• A unique e-mail address is required.</li> <li>• Password and confirm password must same.</li> <li>• Fill up all the text fields and click Register button.</li> </ul>
Post Condition	No post condition.

Use Case No	1.2
Use Case Name	Login
Actor	Customer
Description	Allowing customers to log in the system
Precondition	Customer must be registered.
Trigger	Click the “Login” button.
Flow of Events	<ul style="list-style-type: none"> <li>• Two text fields in the Login form- e-mail address and password.</li> <li>• E-mail address has to be valid.</li> <li>• Password must be at least 8 characters long.</li> <li>• Fill up all the text fields and click Login button.</li> </ul>
Post Condition	No post condition.

Use Case No	1.3
Use Case Name	Search T-shirt/Category
Actor	Customer

Description	Allowing customer to search specific item and specific category items.
Precondition	No pre condition.
Trigger	Click over the search button.
Flow of Events	<ul style="list-style-type: none"> <li>• There is a text input field in the search field.</li> <li>• Type desired item or category.</li> </ul>
Post Condition	No post condition.

Use Case No	1.4
Use Case Name	Make Order & Payment
Actor	Customer
Description	Allowing customer to make order and payment
Precondition	Customer has to be registered.
Trigger	
Flow of Events	<ul style="list-style-type: none"> <li>• Customer chooses items then sends in the cart.</li> <li>• Then go to Checkout.</li> <li>• Provide shipping details.</li> <li>• Click Confirm and Pay button.</li> </ul>
Post Condition	No post Condition.

Use Case No	1.5
Use Case Name	Add Review
Actor	Customer
Description	Allowing customer to give review on products.
Precondition	Customer has bought the product.
Trigger	“Reviews” section on the page.
Flow of Events	<ul style="list-style-type: none"> <li>• There are five text fields in the review section-name, order id, comment, rating and details.</li> <li>• Fill all the text fields and click Submit button.</li> </ul>
Post Condition	No post condition.

Use Case No	1.6
Use Case Name	Update Products
Actor	Admin
Description	Allowing admin to add, edit, delete product.
Precondition	Admin has to be logged in.
Trigger	“Add New Products” on products section.
Flow of events	<ul style="list-style-type: none"> <li>• Admin Log In in the website and goes to product section.</li> <li>• Click “Add New Products”.</li> <li>• There are eleven fields- Name, Price, Stock, Discount, Shipping Cost, Attributes, Description, Category, Image, Availability and Active.</li> <li>• Fill all the fields and click Add button.</li> </ul>
Post Condition	No post condition.

Use Case No	1.7
Use Case Name	Update Category
Actor	Admin
Description	Allowing admin to add, edit, delete category.
Precondition	Admin has to be logged in.
Trigger	“Add New Category” on category section.
Flow of events	<ul style="list-style-type: none"> <li>• Admin Log In in the website and goes to product section.</li> <li>• Click “Add New Category”.</li> <li>• There are four fields- Name, Image, Description and Tag.</li> <li>• Fill all the fields and click Add button.</li> </ul>
Post Condition	No Post Condition.

### 3.4 Logical data Model

A logical schema can be defined as the design of the database at its logical level. At this level, data can be described as certain types of data records that can be stored in the form of data structures. However, the internal details (such as an implementation of data structure) will be remaining hidden at this level.[7]

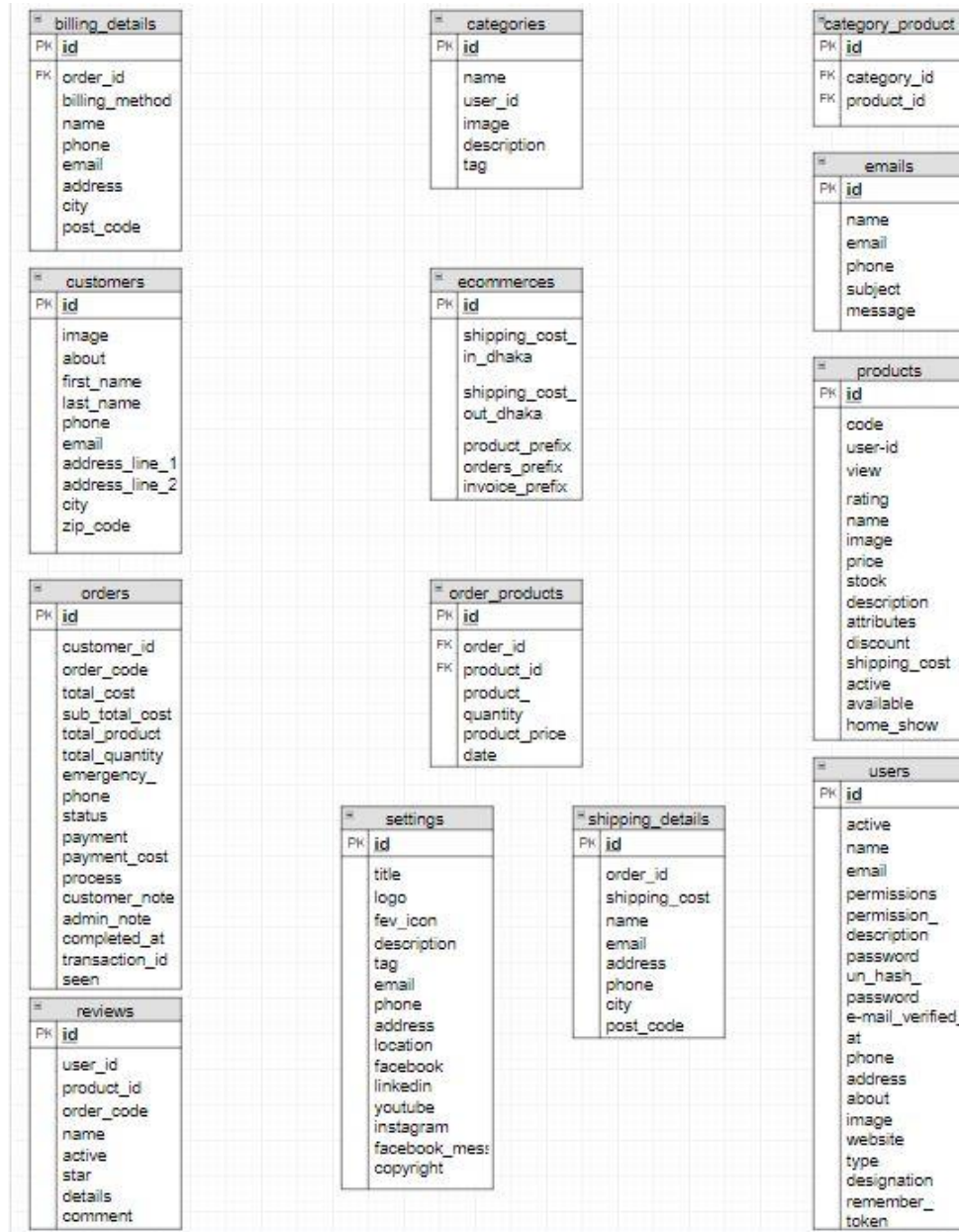


Figure 3.4.1: Logical Data Model

### 3.5 Design Requirements

- Designing Tools: HTML, CSS and its framework BOOTSTRAP, JavaScript and its library jQuery are used in this web application.
- Architecture Design:
  - User comes to the browser and enters the website address
  - Browser sends request to server for the web page
  - Server fetches data from the database and sends it to the browser
  - User sees the web page in the browser

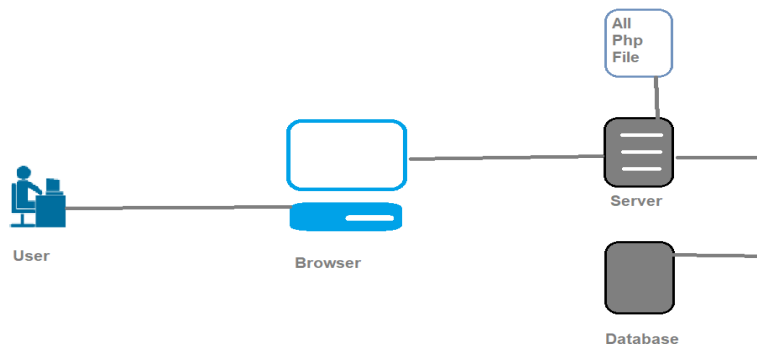


Figure 3.5.1: Architecture Design

# CHAPTER 4

## Design specification

### 4.1 Front-End Design

Front end is the visual interface user can see. To develop the front-end of this web application HTML, CSS, Bootstrap and JavaScript have been used.

- HTML & CSS: Layout of this web application has been built using HTML and CSS.
- Bootstrap: Bootstrap makes a web site responsive. It has been used so that the site can adjust to all devices.
- JavaScript: JavaScript has made the website interactive. All the click events, loading events have been built by JavaScript.

### Front end design Screenshots

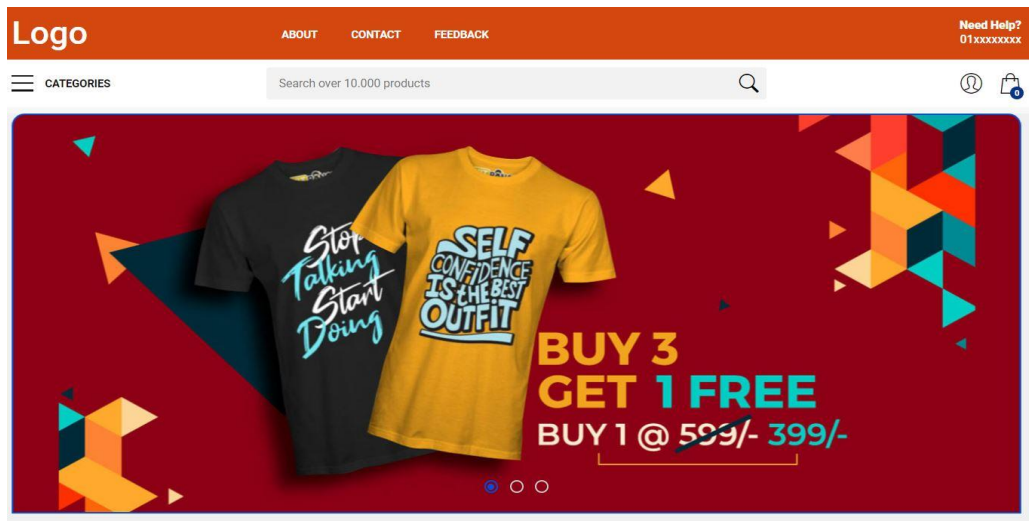


Figure 4.1.1: Index Page

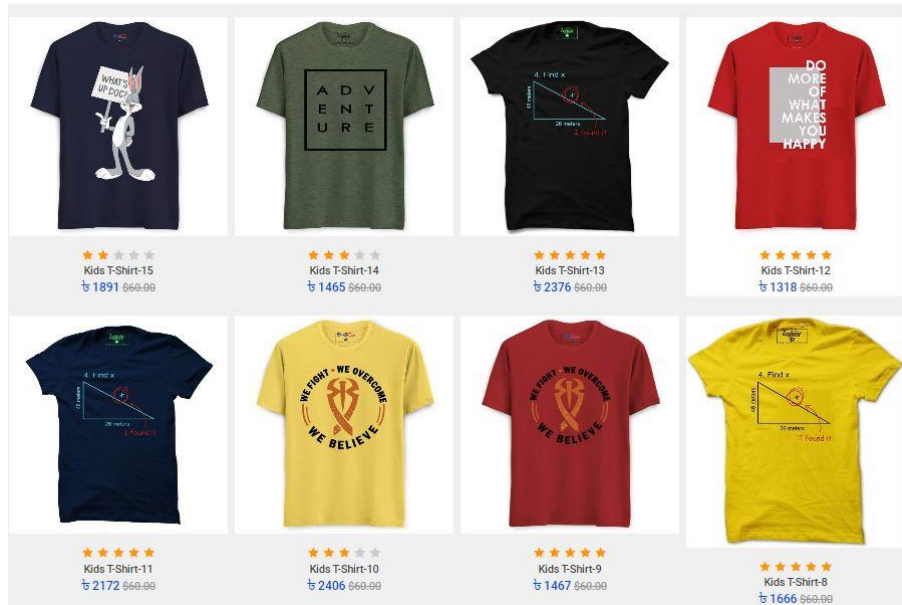


Figure 4.1.2: Index Page



Figure 4.1.3: Index Page

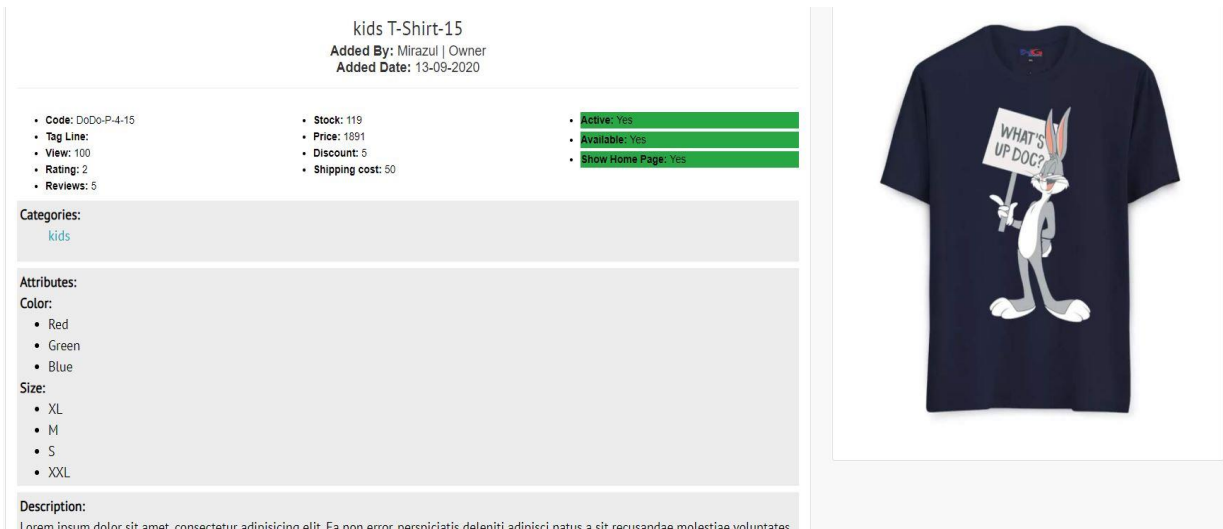


Figure 4.1.4: Product Description

Home
Registration

E-Mail Address

Password

[Login](#)

[Forgot Your Password?](#)

Remember Me

Figure 4.1.5: Login



DoDo Login

Name

E-Mail Address

Password

Confirm Password

**Register**

Figure 4.1.6: Registration

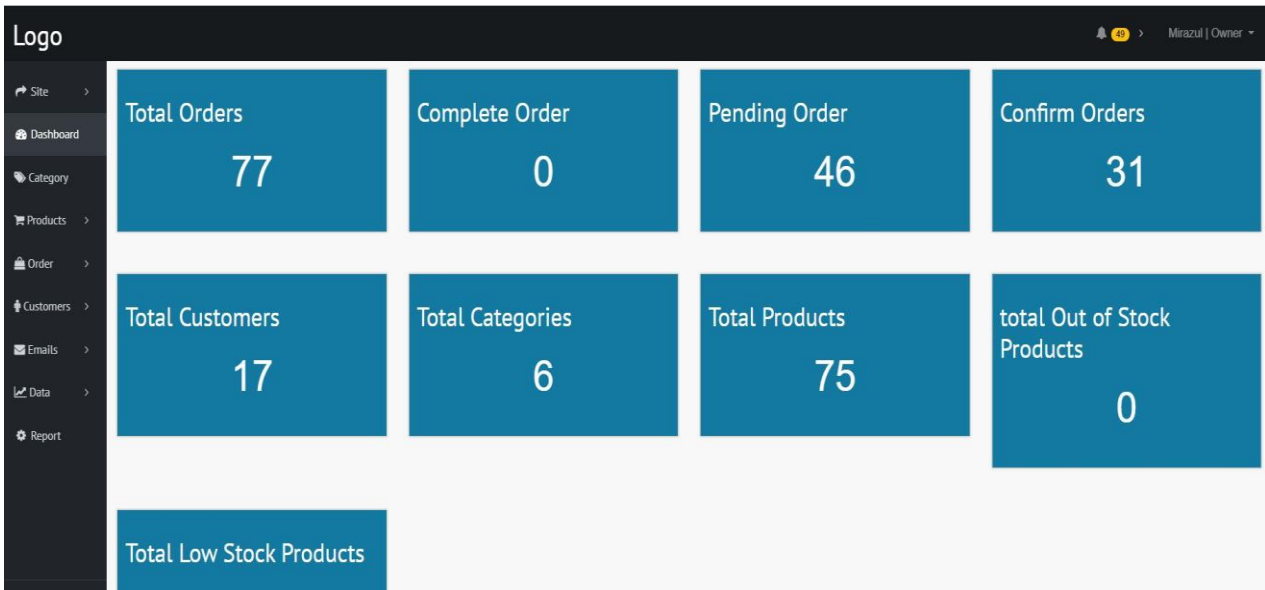


Figure 4.1.7: Admin Dashboard

No	Name	Code	Image	Stock	Date	Confirm	Action
1	kids T-Shirt-15	DoDo-P-4-15		119	2020-09-13	Active	
2	kids T-Shirt-14	DoDo-P-4-14		74	2020-09-13	Active	
3	kids T-Shirt-13	DoDo-P-4-13		54	2020-09-13	Active	
4	kids T-Shirt-12	DoDo-P-4-12		150	2020-09-13	Active	
5	kids T-Shirt-11	DoDo-P-4-11		125	2020-09-13	Active	
6	kids T-Shirt-10	DoDo-P-4-10		141	2020-09-13	Active	
7	kids T-Shirt-9	DoDo-P-4-9		50	2020-09-13	Active	
8	kids T-Shirt-8	DoDo-P-4-8		125	2020-09-13	Active	
9	kids T-Shirt-7	DoDo-P-4-7		127	2020-09-13	Active	

Figure 4.1.8: All Products

Cart page

PRODUCTS	PRICE	QUANTITY	SUBTOTAL
kids T-Shirt-15	₹ 1891	- 4 +	₹ 7564
kids T-Shirt-14	₹ 1465	- 3 +	₹ 4395
kids T-Shirt-7	₹ 2291	- 4 +	₹ 9164
boy T-Shirt-7	₹ 1143	- 6 +	₹ 6858
<b>TOTAL</b>			<b>₹ 27981</b>
<a href="#">Proceed to Checkout</a>			

Figure 4.1.9: Cart and Checkout

### 1. User Info and Billing address

Shipping Details Moinul Islam

Moinul Islam

moinul975@gmail.com

Mirpur, Dhaka

Dhaka 1234

013xxxxxxxxx

Billing

### 2. Payment and Shipping

Credit Card

Paypal

Cash on delivery

Bank Transfer

### 3. Order Summary

4 x kids T-Shirt-15	₳ 7564
3 x kids T-Shirt-14	₳ 4395
4 x kids T-Shirt-7	₳ 9164
6 x boy T-Shirt-7	₳ 6858
<b>Subtotal</b>	<b>₳ 27981</b>
<b>Shipping</b>	<b>₳ 60</b>
<b>TOTAL</b>	<b>₳ 28041</b>

Register to the Newsletter.

**Confirm and Pay**

Figure 4.1.10: Payment














No	Name	Image	Total Products	Date	Action
1	boy		15	2020-09-13	  
2	girl		15	2020-09-13	  
3	men		15	2020-09-13	  
4	women		15	2020-09-13	  
5	kids		15	2020-09-13	  
6	men and women		0	2020-09-13	  

Figure 4.1.11: Categories





















No	Name	Email	Phone	Total Order	Action
1	Nasir   Customer-1	customer1@gmail.com	01637017960	8	 
2	Kamrul   Customer-2	customer2@gmail.com	01637017961	7	 
3	Mim   Customer-3	customer3@gmail.com	01637017962	6	 
4	Sakib   Customer-4	customer4@gmail.com	01637017963	4	 
5	Noman   Customer-5	customer5@gmail.com	01637017964	4	 
6	Arafat   Customer-6	customer6@gmail.com	01637017965	4	 
7	Imam   Customer-7	customer7@gmail.com	01637017966	9	 
8	Sumon   Customer-8	customer8@gmail.com	01637017967	4	 
9	Jabed   Customer-9	customer9@gmail.com	01637017968	2	 
10	Mamun   Customer-10	customer10@gmail.com	01637017969	2	 

Figure 4.1.12: Customer list




























No	Name	Email	Phone	Subject	Date	Action
1	user-0	user-0@gmail.com	0163701920	Subject-0	13-09-2020	  
2	user-1	user-1@gmail.com	0163701921	Subject-1	13-09-2020	  
3	user-2	user-2@gmail.com	0163701922	Subject-2	13-09-2020	  
4	user-3	user-3@gmail.com	0163701923	Subject-3	13-09-2020	  
5	user-4	user-4@gmail.com	0163701924	Subject-4	13-09-2020	  
6	user-5	user-5@gmail.com	0163701925	Subject-5	13-09-2020	  
7	user-6	user-6@gmail.com	0163701926	Subject-6	13-09-2020	  
8	user-7	user-7@gmail.com	0163701927	Subject-7	13-09-2020	  
9	user-8	user-8@gmail.com	0163701928	Subject-8	13-09-2020	  
10	user-9	user-9@gmail.com	0163701929	Subject-9	13-09-2020	  

Figure 4.1.13: E-mails from customers































No	Id	Date	Status	Payment	Action
1	BC-e9d4d-	2021-02-12	pending	pending	  
2	BC-bb029-	2021-02-12	pending	pending	  
3	BC-79eaa-	2021-02-12	pending	pending	  
4	BC-9fed0-	2021-02-12	pending	pending	  
5	BC-8f86b-	2021-02-12	pending	pending	  
6	BC-6058b-	2021-02-12	pending	pending	  
7	BC-7b262-	2021-02-12	pending	pending	  
8	BC-4d284-	2021-02-12	pending	pending	  
9	BC-f1c5a-	2021-02-12	pending	pending	  
10	BC-75e7e-	2021-02-12	pending	pending	  

Figure 4.1.14: Orders

No	Name	Image	Stock	Total Order	Total Sell	Date
1	boy T-Shirt-1		129	3	12	13-09-2020
2	boy T-Shirt-2		128	4	12	13-09-2020
3	boy T-Shirt-3		128	2	10	13-09-2020
4	boy T-Shirt-4		136	2	6	13-09-2020
5	boy T-Shirt-5		120	3	7	13-09-2020
6	boy T-Shirt-6		121	3	6	13-09-2020
7	boy T-Shirt-7		100	3	7	13-09-2020
8	boy T-Shirt-8		94	2	6	13-09-2020
9	boy T-Shirt-9		66	4	13	13-09-2020
10	boy T-Shirt-10		150	3	8	13-09-2020

Figure 4.1.15: Sells data

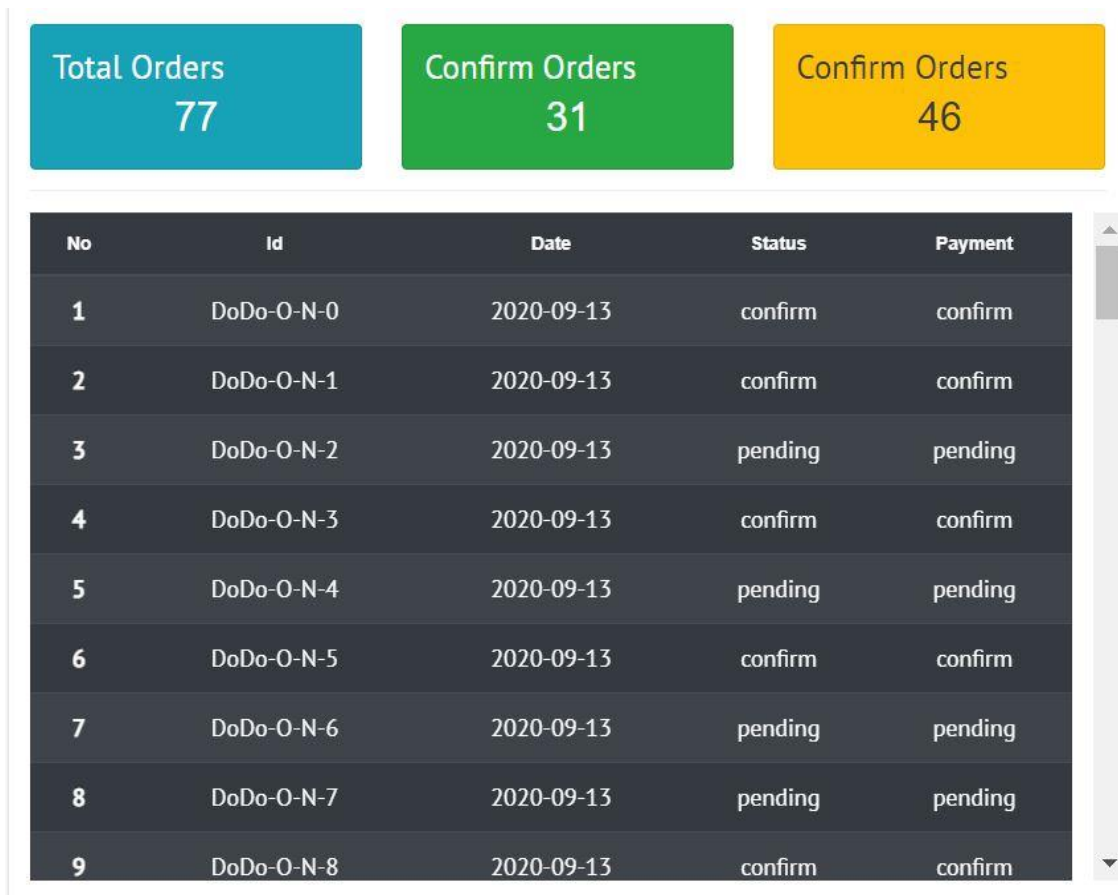


Figure 4.1.16: Report

## 4.2 Back-end Design

PHP, MySQL and Ajax have been used to develop the back-end side of this project.

- **MYSQL**

In this project I used MYSQL for database management, it is the most popular and easy structured query language (SQL)

- **Relation Make Between Two Tables**

If we want to make relation between two tables, we have to use primary key and foreign key.

- DFD Level 0: DFD stands for-Data flow diagram. DFD maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. Here is the dfd level 0 of this e-commerce website: [5]

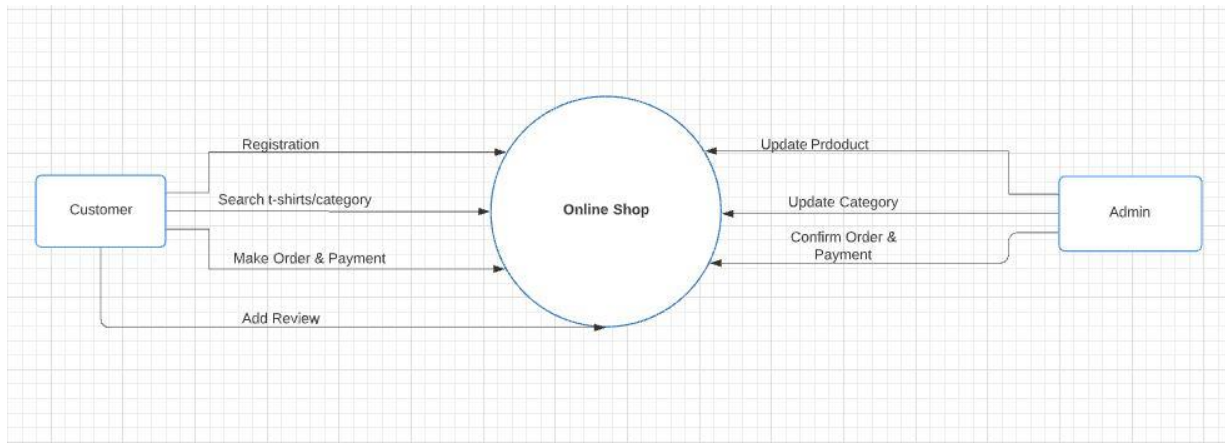


Figure 4.2.1: DFD Level 0

### 4.3 Interaction Design and User Experience (UX)

For interactive design, JavaScript is used in this project. AJAX request is also used to interact with back-end.

### 4.4 Implementation Requirements

As it is a web-based project, following technologies are needed to implement it:

- A computer
- Code Editor
- Server to execute server side language(PHP)
- Necessary library like jQuery and bootstrap

# CHAPTER 5

## Implementation and testing

### 5.1 Implementation of database

- Database table list:

Table	Action	Rows
<input type="checkbox"/> <b>billing_details</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>categories</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>category_product</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>customers</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>ecommerces</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>emails</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>failed_jobs</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>migrations</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>orders</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>order_products</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>password_resets</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>products</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>product_seos</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>reviews</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>seos</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>settings</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>shipping_details</b>	★ Browse Structure Search Insert Empty Drop	
<input type="checkbox"/> <b>users</b>	★ Browse Structure Search Insert Empty Drop	
<b>18 tables</b>	<b>Sum</b>	<b>1</b>

Figure 5.1.1: All tables



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
<input type="checkbox"/>	1 <b>id</b> 🔑	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT
<input type="checkbox"/>	2 <b>active</b>	tinyint(1)			No	1		
<input type="checkbox"/>	3 <b>name</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	4 <b>email</b> 📧	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	5 <b>permissions</b>	text	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	6 <b>permission_description</b>	text	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	7 <b>password</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	8 <b>un_hash_password</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	9 <b>email_verified_at</b>	timestamp			Yes	NULL		
<input type="checkbox"/>	10 <b>phone</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	11 <b>address</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	12 <b>about</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	13 <b>image</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	14 <b>website</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	15 <b>type</b>	varchar(191)	utf8mb4_unicode_ci		No	customer		
<input type="checkbox"/>	16 <b>designation</b>	varchar(191)	utf8mb4_unicode_ci		No	customer		
<input type="checkbox"/>	17 <b>remember_token</b>	varchar(100)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	18 <b>created_at</b>	timestamp			Yes	NULL		
<input type="checkbox"/>	19 <b>updated_at</b>	timestamp			Yes	NULL		

Figure 5.1.2: Users table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
<input type="checkbox"/>	1 <b>id</b> 🔑	bigint(20)		UNSIGNED	No	None		AUTO_INCREMENT
<input type="checkbox"/>	2 <b>customer_id</b>	int(10)		UNSIGNED	No	None		
<input type="checkbox"/>	3 <b>order_code</b> 📧	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	4 <b>total_cost</b>	double			No	None		
<input type="checkbox"/>	5 <b>sub_total_cost</b>	double			No	None		
<input type="checkbox"/>	6 <b>total_product</b>	int(11)			No	None		
<input type="checkbox"/>	7 <b>total_quantity</b>	int(11)			No	None		
<input type="checkbox"/>	8 <b>emergency_phone</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	9 <b>status</b>	varchar(191)	utf8mb4_unicode_ci		No	pending		
<input type="checkbox"/>	10 <b>payment</b>	varchar(191)	utf8mb4_unicode_ci		No	pending		
<input type="checkbox"/>	11 <b>payment_cost</b>	double			No	0		
<input type="checkbox"/>	12 <b>process</b>	double			No	0		
<input type="checkbox"/>	13 <b>customer_note</b>	mediumtext	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	14 <b>admin_note</b>	mediumtext	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	15 <b>completed_at</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	16 <b>transection_id</b>	varchar(191)	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	17 <b>seen</b>	tinyint(1)			No	0		
<input type="checkbox"/>	18 <b>created_at</b>	timestamp			Yes	NULL		
<input type="checkbox"/>	19 <b>updated_at</b>	timestamp			Yes	NULL		

Figure 5.1.3: Orders table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
<input type="checkbox"/>	1 <b>id</b> 🔑	bigint(20)		UNSIGNED	No	None		AUTO_
<input type="checkbox"/>	2 <b>code</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	3 <b>user_id</b>	int(10)		UNSIGNED	No	None		
<input type="checkbox"/>	4 <b>view</b>	int(10)		UNSIGNED	No	0		
<input type="checkbox"/>	5 <b>rating</b>	int(11)			No	0		
<input type="checkbox"/>	6 <b>name</b> 🔑	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	7 <b>slug</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	8 <b>image</b>	varchar(191)	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	9 <b>price</b>	double			No	None		
<input type="checkbox"/>	10 <b>stock</b>	int(11)			No	None		
<input type="checkbox"/>	11 <b>description</b>	mediumtext	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	12 <b>attributes</b>	mediumtext	utf8mb4_unicode_ci		No	None		
<input type="checkbox"/>	13 <b>discount</b>	double			No	0		
<input type="checkbox"/>	14 <b>shipping_cost</b>	double			No	0		
<input type="checkbox"/>	15 <b>active</b>	tinyint(1)			No	0		
<input type="checkbox"/>	16 <b>available</b>	tinyint(1)			No	1		
<input type="checkbox"/>	17 <b>home_show</b>	tinyint(1)			No	0		
<input type="checkbox"/>	18 <b>meta_tag</b>	mediumtext	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	19 <b>meta_description</b>	mediumtext	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	20 <b>meta_keyword</b>	mediumtext	utf8mb4_unicode_ci		Yes	NULL		
<input type="checkbox"/>	21 <b>created_at</b>	timestamp			Yes	NULL		
<input type="checkbox"/>	22 <b>updated_at</b>	timestamp			Yes	NULL		

Figure 5.1.4: Products table

- Database Connection (PHP): To connect with the database, `mysqli_connect` function is used in the PHP file. This function takes four parameters –host name, user name, password of the database and database name.

`mysqli_connect("host name", "username", "password", "database name");`

## 5.2 Implementation of Front-end Design

To implement the front-end HTML, CSS, and JavaScript are used.

### 5.3 Testing Implementation

Table 2: Test Case and Results

Test Case	Input	Expected Output	Actual Output	Result	Test On
1.Front-end design	Tested browsers- Firefox Google Chrome Opera Safari	Display all the page successfully.	Displayed all the page successfully.	Passed	12-3-21
2.Registration Form	Input name, e-mail address, and password	Successful Registration	Successful Registration	Passed	12-3-21
3.Login	Input e-mail address and password	Successful Login	Successful Login	Passed	12-3-21
4.Search t-shirts/category	Input in the search bar	Show t-shirts/category	Show t-shirts/category	Passed	12-3-21
5.Make Order & Payment	Select desired items, go to checkout, provide shipping details, select payment method and then click confirm and pay.	To make order and payment successfully.	Order and payment made successfully.	Passed	12-3-21
6.Add Review	Input name, order ID, comment, rating and details in the review section	Show review successfully	Showed review successfully	Passed	12-3-21
7.Logout	Click on the Logout button	To logout successfully and show index page	Logged out successfully and showed index page	Passed	12-3-21

#### **5.4 Test Results and Reports:**

All test case results are positive. And all the test case are passed, expected outcome and actual outcome are same.

## **CHAPTER 6**

### **Impact on society, environment and sustainability**

#### **6.1 Impact on Society**

E-commerce has changed the way how businesses and customers interact. It affects pricing, product availability, transportation patterns, and consumer behavior. [2]

#### **6.2 Impact on Environment**

E-commerce business models allow for organizations to conduct business without physically commuting. Transportation is responsible for a large number of harmful emissions/pollution, and by reducing an organization's reliance on it, carbon footprint can be reduced. [3]

#### **6.3 Ethical Aspects**

In e-commerce website buyer has to give many personal information such as address, mobile number, e-mail address etc. The owner's responsibility is to keep the buyer's information secure.

#### **6.4 Sustainability Plan**

Sustainability and the future of our planet is an issue that affects all of us as global citizens, and younger shoppers in particular as those who will inherit our future Earth, are starting to take a stand with their dollars. By making efforts toward creating a more sustainable product, supply-chain, or shipping method one may be able to have the win of creating a more sustainable future. [4]

## **CHAPTER 7**

### **Conclusion and future scope**

#### **7.1 Discussion and Conclusion**

The Project (Web application) has been successfully implemented. After uploading the application in server it's all features and functionalities works fine. This application is responsive and user friendly also efficient enough to use.

#### **7.2 Scope for Further Developments**

- Product Request: Customer can request certain product(s) those are not available in the website.
- Taking orders over phone: Customer will be able to order products over phone.
- Data Mining Applications: Data mining applications can be used by using large amount of data from the website.

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# ECommerce Website

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