



TRIBHUVAN UNIVERSITY
FACULTY OF HUMANITIES AND SOCIAL SCIENCE

A Project Report
On
Vastra: A Clothing Website

Submitted to
Department of Computer Application
National College of Computer Studies

In partial fulfillment of the requirements for Bachelor Degree in Computer
Application

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Supervisor's Recommendation

I hereby recommend that this project prepared under my supervision by Samman Phuyal and Binay Manandhar entitled "Vastra: A Clothing Website" in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the final evaluation.

.....

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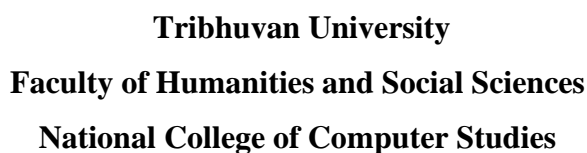
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This is to certify that this project prepared by Samman Phuyal and Binay Manandhar entitled “Vastra: A Clothing Website” in partial fulfillment of the requirements for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

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ABSTRACT

Vastra an E-commerce website presents a captivating online shopping destination tailored for clothing enthusiasts. This documentation provides a concise overview of the platform's essence and functionalities, offering a glimpse into the world of fashion and convenience that Vastra brings to its users.

Vastra encapsulates the spirit of effortless and enjoyable online shopping. With an extensive collection of clothing items, users can seamlessly explore a diverse range of styles, sizes, and trends. The intuitive interface guides users through a personalized journey, allowing them to curate their preferences, add products to their virtual carts, and finalize purchases with ease.

This website is a business to consumer model which means we sell goods and services to an individual consumer. Since it is a small business and we are just starting the products are in low quantity and the delivery service is not yet introduced. The website offers different shopping categories like shirts, pants etc. Any product can be bought within the offered price range. Users can easily place a place in the cart and the cart design very simple and intuitive.

ACKNOWLEDGEMENT

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LIST OF ABBREVIATION

AJAX	Asynchronous JavaScript and XML
CSS	Cascading Style Sheets
HTML	Hypertext Markup Language
MYSQL	My Structured Query Language
PHP	Hypertext Preprocessor
SDLC	System Development Life Cycle

Chapter 1: Introduction

1.1 Introduction

Online shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser or a mobile app. Consumers find a product of interest by visiting the website of the retailer directly or by searching among alternative vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers. Online shopping has revolutionized the way we shop, offering convenience, accessibility, and a vast array of products at our fingertips. Gone are the days of visiting physical stores and dealing with long queues or limited selection. With just a few clicks, you can explore countless online stores and make purchases from the comfort of your own home or on-the-go. [1]

Furthermore, online shopping provides a secure and hassle-free payment process. Multiple payment options, including credit/debit cards, digital wallets, and bank transfers, ensure a seamless checkout experience. Stringent security measures protect your personal and financial information, giving you peace of mind while making transactions online.

In conclusion, online shopping has transformed the way we shop by offering convenience, variety, and accessibility. It has opened up a world of possibilities, connecting buyers and sellers from different corners of the globe. Embracing the digital marketplace provides endless opportunities to explore, discover, and shop for your desired products, all with just a few clicks.

1.2 Problem Statement

Traditionally we see that the Shopping sites contain a lot of products and it is very difficult for the users to choose from. They have to waste a lot of time choosing products and end up buying nothing. Product quality and quantity is poor and irrelevant product are kept everywhere.

1.3 Objective

Our website focuses on providing quality services for the customer. The main aim of the shopping website is listed below:

- To provide a platform for buying and paying for clothes.

1.4 Scope and Limitation

The domain of this project is to allow user to buy clothes from any place at any time as their choice and enjoy without complication of needing to go to a shop physically.

The main drawback of this project is that user will not be able to touch and feel the merchandise they will buy through online shopping.

1.5 Report Organization

1.5.1 Introduction

Chapter one introduces the concept of this project. It describes the problems that has been existing and how its objective can tackle it. It also presents the scope and limitations of the project.

1.5.2 Background study and literature review

This chapter focuses on the basic ideology of how this project will be build. It traces out the study of different platforms and their workings.

1.5.3 System analysis and design

This chapter describes the requirements gathering, feasibility study, and designing of the project. It includes diagrams, functionality analysis, requirement gathering technique and process model.

1.5.4 Implementation and testing

This chapter is designed to give information about how the project has been implemented, what kind of software and tools has been used and the type of testing that the project has gone through.

1.5.5 Conclusion and future recommendation

This chapter includes the possible outcome of this project, conclusion and future recommendations.

Chapter 2: Background Study

2.1 Background Study

It is the study of history of booking and recording of a certain system. The existing system has been studied as the background study for this project.

2.2 Literature Review

According to Monsuwe, Delleart and Ruyter (2004), there are five external factors to understand consumer's intention to purchase in the internet which are consumer personality, situational factors, product characteristics, previous online shopping experiences and the trust in online shopping. Consumer's trait includes their demographic factors such as age, income, gender and educational level will lead them to have the intention to shop online. For age factor, consumers that are aged under 25 have more potential to shop online because of their interest in using new technologies to search for product information and compare and evaluate alternatives (Wood, 2002). For educational level, higher educated consumers are more likely to use the internet for their shopping medium because they are more computer literate (Burke, 2002).

Product characteristic is also another factor that will influence the consumer's intention to purchase in the internet. Product characteristic can be tangible or intangible; standardized or customized. In an online context, lower tangibility of a product is caused by the lack of physical contact and assistance in the shopping process; consumer's intention to shop on the internet will be low when there is a need to seek advice from a salesperson regarding the considered product (Monsuwe, et. al., 2004). Products such as car, computers, perfume, perfume or lotion have the lower potential to be purchased by the consumer because it requires more personal knowledge and experience (Elliot, et. al., 2000). [2]

Chapter 3: System Analysis and Design

3.1 System Analysis

Considering the fact that this project involves design and implementation of a software system regardless that it is web-based, it will be important to mention and consider some models used in software development and deployment. After reading though all the models. The waterfall model fits the development of this website. The main aim of using this approach is, we can focus on each part of the model during development and come back to it if need be. The project can easily be broken down into different parts based on this model. [3]

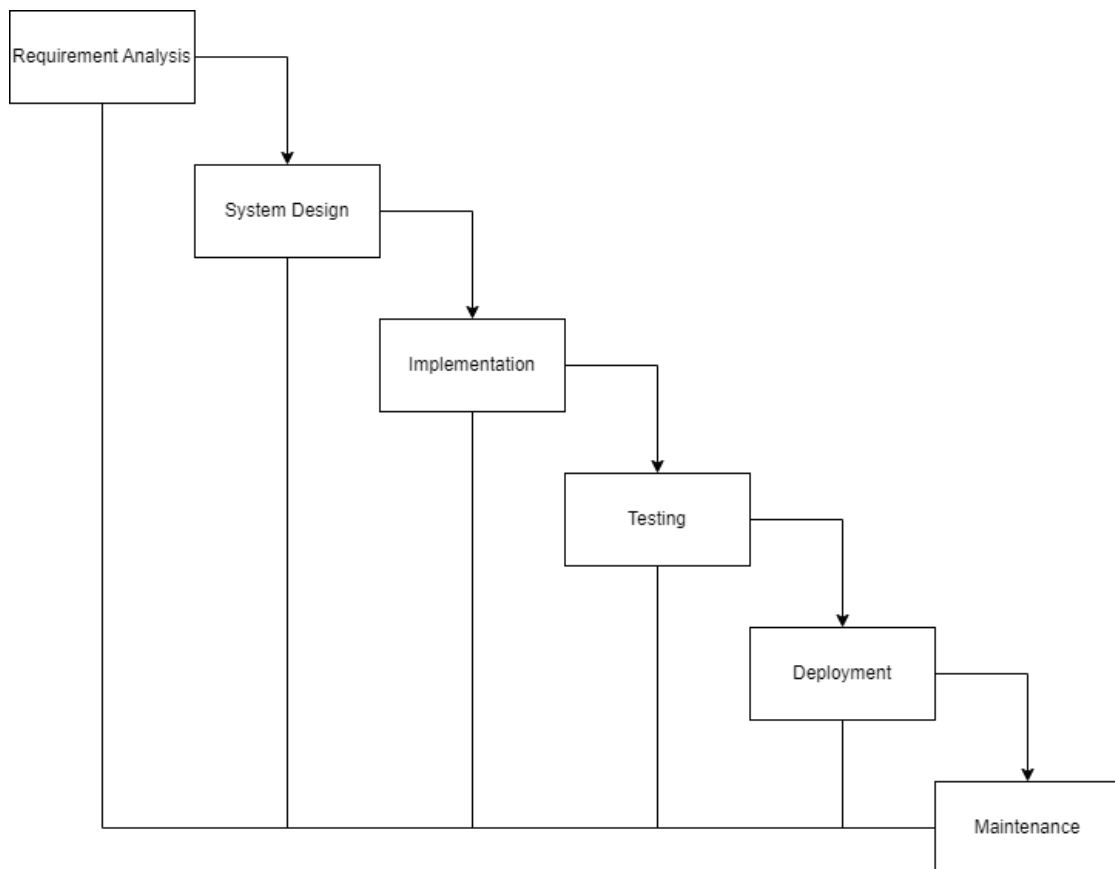


Figure 3.1 Waterfall Model

3.1.1 Requirement Identifications

The process of obtaining important specifications that will be utilized to create a system is known as requirement identification. There are several ways to obtain requirements, such as reviewing the existing system, conducting interviews, using questionnaires, etc.

i. Functional Requirements

The requirement that has been used in the project as the functional requirements generally includes the function such as inputs, the processing and the final output. The functional requirements in the project are mentioned below.

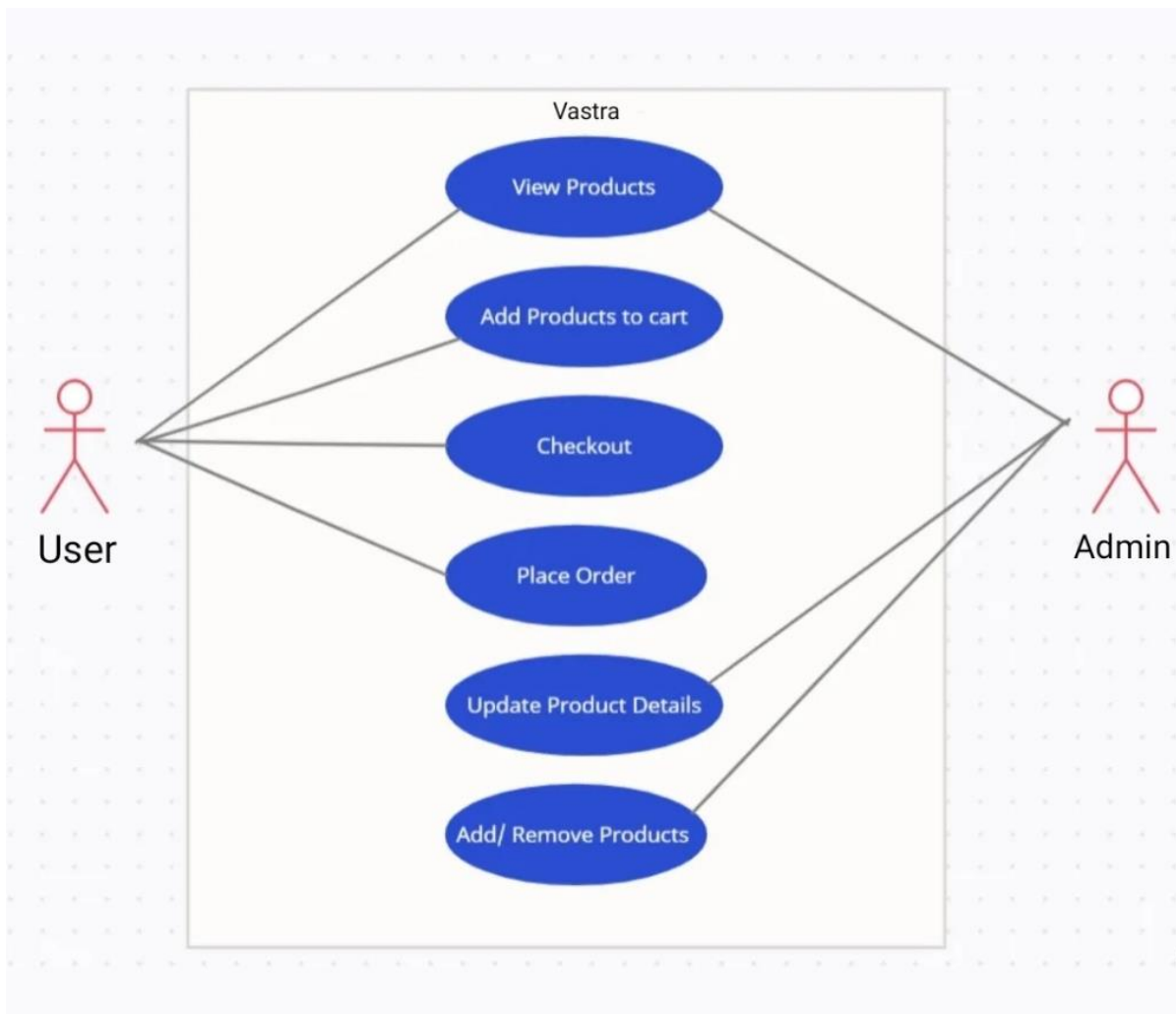


Figure 3.2 Usecase Diagram of Vastra

1. User Module

- User can register and login the system.
- User can get cart detail after updating each product.
- User can link their bank account to complete the buy process.
- User can logout from the system after completion of transaction.

2. Admin Module

- Admin can login the System.
- Admin can add and delete products.
- Admin can see the registered users.
- Admin has privilege to delete the user.
- Admin can logout from the system.

ii. Non-Functional Requirements

The non-functional requirement specifies how the system works. The non-functional requirements included in the project are:

- System uses different database for storing the attribute for each entity.
- User can see the transaction detail after performing transaction.

3.1.2 Feasibility Study

The purpose of a feasibility study is to determine how effectively a system will operate given constraints. It investigates how simple it is to construct a system given certain constraints. Operational feasibility, economic feasibility, and technical feasibility are some of the constraints.

i. Technical Feasibility

This system meets the technical feasibility as it will be using existing technologies like HTML, CSS, JavaScript, PHP and MYSQL as well as simple hardware specifications.

- The UI of our project is very simple.
- User will require internet browser and internet to use it.

ii. Operational Feasibility

These include the reliability, maintainability, usability, supportability. The proposed system is operationally feasible as it is reliable for all type of user i.e whether or not the user has the knowledge of computer or not. The proposed system is supported for a small to large-scale organization. It is simple and easy to use due to simple user interface and its operational feasible.

Since the system promises to provide easier and understandable user interface as well as responsiveness when used in another device. Thus, the proposed system will be operationally feasible.

iii. Economic Feasibility

Before the development of a system, the proposed system should be studied whether or not it is within the budget estimated by the organization. The project that we are developing is within the cost estimation of the organization. The project cost is less and no more burdens are needed. The system development does not have any requirement of expensive hardware and software. The platform are open sources and the resources required for the project are also open source. Hence the project is said to be economically feasibility.

Vastra will be economically feasible as it can attract a large user base, generate revenue, and have minimal development and maintenance costs.

3.1.3 Data Modeling (ER Diagram)

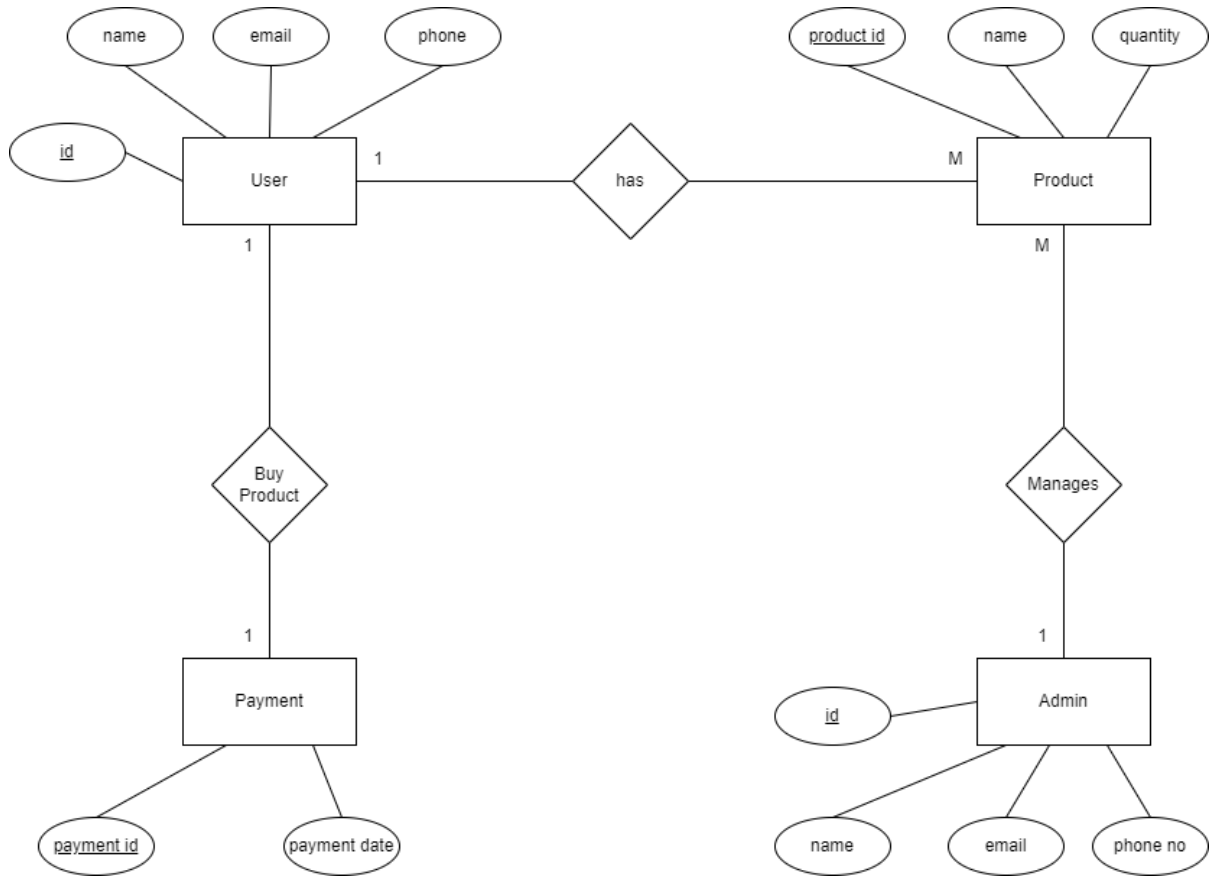


Figure 3.3 E-R Diagram of Vastra

First, there are the Users, who have their own unique ID, name, email, and phone number. These users can look at and potentially buy Products from your website. Each product has its own special ID, name, and a quantity showing how many are in stock. The people who take care of the website's operations, known as Admins, also have their IDs, names, emails, and phone numbers listed.

Each user can have a bunch of products they're interested in, so there's a connection between Users and Products. This is because a user can be considering multiple products. Then, when a user decides to buy something, it's recorded in the system as a Payment. This payment has its own ID and the date it was made. Importantly, a user can make multiple payments over time. So, there's a link between Users and Payments.

3.1.4 DFD Diagram (Process Modeling)

Data Flow Diagrams show the flow of data from external entities into the system, and from one process to another within the system. Following are the Data Flow Diagrams for the current system. Each process within the system is first shown as a Context Level DFD and later as a Detailed DFD. The Context Level DFD provides a conceptual view of the process and its surrounding input, output and data stores. The Detailed DFD provides a more detailed and below comprehensive view of the interaction among the sub processes within the system. Which is explained below in figure

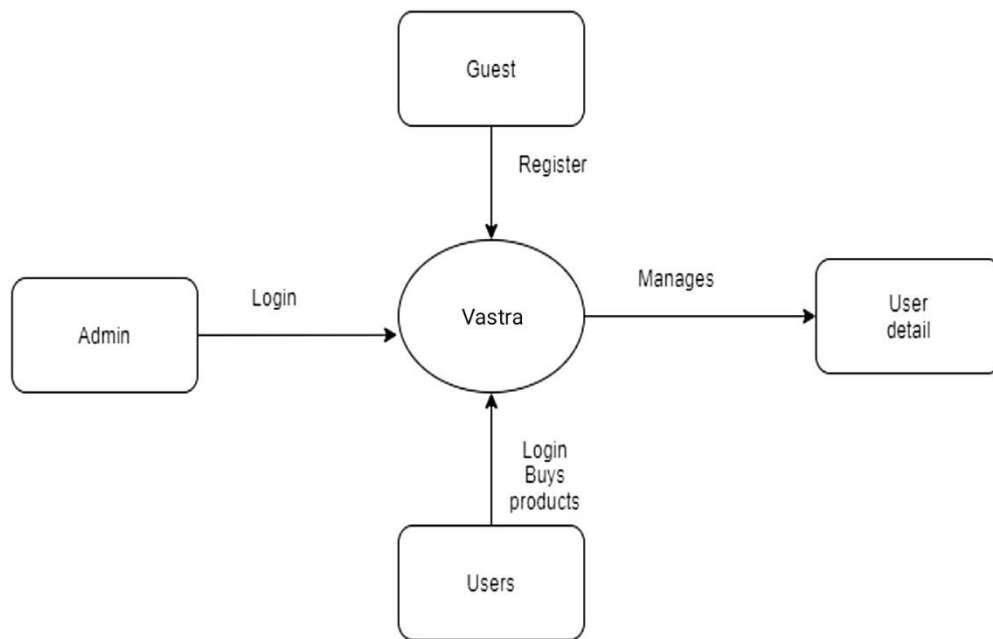


Figure 3.4 0 Level Dataflow Diagram of Vastra

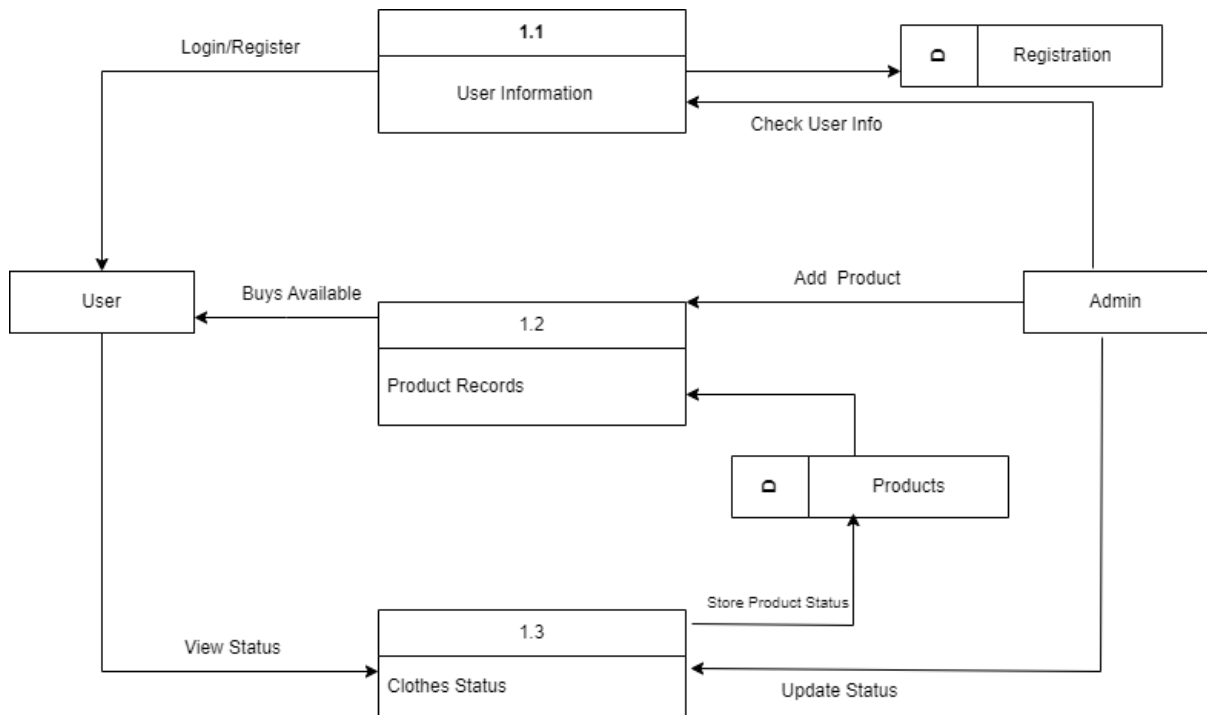


Figure 3.5 1 Level Dataflow Diagram of Vastra

3.2 System Design

3.2.1 Flowchart

User

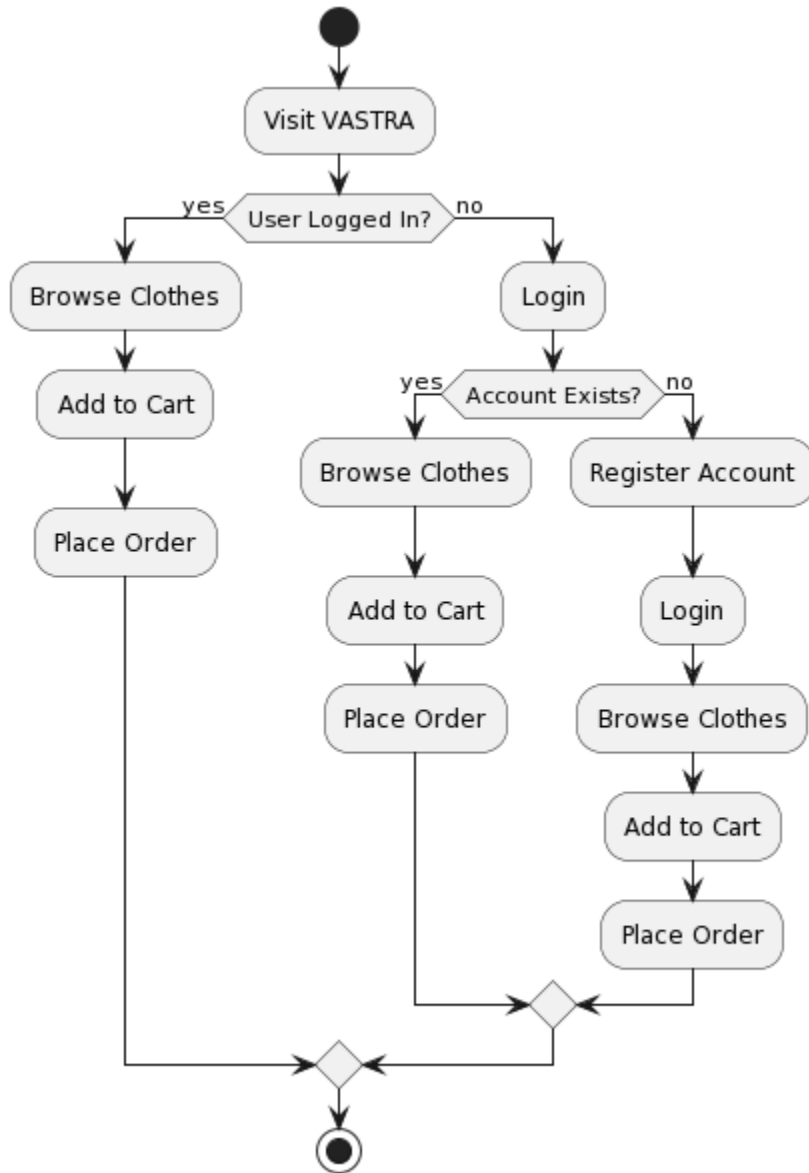


Figure 3.6 Flowchart Diagram of Vastra (User)

Admin

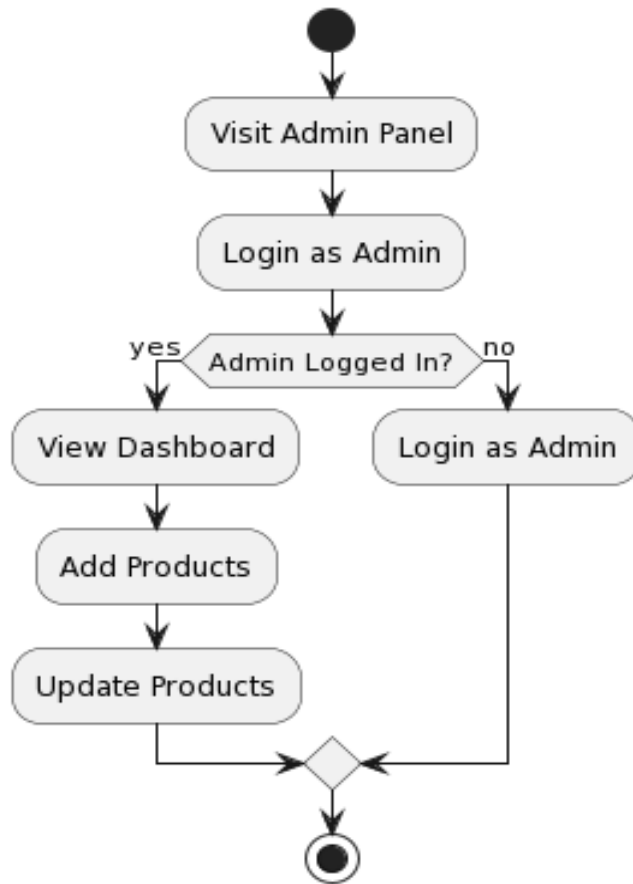


Figure 3.7 Flowchart Diagram of Vastra (Admin)

The user journey begins with a visit to the ecommerce website. If the user is already logged in, they can seamlessly explore the collection of clothes, select items to add to their shopping cart, and proceed to place an order. On the other hand, if the user is not logged in, they are directed to the login page where they can enter their credentials. If an account already exists, they are allowed to browse clothes, add items to the cart, and place an order. In the case of no existing account, they are prompted to register. After registering and subsequently logging in, they gain access to the same set of actions – browsing, adding to the cart, and placing orders – completing the purchase process.

The admin-side process commences with accessing the admin panel, typically a restricted area of the ecommerce system. To gain entry, the user is required to log in using admin credentials. If the login is successful, the admin is granted access to the admin dashboard, providing an

overview of crucial ecommerce metrics. This dashboard enables the admin to monitor performance and make informed decisions. Beyond this, the admin holds the authority to enrich the product catalog by adding new products, inputting essential details like product name, description, and pricing. Additionally, they can refine the platform's offerings by updating existing product information. This control over products and insights into performance allows the admin to effectively manage and enhance the ecommerce website's offerings.

Both flowcharts elucidate the series of steps users and admins undertake within the ecommerce ecosystem, outlining the decision points and actions that lead to successful transactions and management.

3.2.2 Database Design

Table 3.1 User Table

Id	Int
Name	Varchar(30)
Email	Varchar(50)
Phone	Varchar(10)

Table 3.2 Product Table

Product_id	Int
Name	Varchar(30)
Quantity	Int

Table 3.3 Payment Table

Payment_id	Int
Payment_date	Date

3.2.3 Architectural Design

In the shopping website, users interact with the system through a simple user interface. The shopping website uses three tier architecture. The data is collected from the users and stored in the database through which the server provides cart detail to the user. In order to perform transaction to the user, the system uses different database tables including different attribute for each entity, user has a unique account number which makes them different from other users. In this way out system architecture is designed which is an abstract view of the system.

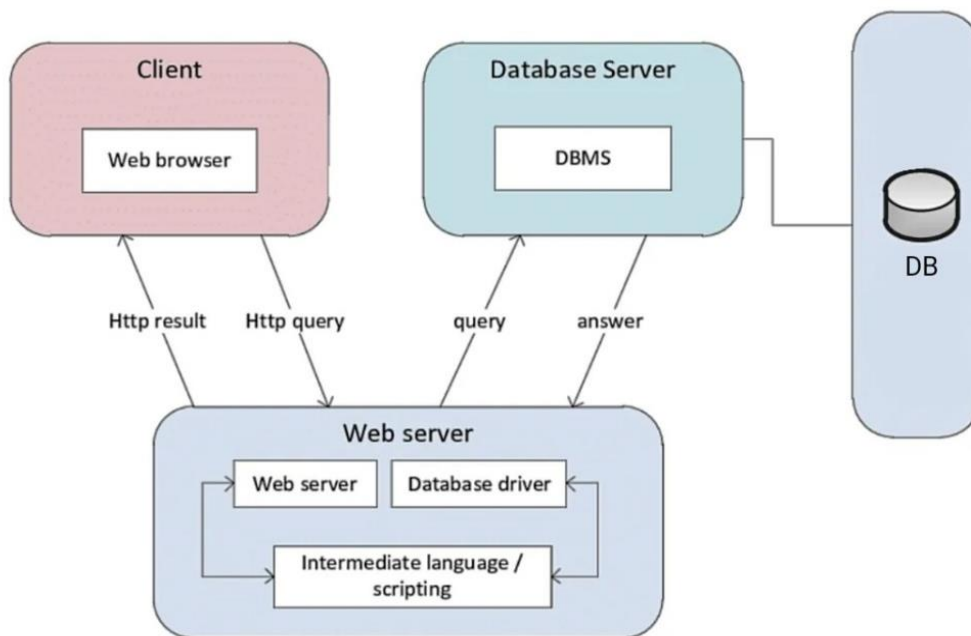


Figure 3.8 Architectural Design of Vastra

Chapter 4: Implementation and Testing

4.1 Implementation

Implementation basically means the phase where the system is actually being built. Firstly, all the information that we gathered is studied and analyzed and implemented a system in operation for users. It is one of the most important phases of any project. Implementation usually consists of coding, testing, installation, documentation, training and support. Different tools and technologies that have been used to develop the system which are already discuss in the previous chapter. It is basically converting system design specification into working software.

4.1.1 Tools Used

Frontend

- **HTML:** HTML is utilized as a means to create the visual front end and user interface within our web browsers.
- **CSS:** We've employed CSS to style the browser's backdrop and interface, enhancing its visual appeal.
- **JavaScript:** JavaScript serves the purpose of adding interactivity to webpages, contributing to user engagement.

Backend

- **PHP:** PHP is employed to establish essential connections between various elements within the browser.

Database

- **MySQL:** MySQL has been utilized to efficiently store data, enabling the effective operation of the system by organizing and managing all the stored information.

4.2 Testing

4.2.1 Testing case for unit testing of login and logout system

Test case ID: VastraLogin001

Testcase type: Unit Testcase

Requirement no: 1

Module: Login

Status: XXX

Severity: Critical

Pre-condition: Required one login

Test Data: username - Samman, password – samman123

Summary: Unit testing of login and logout system

Table 4.1 Unit testing of login and logout system

Step no.	Steps	Inputs	Expected result	Actual result	Status
1	Open the browser and enter URL	http://localhost/Vastra/php/login.php	Displays Login Page	As expected	Pass
2	Enter the following values for “username”				
	Valid	Samman	Accept	As expected	Pass
	Invalid	null	Displays “Please fill out this field” message	As expected	Pass

3	Enter the following values for “password”				
	Valid	Samman123	Accept	As expected	Pass
	Invalid	null	Displays “Please fill out this field” message	As expected	Pass
4	Click ‘Login’ button	Samman, samman123	Redirect to homepage	As expected	Pass
5	Click ‘Logout’ button		Redirected to homepage	As Expected	Pass

4.2.2 Testing case for Unit Testing of Purchase of product

Test case ID: VastraPurchase001

Testcase type: Unit Testcase

Requirement no: 1

Module: Manage cart

Status: XXX

Severity: Critical

Pre-condition: Required one product add to cart

Test Data: Samman,12345,XL,2

Summary: Unit testing of Vastra add to card

Table 4.2 Unit Testing of Vastra add to card

Step no.	Steps	Inputs	Expected result	Actual result	Status
1	Login as valid user	Input Username, password	Redirected to User profile	As expected	Pass
2	Click on product image		Redirected to cart page	As expected	Pass
3	Enter the size of product, quantity	XL, 2	Accept	As expected	Pass
4	Enter add to cart		Redirected to Transaction page	As expected	Pass
5	Confirm the purchase		Purchase Successful	As expected	pass

4.2.3 Testing case for Unit Testing of Manage Products for Admin

Test case ID: VastraManage001

Testcase type: Unit Testcase

Requirement no: 1

Module: Manage Purchase

Status: XXX

Severity: Critical

Pre-condition: Required for Admin login

Test Data: Binay , binay123 ,samman ,samman123

: 5,Red shirt,2023/07/05,5

Summary: Unit testing of Vastra Admin and its features

Table 4.3 Unit testing of Vastra Admin and its features

Step no.	Steps	Inputs	Expected result	Actual result	Status
1	Enter the following values for “username”				
	Valid	Binay , binay123	Accept	As expected	Pass
	Invalid	samman , samman123	Display “Not admin”	As expected	Pass
3	Enter Login		Redirect to admin page	As expected	Pass
4	Select the product to delete		The product is deleted	As excepted	pass
5	Select the product to add	5, Red Shirt, 2023/7/05,5	The product is added	As excepted	Pass

Chapter 5: Conclusion and Future Recommendations

5.1 Lesson learnt/ outcome

When this project is completed, the users will be able to buy various products. After filling the register form, user can view and buy different products online through web browser. User can easily add and remove products from the cart. Users can easily pay for their products.

5.2 Conclusion

After the successful completion of the shopping website, people can perform easy shopping online. The current application has fulfilled all the objectives. We followed the specifications strictly but enhanced some of the features when there was need for it to be done. There have been challenges especially when it came to backend and making sure that the application responses in a predictable manner. Choosing PHP for this project is because it is very simple and easy to use, it could handle a lot of data and easily manipulation compared to another scripting language, this is widely used all over the world, it is Open source; we can freely download and use. And it is platform independent as well.

As we came to the end of the project, we realized that there are many enhancements that can be made on the application. Some of these ideas came from those who tested the application and some of them from both of us. We decided to follow the specification because there were realistic to achieve in this given amount of time. Any other enhancements to the application can be done in future development of the application.

5.3 Future Recommendations

Here is what can be added in the future on this website to increase its usability, user experience and portability of the website. There is a lot to be done hence this application can be considered as a starting point for something big to come. It will need more time and resources for all these to be done but it is still very realistic and possible to achieve.

Addition of buy out features,

- Access the applications on a small device (mobile app).

- Addition of new shopping categories,
- Making project device compatible,

This shopping website should have the e-payment facilities as any cash transactions nowadays gone to digital transactions. The website should be compatible with both mobile phones and PCs. Furthermore, features of AR (Augmented Reality) can help more in finding the right fit and size.

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Appendices

Screenshot of Output

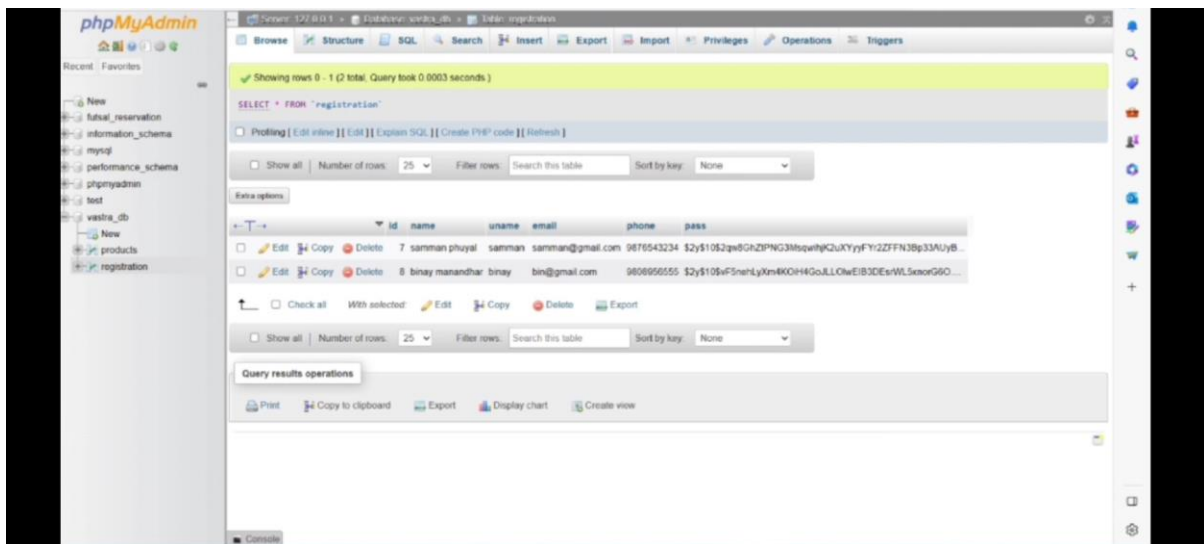
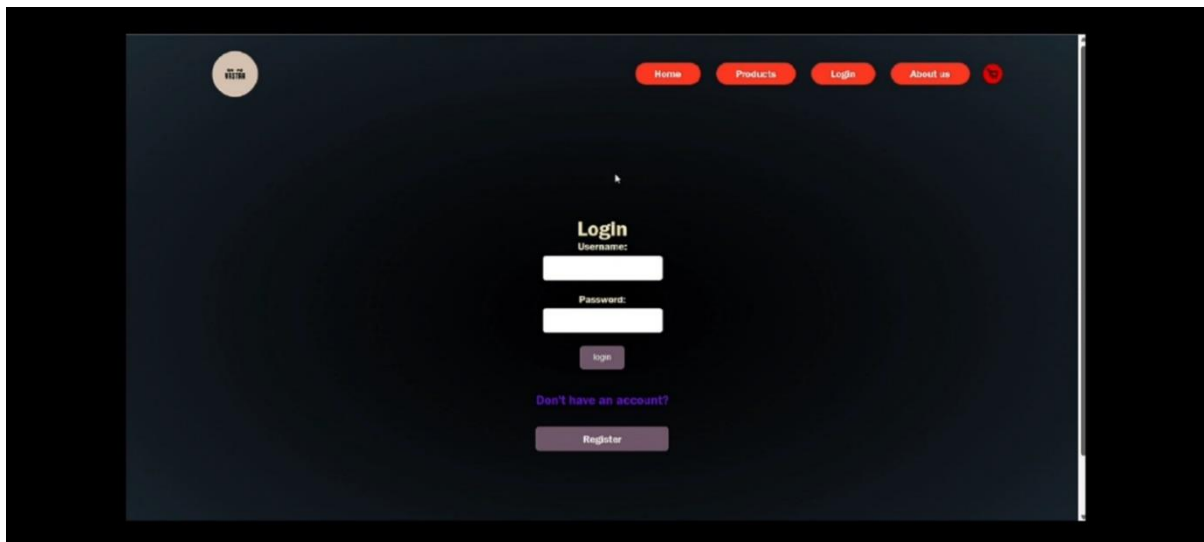


Fig I Login Page (Admin and User)

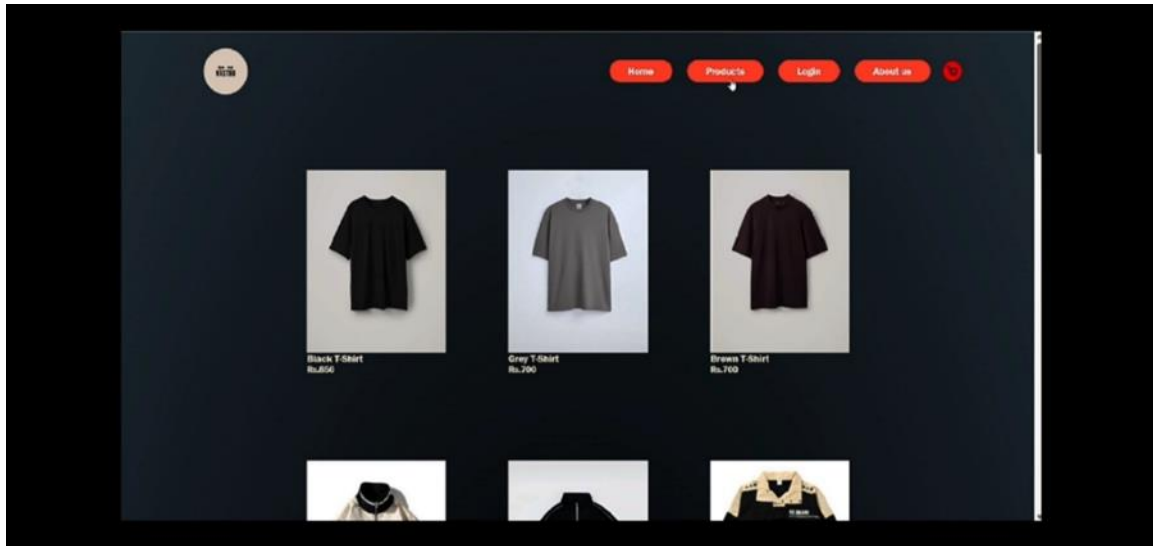


Fig II Product Page



Fig III Add to Cart Page

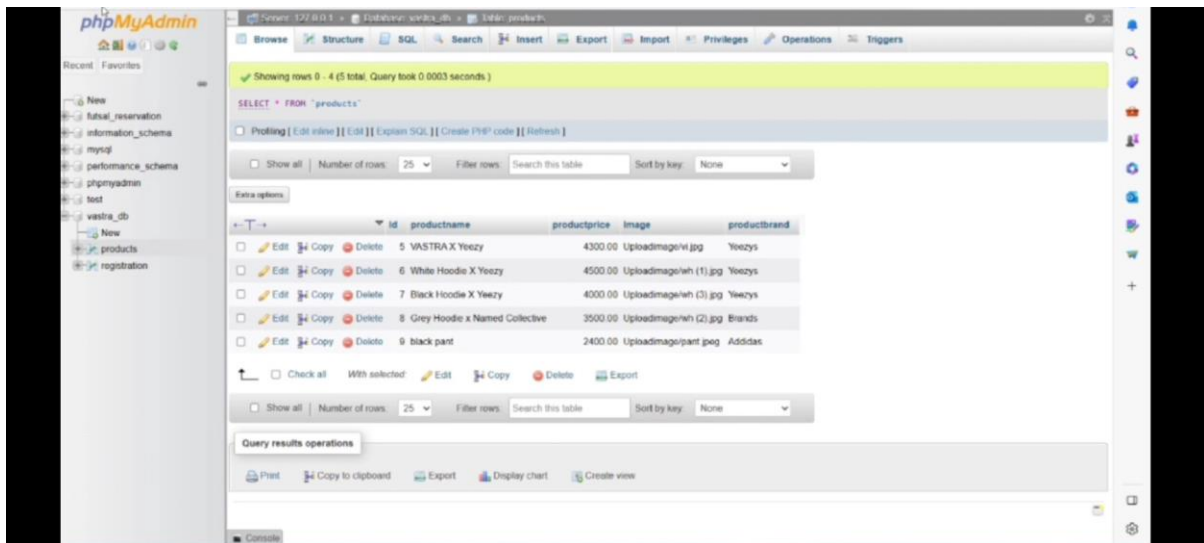
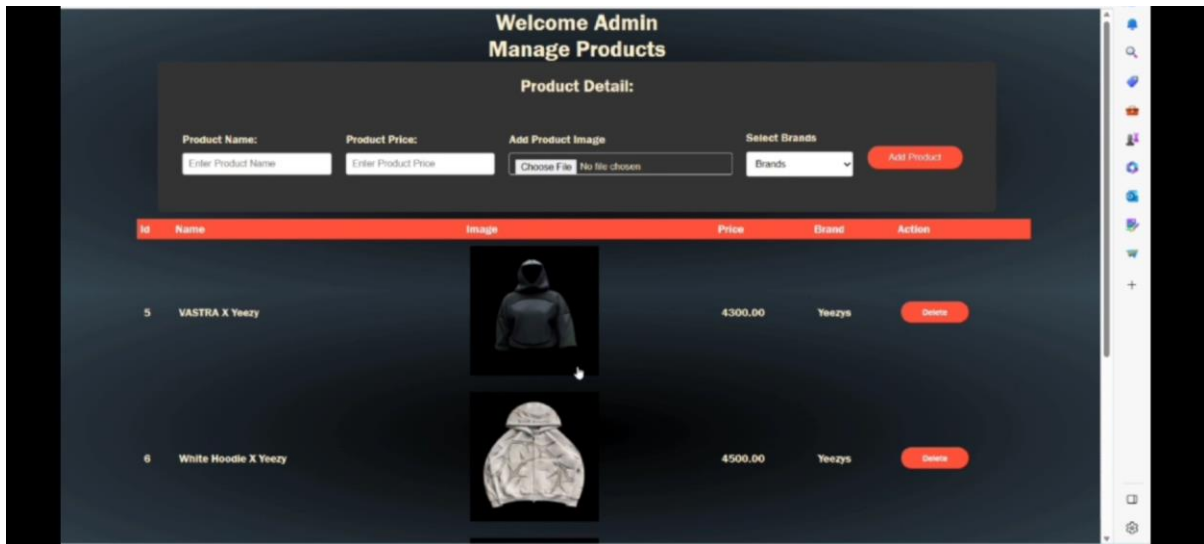
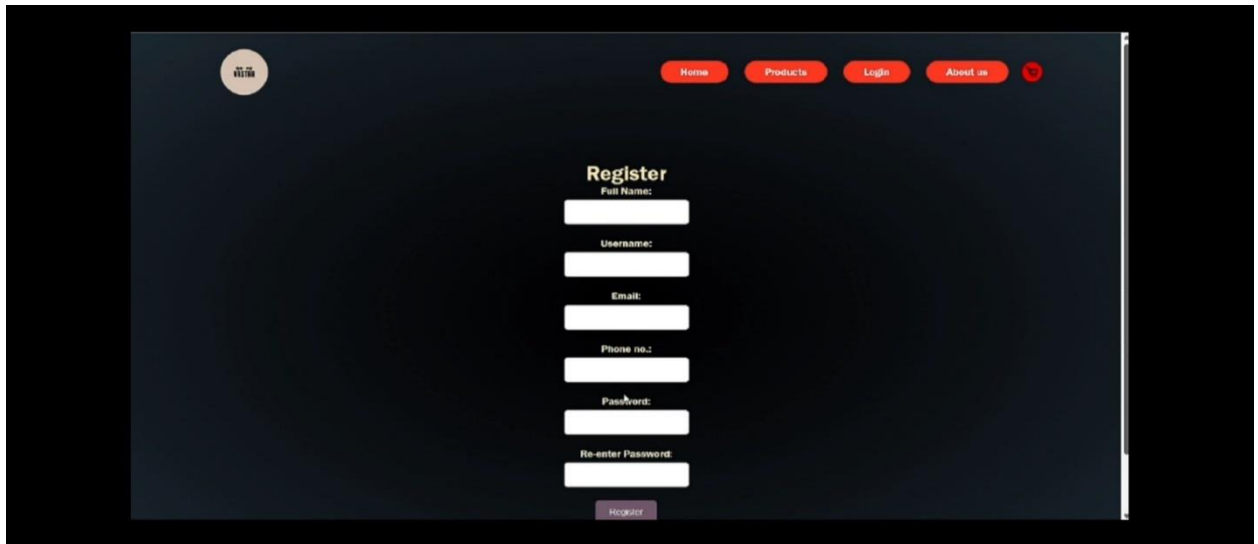


Fig IV Delete and Add Product for Admin



The screenshot shows a dark-themed web page for registration. At the top left is a circular logo with the text "MY NEW VESTER". To the right is a navigation bar with four red buttons: "Home", "Products", "Login", and "About us", followed by a red heart icon. The main content area is titled "Register" in a bold, light-colored font. Below the title are five input fields, each with a label above it: "Full Name:", "Username:", "Email:", "Phone no.:", and "Password:". Below the "Password:" field is a "Re-enter Password:" field. At the bottom of the form is a red button labeled "Register".

Fig V Register Page

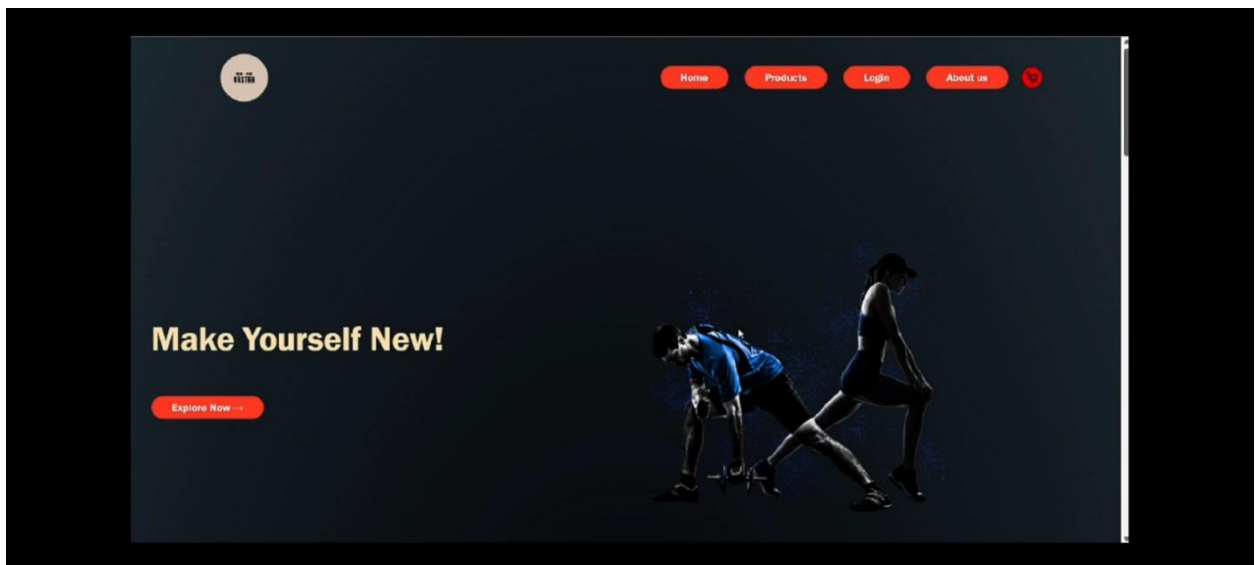


Fig VI Home Page