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An Undergraduate Internship/Project on E-commerce Website

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Independent University, Bangladesh

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An Undergraduate Internship/Project on E-commerce Website

By

Sabbir Hossain Zishan

Student ID: **1920490**

Summer, 2023

Supervisor:
MD. Fahad Monir

Lecturer

Department of Computer Science & Engineering

Independent University, Bangladesh

October 01 , 2023

Dissertation submitted in partial fulfillment for the degree of
Bachelor of Science in Computer Science

Department of Computer Science & Engineering

Independent University, Bangladesh

Attestation

I worked alone to complete the e-commerce website. Bootstrap, HTML, and CSS were the platforms I learned front-end work on, and Python's Django framework was used for back-end work. I used a few of the templates from the bootstrap documentation that I downloaded from their website, and I also used online guides and tutorials for better customization.

Signature	Date
Sabbir Hossain Zishan	
Name	

Attestation

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Signature

16-10-2023

Date

Sabbir Hossain Zishan

Name

Acknowledgement

First, I would like to thank Almighty Allah for granting me this opportunity.
I would like to thank Al Amin Shourov Managing Director/CEO, of Evident Bd Limited for giving me the opportunity to do an internship within the organization.
I would like to thank Masud Rumi for giving me the constant assistance and advice as my external supervisor.
I'd like to express my gratitude to Md. Fahad Monir, Internal Supervisor, lecturer, Department of Computer Science Engineering, Independent University of Bangladesh, forhis constant assistance and advice.
I am incredibly grateful to my department staff members and friends who helped mecomplete this internship.

Letter of Transmittal

October 01, 2023

Subject: Submission of Internship Report on Evident E-commerce Website

Dear Sir,
I have written my internship report on the Evident E-commerce Website as a student at Independent University in Bangladesh. In every step of the planning for this report, I have done my absolute best to adhere to your instructions. To make this report precise and accurate, I have also gathered what I consider to be the most important data. Sincerely, I appreciate your advice during this report's draught. I hope my efforts will be appreciated by you. I have completed the study in its entirety and have made every effort to conduct this research professionally. In fact, if there had been no restrictions, it might have been better. I hope you will evaluate my report while taking the study's limitations into account.

Yours sincerely,
Sabbir Hossain Zishan
ID: 1920490

Evaluation Committee

.....

Signature

.....

Name

.....

Supervisor

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Signature

.....

Name

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Internal Examiner

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Signature

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Name

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External Examiner

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Signature

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Name

.....

Convener

Evaluation Committee

Supervision Panel

Academic Supervisor MD. Fahad Monir	Industry Supervisor

Panel Members

Panel Member 1 Dr. Md. Tarek Habib	Panel Member 2 Mr. Sajed Intenanul

Office Use

11-10-23 Program Coordinator Subrata Kumar Dey	Head of the Department Mahady Hasan

Abstract

Software developer Evident BD Limited, also known as evident, is based in Dhaka, Bangladesh.
Evident BD offers a wide range of services to the domestic and international markets, including business research, e-commerce websites and apps, mobile applications, and web and web applications. During my internship, I was instrumental in the creation of an e-commerce website, which is a crucial component of Evident BD's offerings. I was able to apply what I had learned in the classroom and work closely with seasoned professionals to understand the ins and outs of efficient online shopping platforms thanks to my hands-on experience.

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4. Six element analysis

Chapter 1
Introduction

1.1 Overview/Background of the Work

In this age of digitization and automation, having a website has become increasingly important for any business. The task Masud Rumi, my boss at Evident, has given me is to create a website for an online store. I'll be doing all of the work on my own for this project. Users will be able to browse and buy a variety of products on the website. Users will have the option to add items to their cart and finish their purchases, and it will feature a variety of categories and products. A system for admin control will also be put in place, giving the admin the ability to add, remove, and update both products and categories.

1.2 Objectives

In order to ensure a seamless shopping experience for customers, the project aims to develop a professional and industry-based E-Commerce website with a user-friendly and responsive design that includes login and multiple register options.

1.3 Scopes

During the development of this project some of the features that will be available forthe users are mentioned below:

- Homepage
- Register
- Login
- Products
- Different Categories
- Add to Cart
- Payment Option

Literature Review

2.1 Relationship with Undergraduate Studies

One of my goals as a future computer scientist is to become a developer. My understanding of the technicalities has greatly improved as a result of all the courses I have taken. Additionally, knowledge learned in classes on system analysis and design, database management, and software engineering has been useful.

2.2 Related works

1. I developed a project during system analysis and design that helped me come up with and carry out solutions during my fieldwork. I created an online store project.

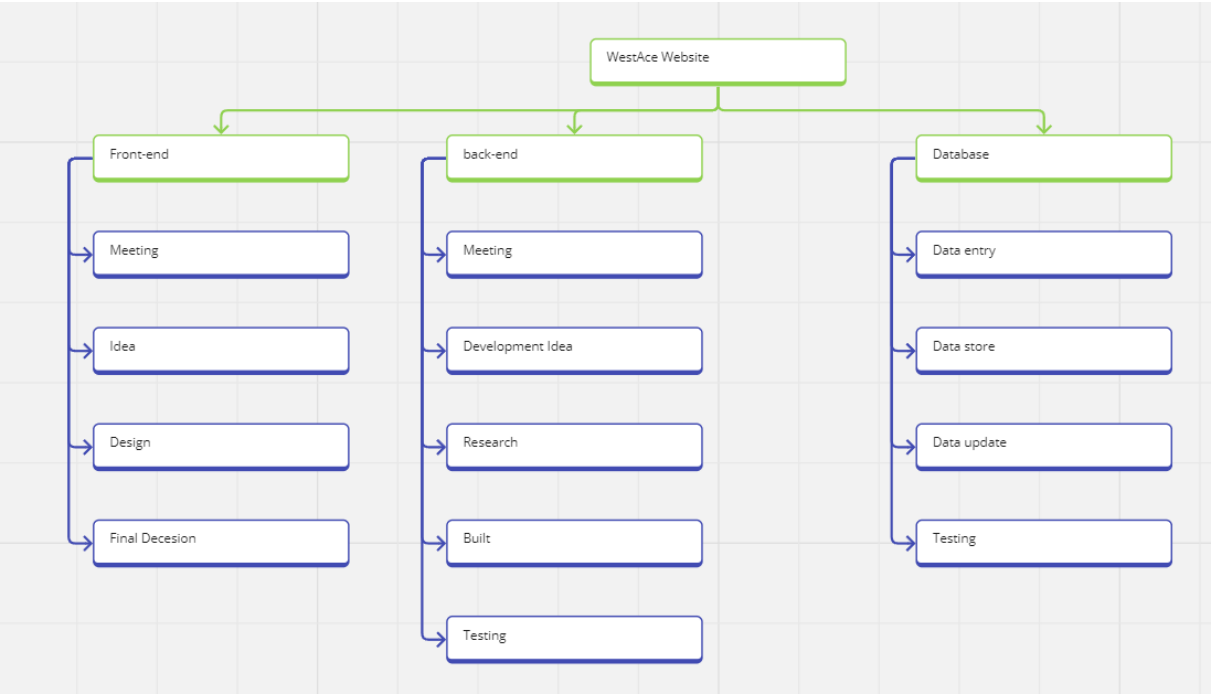
2. I worked on a project involving a post office for my Object-Oriented Programming (OOP) class.

3. I developed websites for a registration system and weather forecasting during the Web Application and Design course.

4. I created a project in database management that involved building a database management system for storing and displaying data.

Project Management & Financing

3.1 Work Breakdown Structure

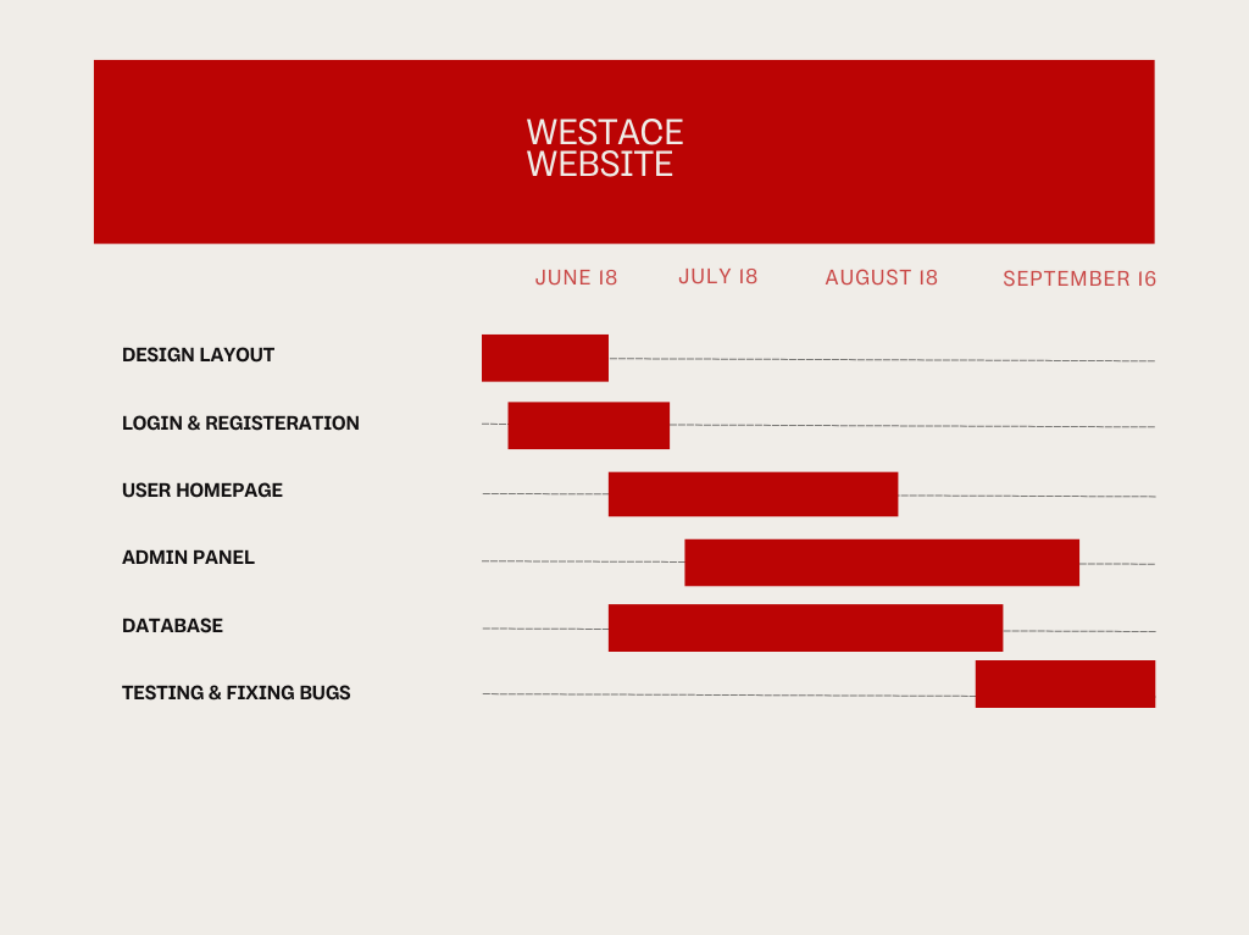


3.2 Process/Activity wise Time Distribution

Activity	Days	Percentage
Design	7	10%
Breakdown	6	10%
Front-end	15	30%
Back-end	19	40%
Testing	7	5%
Bug fixing	6	5%
Total	60	100%

3.3 Gantt Chart

Gantt Chart



3.4 Process/activity wise Resource Allocation

Team Member	Max	Salary
Senior Developer	1	70000
Ui/UX design	1	35000
System Analysist	1	25000
Business Analysist	1	30000
Marketing Team	2	40000
Intern Developer	2	5000

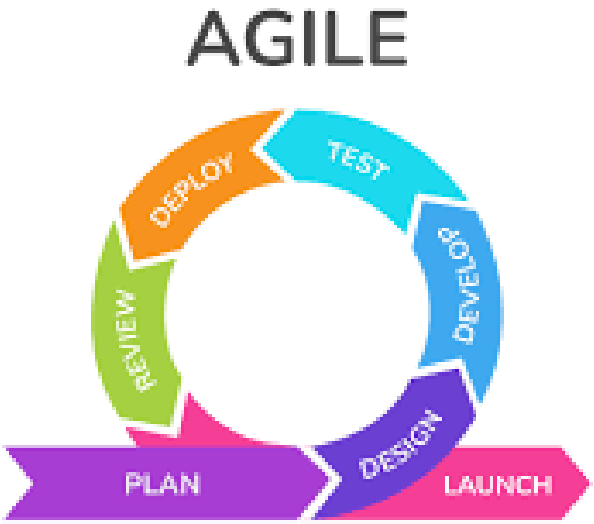
3.5 Estimated Costing

Distribution	Costing
Development	**80000**
Project Management	**70000**
Design	**50000**
Ui/UX	**40000**
Marketing	**30000**
Total	**270000**

Chapter 4
Methodology

The Agile software development technique is a straightforward and efficient methods for integrating a business need into software solutions. Agile software development methodologies involve continuous planning, learning, improvement, team participation,evolutionary development, and early delivery. It promotes an adaptability scope of change. The basic principles of Agile methodology are:

- Satisfy the consumer by delivering functional software
- Accept change, especially if it is introduced late in the development process.
- Continue to build functional software in small increments and on a regular basis.
- Encourage customers and analysts to collaborate on a regular basis.
- Adopt agility while paying close attention to mindful development.



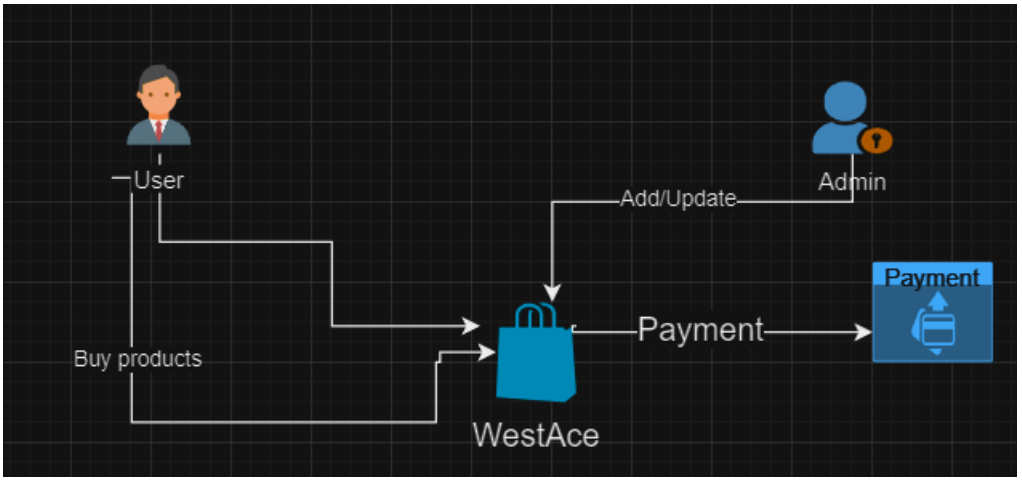
Chapter 5
Body of the Project

5.1 Work Description

In this age of digitization and automation, a website is becoming an increasingly important requirement for any business. My boss Masud Rumi, has given me the task of creating the website for a business that makes products based on the circular economy. To build this project, I'll be working alone. The website's About Us section will give users all the details they need to know about the business, including its Mission and Visions, Core Practices, Locations, etc. If users want to get in touch with the business, there will also be a contact form.

5.2 Requirement Analysis

Rich Picture



Functional and Non-Functional Requirements

Functional Preconditions

- The user may log in and open multiple accounts.
- Users can display and purchase products from a variety of categories.
- Contact form
- Product and category addition, editing, and updating by admin.

Non-Functional Requirements

- Responsiveness
- User-friendly interface
- responsive design
- lightweight website development
- ongoing website maintenance
- readable code that any developer can understand
-

5.3 System Analysis

5.3.1 Six Element Analysis

PROCESS	HUMAN	NON COMPUTING & HARDWARE	COMPUTING & HARDWARE	SOFTWARE	DATBASE	NETWORK & COMMUNICATION
USER REGISTRATION	USER	N/A	COMPUTER/LAPTOP	WEB BROWSER	MYSQL	INTERNET
USER BUY PRODUCTS	USER	N/A	COMPUTER/LAPTOP	WEB BROWSER	MYSQL	INTERNET
ADMIN	ADMIN	N/A	COMPUTER/LAPTOP	WEB BROWSER	MYSQL	INTERNET
USER DATA	ADMIN	N/A	COMPUTER/LAPTOP	WEB BROWSER	MYSQL	INTERNET
SUBMIT FPRMS	USER	N/A	COMPUTER/LAPTOP	WEB BROWSER	MYSQL	INTERNET

5.3.2 Feasibility Analysis

The importance of a feasibility study is based on organizational desire to "get it right" before committing resources, time, or budget. A feasibility study might uncover new ideas that could completely change a project's scope. It's best to make these determinations in advance, rather than to jump in and to learn that the project won't work. Conducting a feasibility study is always beneficial to the project as it gives you and other stakeholders a clear picture of the proposed project. For our project we followed some feasibility analysis steps to make our project market based and they are:

Technical feasibility

This assessment focuses on the organization's technical resources. It helped us organization determine if resources meet capacity and if the technical team can convert ideas into working systems.

Economic feasibility

This assessment typically involves a cost/benefits analysis of the project, helping our organization determine the viability and benefits associated with a project.

Legal feasibility

This assessment investigates whether any aspect of the proposed project conflicts with legal requirements like zoning laws, data protection acts, or social media laws.

Operational feasibility

This assessment involves undertaking a study to analyze and determine whether-and how well-our organization needs can be met by completing the project.

Scheduling feasibility

This assessment is the most important for project success. In scheduling feasibility, our

organization estimated how much time our project will take to complete.

5.3.3 Problem Solution Analysis

Sample problem solution analysis for web development project
Problem: Users are having difficulty completing the checkout process on the e-commerce website.
Solution:

Simplify the checkout process by reducing the number of steps involved.
Add clear and concise instructions to each step of the checkout process.
Provide users with the option to save their shipping and billing information for future purchases.
Offer multiple payment options.
Make it easy for users to contact customer support if they have any problems during the checkout process.
Evaluation:

These solutions are all feasible and relatively cost-effective. They are also likely to have a positive impact on the user experience, as they will make it easier for users to complete the checkout process.
Selection:

All of these solutions are important, but the most important one is to simplify the checkout process. This will have the greatest impact on the user experience.
By implementing these solutions, the e-commerce website can make it easier for users to complete the checkout process, which will lead to increased sales and revenue.
Additional considerations:

Test the checkout process with users to identify any additional problems or areas for improvement.
Monitor the checkout process after the changes are implemented to track user behavior and identify any new problems. Continue to iterate and improve the checkout process over time as needed.

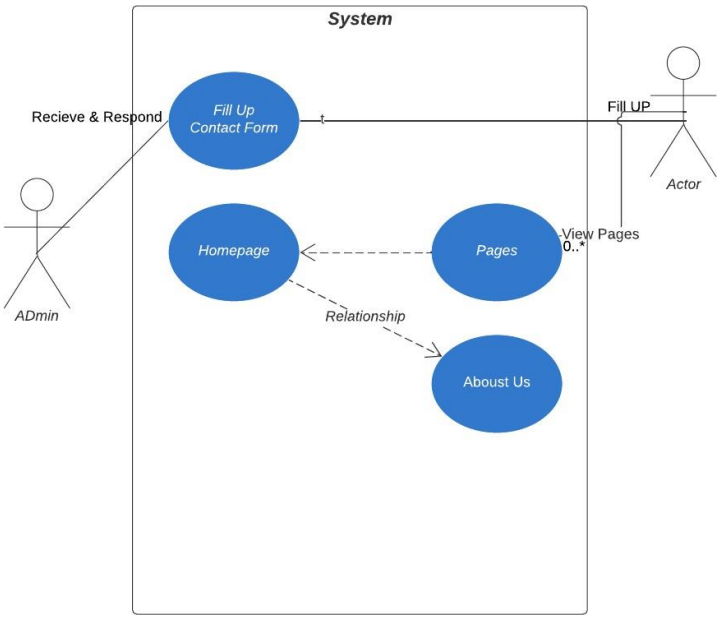
5.3.4 Effect and Constraints Analysis

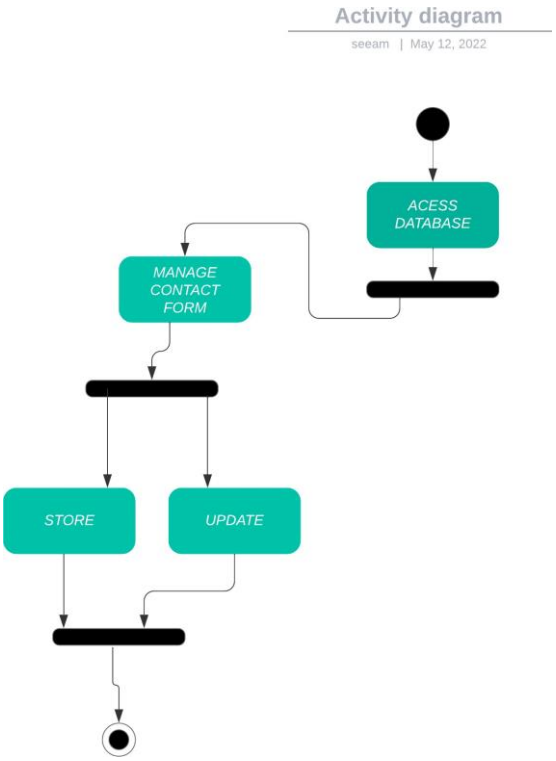
There are a few limitations that must be considered when building any website. Budget, deadline, special features, etc. are a few examples. It came down to the project's budget and design. The most crucial task when creating a website is keeping the end user in mind. Every customer is distinctive in their own way. We must conduct research and understand our target audience before we start designing. The completion of a design takes almost 10 to 15 working days. The project's initial mockup and final design resembled two distinct websites.

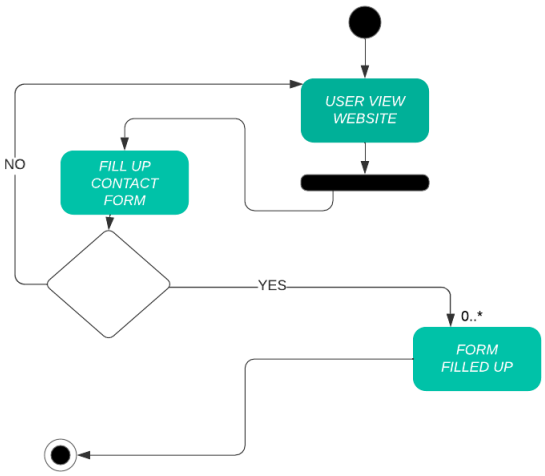
5.4 System Design

A method used by businesses to develop and maintain the systems that carry out their essential functions. The main goal is to increase employee productivity by using computer-based solutions for crucial business tasks. In order to guarantee success, a planned approach must be used.

UML Diagrams




Activity diagram
seeam | May 12, 2022
ACESS DATABASE
MANAGE CONTACT FORM
STORE
UPDATE



Architecture

Scalability: The application should be able to handle increased traffic and load without impacting performance.
Reliability: The application should be able to withstand failures and continue to operate.
Security: The application should be protected from unauthorized access and attacks.
Maintainability: The application should be easy to update and maintain.

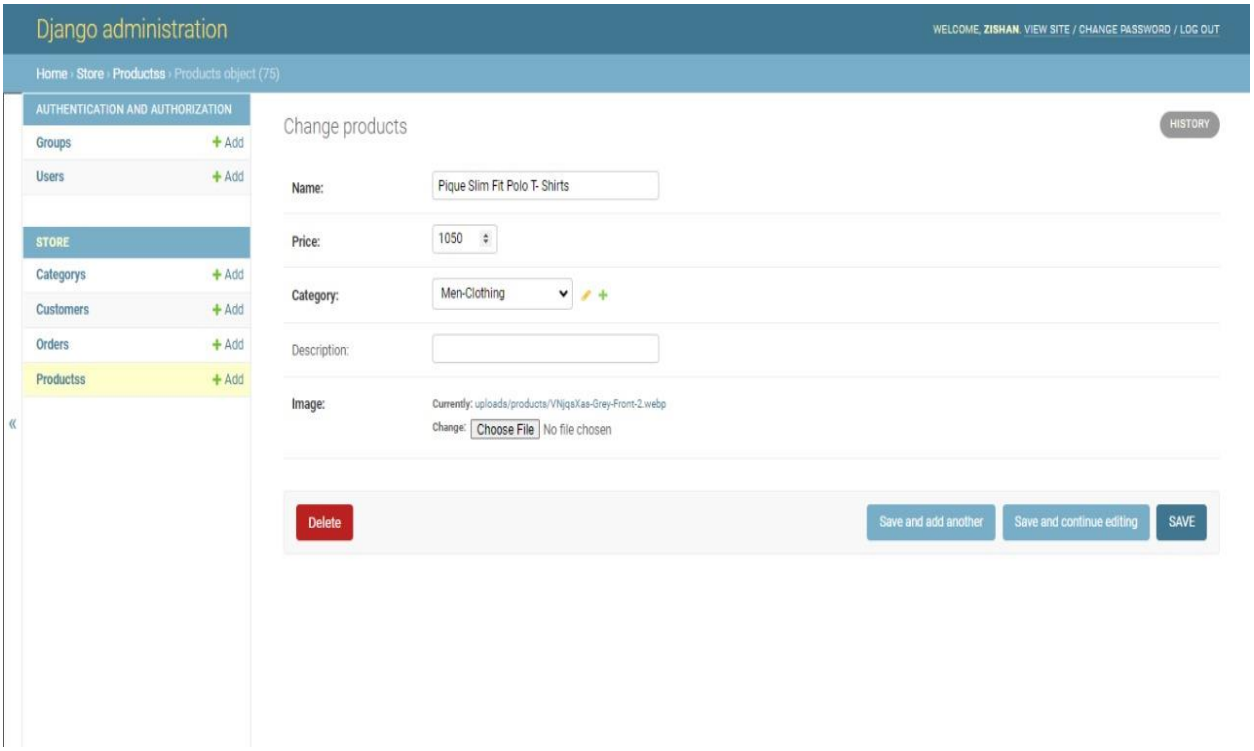
5.5 Implementation

5.6 Testing

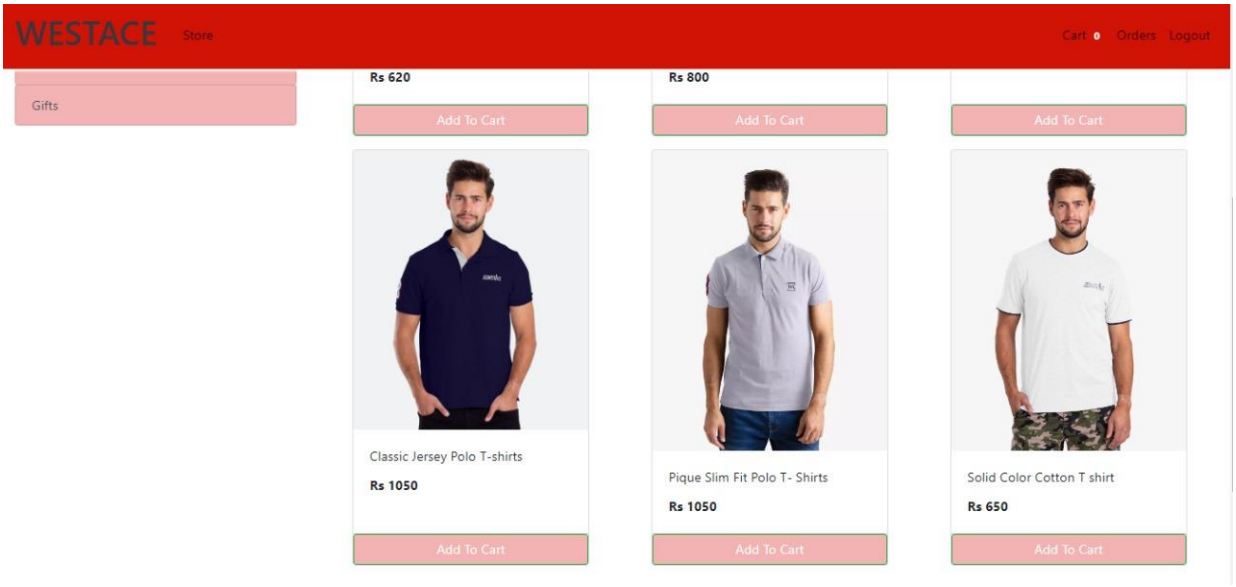
The following functionalities have been tested for this particular website:

- Mobile Responsiveness
- Contact Form
- All Buttons
- All Links

Input



Output



Designing

Test Cases

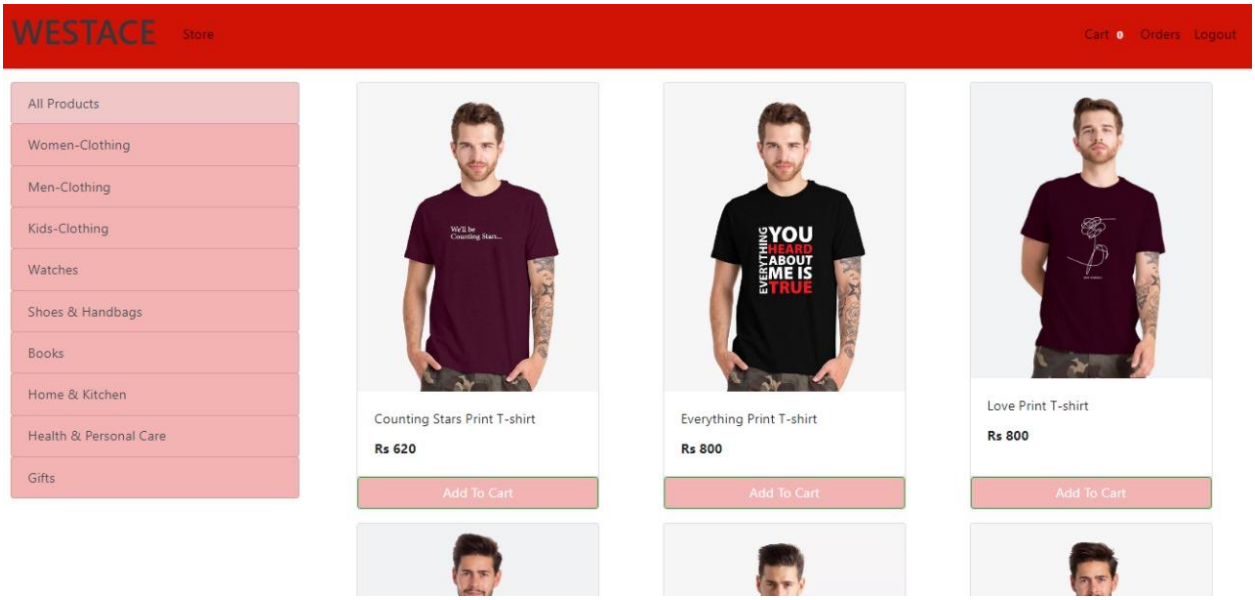
Test

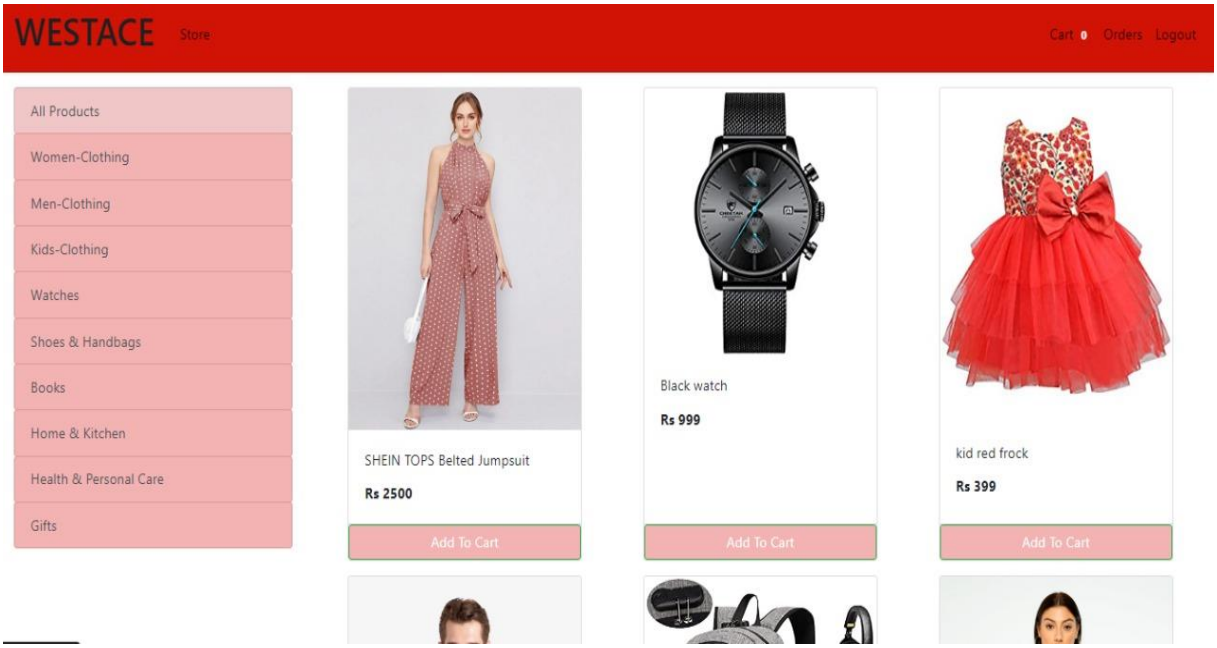
Results

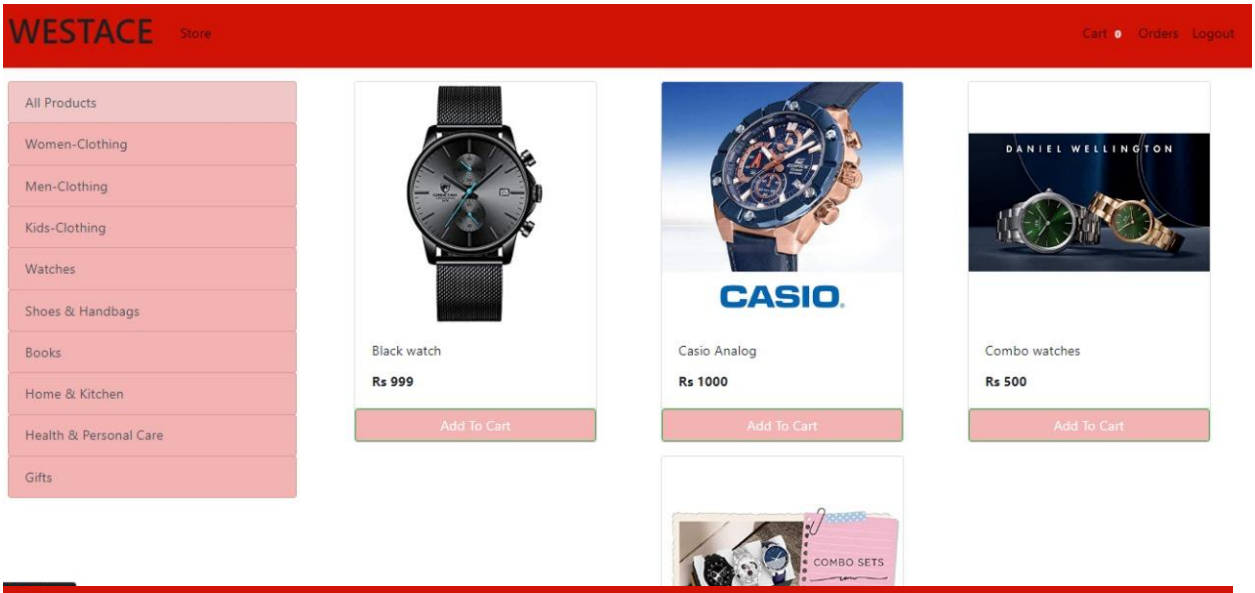
All the features mentioned in functional requirements work.

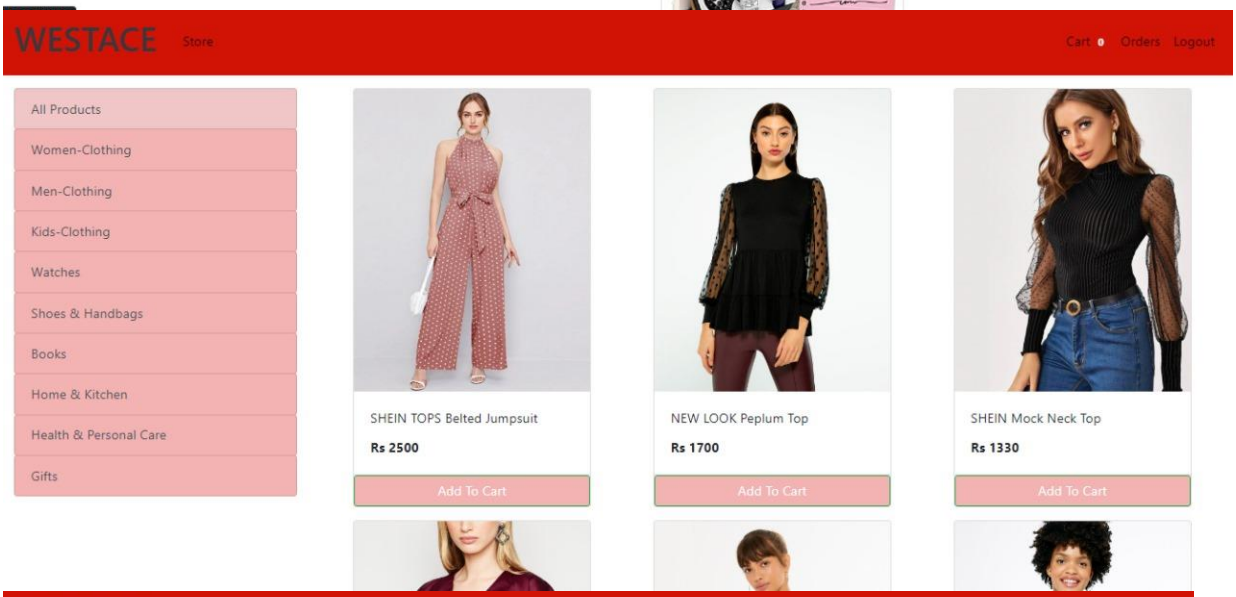
Chapter 6

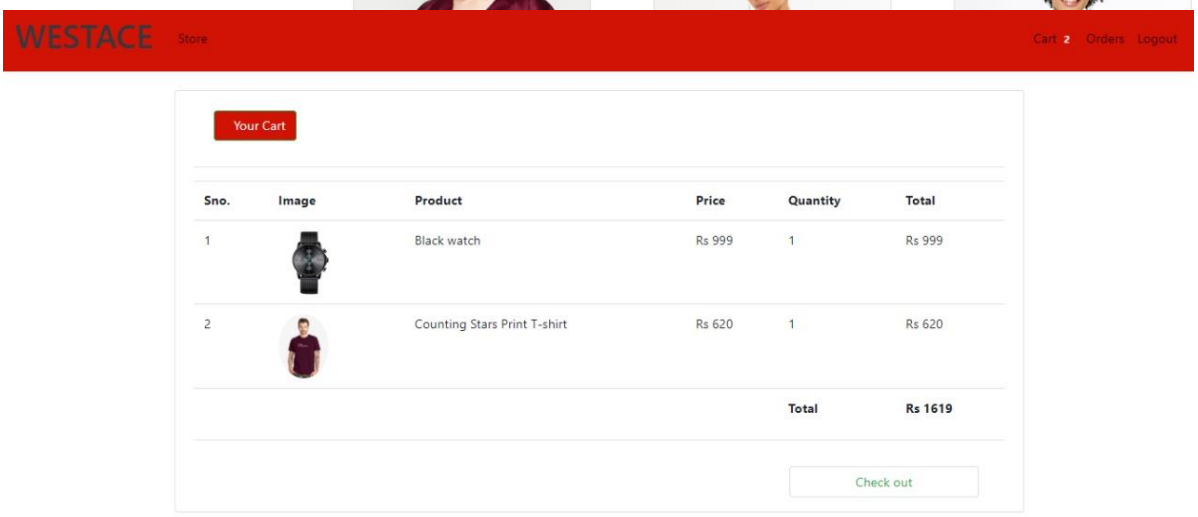
Results & Analysis

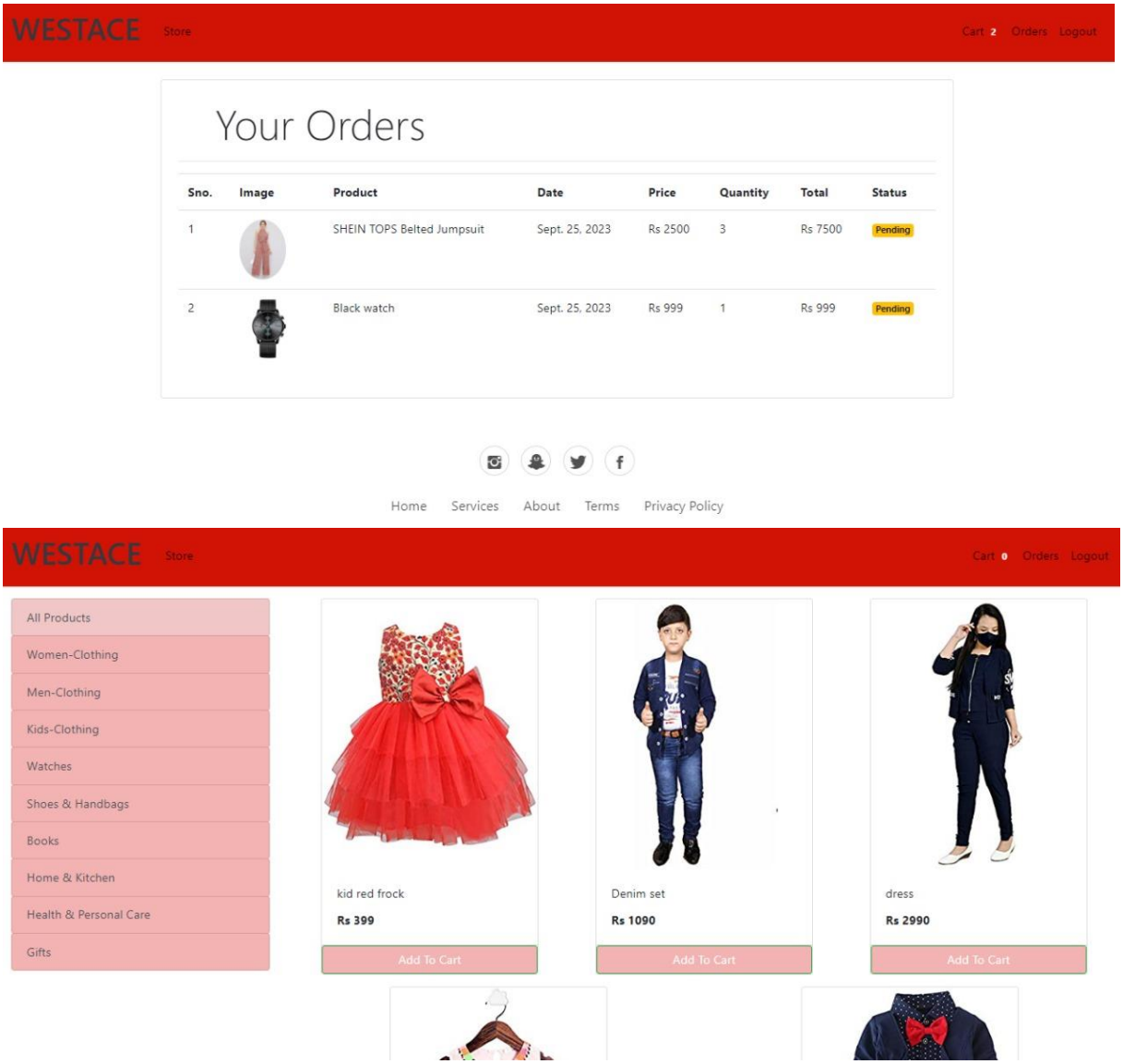


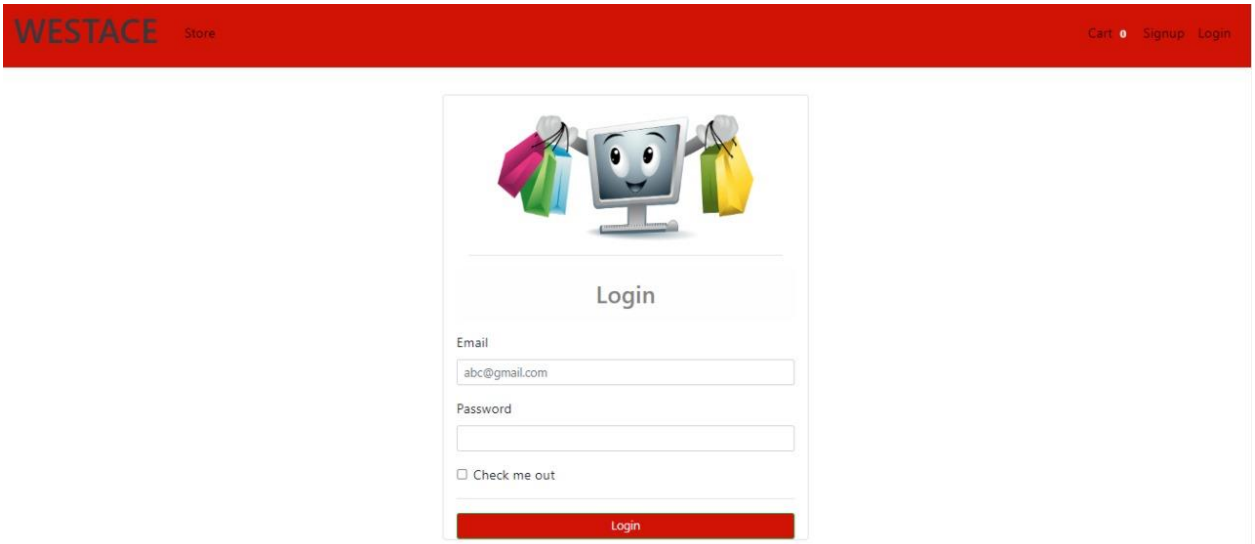


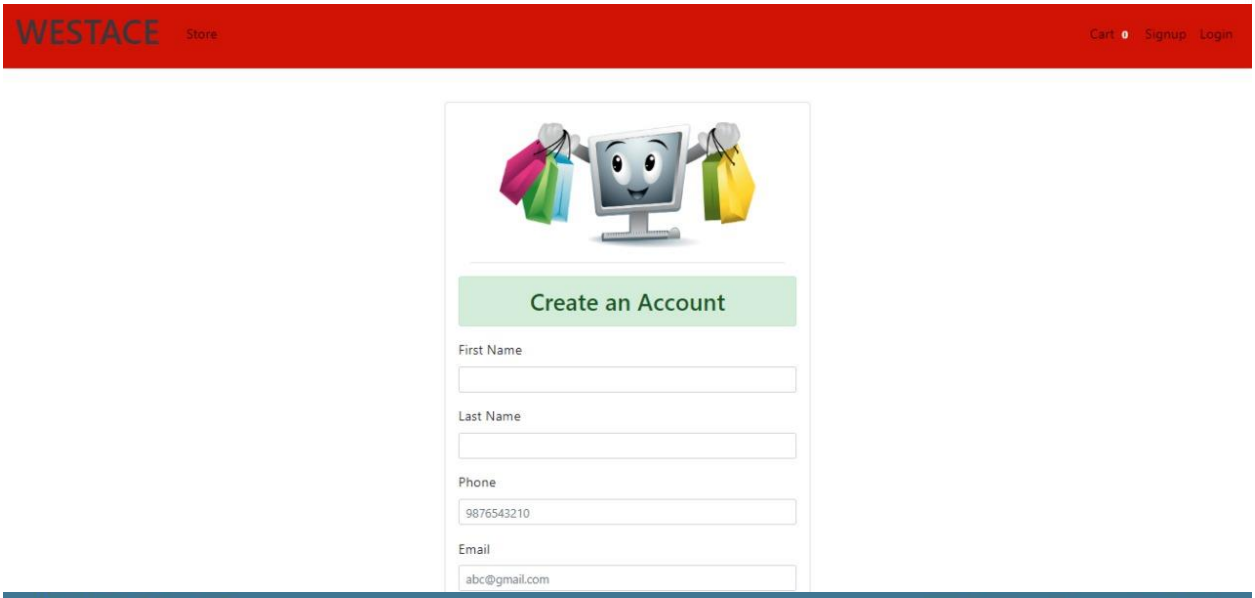

WESTACE
Store
Cart 0
Orders
Logout
All Products
Women-Clothing
Men-Clothing
Kids-Clothing
Watches
Shoes & Handbags
Books
Home & Kitchen
Health & Personal Care
Gifts
Black watch
Rs 999
Add To Cart
CASIO
Casio Analog
Rs 1000
Add To Cart
DANIEL WELLINGTON
Combo watches
Rs 500
Add To Cart
COMBO SETS

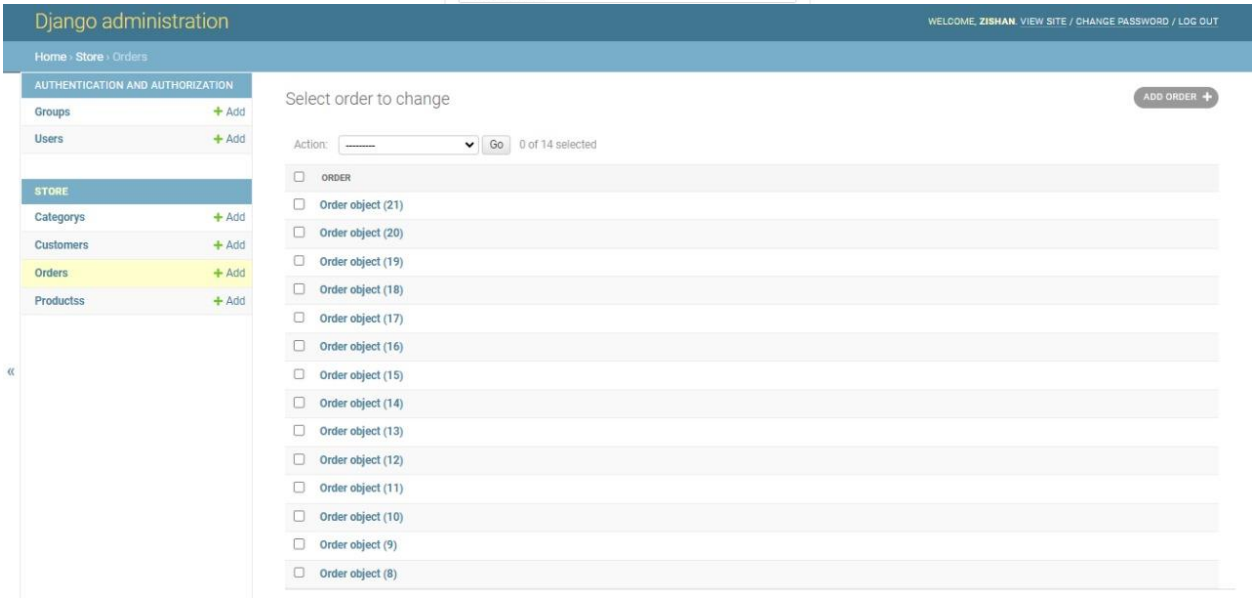

WESTACE
Store
Cart 0
Orders
Logout
All Products
Women-Clothing
Men-Clothing
Kids-Clothing
Watches
Shoes & Handbags
Books
Home & Kitchen
Health & Personal Care
Gifts
SHEIN TOPS Belted Jumpsuit
Rs 2500
Add To Cart
NEW LOOK Peplum Top
Rs 1700
Add To Cart
SHEIN Mock Neck Top
Rs 1330
Add To Cart

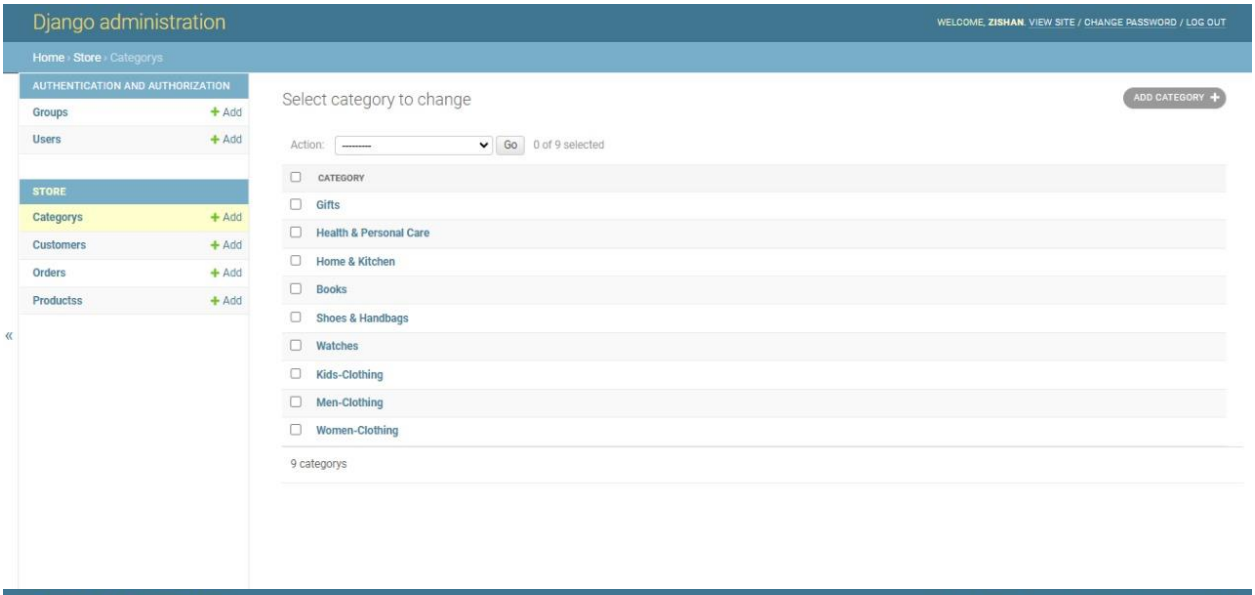

WESTACE
Store
Cart 2
Orders
Logout
Your Cart
Sno.
Image
Product
Price
Quantity
Total
1
Black watch
Rs 999
1
Rs 999
2
Counting Stars Print T-shirt
Rs 620
1
Rs 620
Total
Rs 1619
Check out

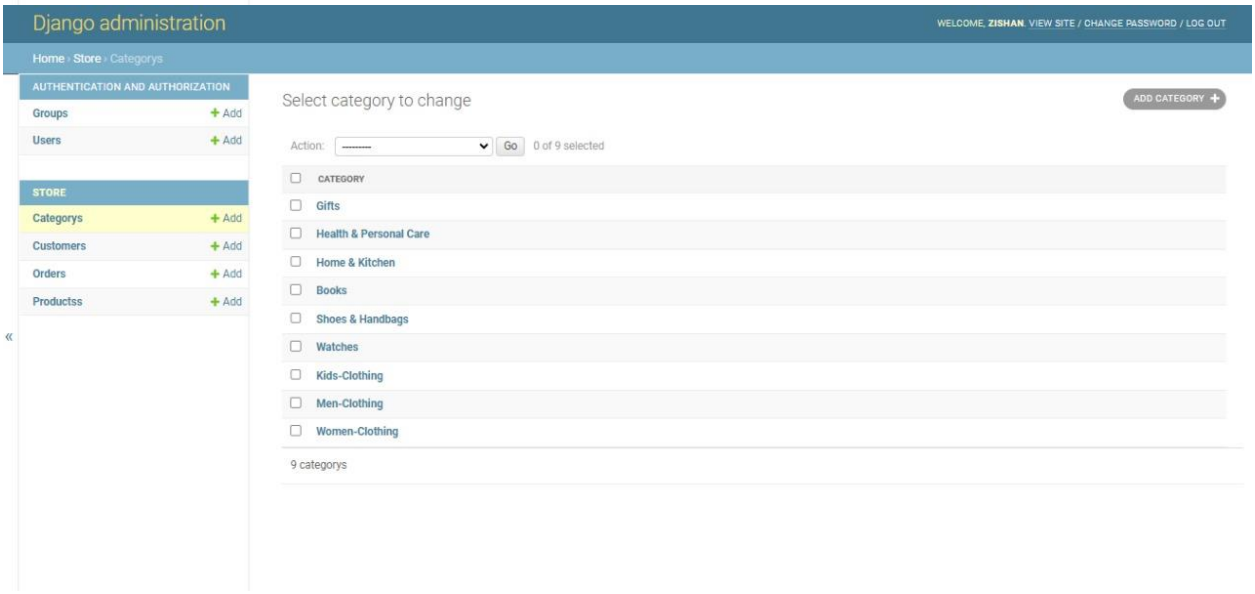

WESTACE
Store
Cart 2
Orders
Logout
Your Orders
Sno.
Image
Product
Date
Price
Quantity
Total
Status
1
SHEIN TOPS Belted Jumpsuit
Sept. 25, 2023
Rs 2500
3
Rs 7500
Pending
2
Black watch
Sept. 25, 2023
Rs 999
1
Rs 999
Pending
Home
Services
About
Terms
Privacy Policy
WESTACE
Store
Cart 0
Orders
Logout
All Products
Women-Clothing
Men-Clothing
Kids-Clothing
Watches
Shoes & Handbags
Books
Home & Kitchen
Health & Personal Care
Gifts
kid red frock
Rs 399
Add To Cart
Denim set
Rs 1090
Add To Cart
dress
Rs 2990
Add To Cart

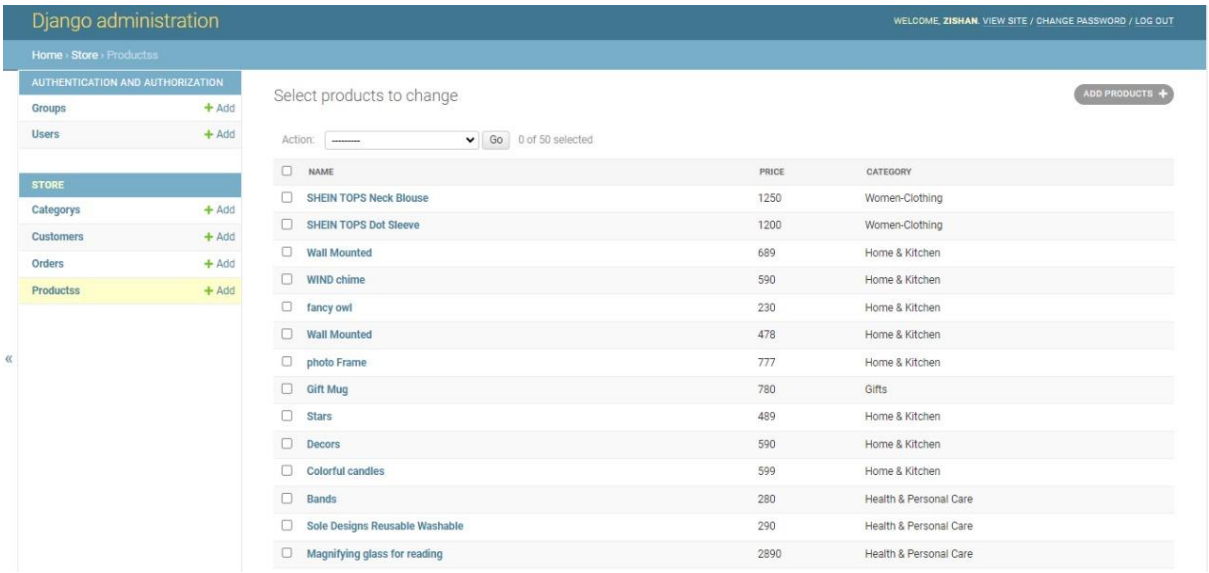

WESTACE
Store
Cart 0
Signup
Login
Login
Email
abc@gmail.com
Password
Check me out
Login

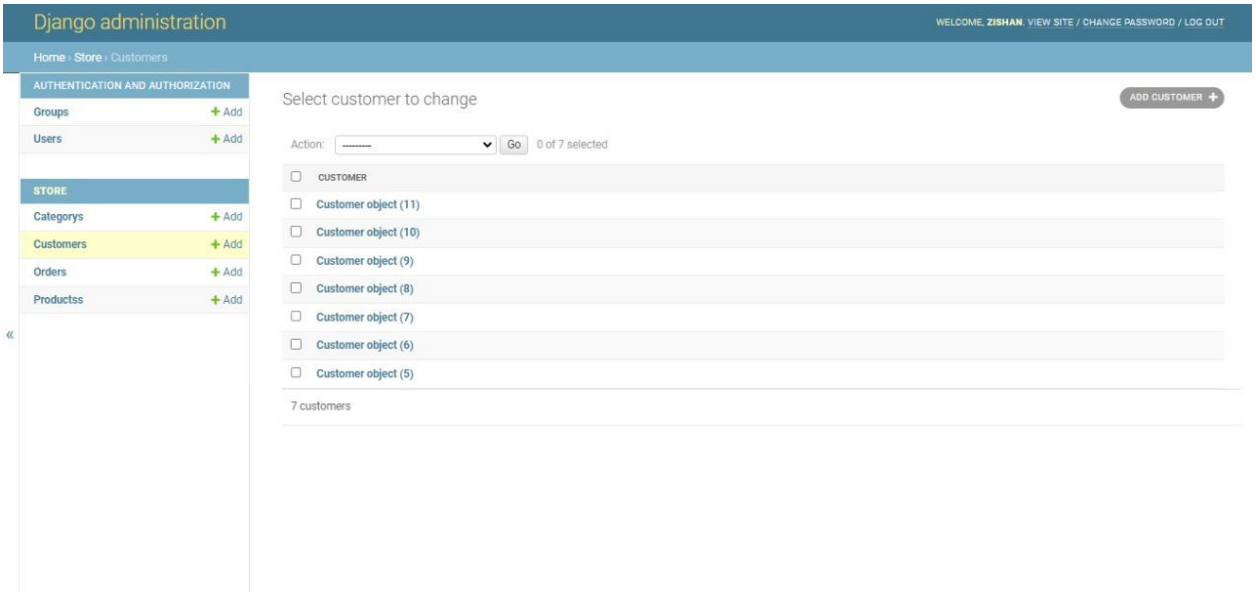

WESTACE
Store
Cart 0
Signup
Login
Create an Account
First Name
Last Name
Phone
9876543210
Email
abc@gmail.com


Django administration
WELCOME, ZISHAN. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › Store › Orders
AUTHENTICATION AND AUTHORIZATION
Groups + Add
Users + Add
STORE
Categorys + Add
Customers + Add
Orders + Add
Productss + Add
Select order to change
ADD ORDER +
Action: --------- Go 0 of 14 selected
ORDER
Order object (21)
Order object (20)
Order object (19)
Order object (18)
Order object (17)
Order object (16)
Order object (15)
Order object (14)
Order object (13)
Order object (12)
Order object (11)
Order object (10)
Order object (9)
Order object (8)


Django administration
WELCOME, ZISHAN. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › Store › Categorys
AUTHENTICATION AND AUTHORIZATION
Groups + Add
Users + Add
STORE
Categorys + Add
Customers + Add
Orders + Add
Productss + Add
Select category to change
ADD CATEGORY +
Action: --------- Go 0 of 9 selected
CATEGORY
Gifts
Health & Personal Care
Home & Kitchen
Books
Shoes & Handbags
Watches
Kids-Clothing
Men-Clothing
Women-Clothing
9 categorys


Django administration
WELCOME, ZISHAN. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › Store › Categorys
AUTHENTICATION AND AUTHORIZATION
Groups + Add
Users + Add
STORE
Categorys + Add
Customers + Add
Orders + Add
Productss + Add
Select category to change
ADD CATEGORY +
Action: --------- Go 0 of 9 selected
CATEGORY
Gifts
Health & Personal Care
Home & Kitchen
Books
Shoes & Handbags
Watches
Kids-Clothing
Men-Clothing
Women-Clothing
9 categorys


Django administration
WELCOME, ZISHAN. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › Store › Productss
AUTHENTICATION AND AUTHORIZATION
Groups + Add
Users + Add
STORE
Categorys + Add
Customers + Add
Orders + Add
Productss + Add
Select products to change
ADD PRODUCTS +
Action: --------- Go 0 of 50 selected
NAME PRICE CATEGORY
SHEIN TOPS Neck Blouse 1250 Women-Clothing
SHEIN TOPS Dot Sleeve 1200 Women-Clothing
Wall Mounted 689 Home & Kitchen
WIND chime 590 Home & Kitchen
fancy owl 230 Home & Kitchen
Wall Mounted 478 Home & Kitchen
photo Frame 777 Home & Kitchen
Gift Mug 780 Gifts
Stars 489 Home & Kitchen
Decors 590 Home & Kitchen
Colorful candles 599 Home & Kitchen
Bands 280 Health & Personal Care
Sole Designs Reusable Washable 290 Health & Personal Care
Magnifying glass for reading 2890 Health & Personal Care


Django administration
WELCOME, ZISHAN. VIEW SITE / CHANGE PASSWORD / LOG OUT
Home › Store › Customers
AUTHENTICATION AND AUTHORIZATION
Groups + Add
Users + Add
STORE
Categorys + Add
Customers + Add
Orders + Add
Productss + Add
Select customer to change
ADD CUSTOMER +
Action: --------- Go 0 of 7 selected
CUSTOMER
Customer object (11)
Customer object (10)
Customer object (9)
Customer object (8)
Customer object (7)
Customer object (6)
Customer object (5)
7 customers

Chapter 7

Project as Engineering Problem Analysis

I've created a contact form that receives data and stores it in the database. Initially, I was working on an admin panel, but the implementation presented some challenges. In the future, I'll add an admin panel, a products page, and cart features to let customers purchase items directly from the website. The administrator will have the ability to update and add new products.

7.1 Sustainability of the Project/Work

For any system to keep pace with the modernization process, sustainability must be prioritized. Sustainability is a difficult task, but it is essential if the system is to endure over time and make sure that the customers' needs are met. Systems are built to be sustainable in the case of software and web development so that they may be used continuously without posing problems for both the owners and the users. The website is designed to be accessible regardless of the user's machine's environment in order to ensure the long-term viability of my project. We created the website in a way that it is independent of the user's computer, operating system, screen resolution, or internet speed. Any browser can be used to access the website on all desktops and mobile devices. The maintenance team will work with developers to perform regular maintenance on the website and its server, which will further ensure its long-term viability. The HTML, CSS, JS, and back-end code of the website are all optimized. By minimizing repeated codes, utilizing all CSS and JS codes, and adhering to appropriate coding standards, the website operates correctly and is simple for users to access regardless of the device's specifications. The website's style and layout are intended to be user-friendly, with a focus on the User Experience. Accessing and navigating the website will be simple for users with little computer experience. media files etc.

In order to ensure that the pages load quickly, content such as images, videos, symbols, and logos have been optimized. This enables users with low-end devices and sluggish connections to access the website.

7.2 Social and Environmental Effects and Analysis

This website was created and designed to be as efficient as possible while using the least amount of resources. To the greatest extent possible, I tried to make the code and media content. As a result, the website is ad-free, has fewer redirects, and only uses plugins that are absolutely necessary, all of which contribute to overall optimization and lower power usage.

7.3 Addressing Ethics and Ethical Issues

Every type of web or software development must adhere to some fundamental ethical principles and guidelines because of how technologically advanced our society is becoming. Sensitive information is frequently shared online through a variety of systems. There must be no compromise of the data. Data can now be measured for a higher cost than patrol.

• There is no discrimination or preference on the website based on race, sexual orientation, gender, religious beliefs, color, language, political or other perspectives, national or social origin, property, birth, or any other status

• The back-end server and database can only be accessed by the developer; and

• The website only collects necessary user information, such as a user's name, email address, and phone number.

Chapter 8
Lesson Learned

8.1 Problems Faced During this Period

I had some communication problems and a time zone difference while working remotely during my internship. I ran into some personal issues, which seriously hindered me. After I began my internship, Evident lead developer left, so I was left without a technical mentor. I had to figure everything out for myself. I had trouble comprehending the back-end framework's concepts.

8.2 Solution of those Problems

Due to the time difference, I made an effort to be accessible and responsive outside of my regular hours. Throughout my time off to attend to my sister's hospitalization, I tried to work and advance. Everything I know, I learned online from documentation and YouTube.

Chapter 9
Future Work & Conclusion

9.1 Future Works

In-Use Ltd, a sister company of Evident BD Ltd., specializes in the sale of 3D filaments. We are currently developing a product-focused website where users can view products and request quotes and more for future development. The plan is to make it resemble a website that focuses on products and allows customers to place orders for delivery to their homes and workplaces. I want to add all of the CMS Panel's features.

9.2 Conclusion

It was a fantastic experience to work as an intern for Evident Limited. I've developed my ability to work under pressure and with limited time constraints. On the other hand, by providing guidance and suggestions, my managers significantly contributed to making my job simpler. I've had the opportunity to learn more about the market and development environment thanks to this internship. My ability to work in a team, my professional skills, my communication abilities, and not to mention my technical skills have all improved as a result of Evident. Without a doubt, I'll learn and look into careers in this area. I want to express my gratitude to everyone who made my time as an intern so wonderful, helped me feel more confident, and helped me get ready to start my professional career.

Bibliography

Krug, S. (2000). *Don't make me think!: a common sense approach to Web usability.* Pearson Education India.

M. S. Ackerman. (2000.). The intellectual challenge of cscw: the gap between social requirements and technical feasibility," Human–Computer Interaction,. 179–203. Montgomery, D. C. (2017). *Design and analysis of experiments.* John wiley & sons,.

Y. Xing, J. H. (2019). "Research and analysis of the front-end frameworks. *11th International Conference on Computer and Automation Engineering,*, (pp. 68–72).

Z. F. F. Putra, H. A. (2021). Designing a user interface and user experience from piring makanku application by using figma application for teens,. *IJISTECH (International Journal of Information System and Technology)*, 308–315.

An Undergraduate Internship/Project on

E-Commerce Website

By

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Summer , 2023

Consent from Supervisor

The student modified the internship final report as per the recommendations made by his/her academic supervisor and/or panel members during and/or before final viva, and the department can use this version *for archiving as well as the OBE course material for CSE499.*

This internship report is checked with Turnitin and plagiarism checker, and the score is:

Turnitin Score (%): 14 %

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