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E-commerce Shoe Website of Western Footwear

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Independent University, Bangladesh

An Undergraduate Internship on E-commerce Shoe Website of Western Footwear

By

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Summer, 2022

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September 13, 2022

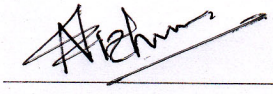
Dissertation submitted in partial fulfillment for the degree of Bachelor of Science in Computer Science

Department of Computer Science & Engineering

Independent University, Bangladesh

Attestation

I certify that this report contains the project on E-commerce Shoe Website of Western Footwear is fully done by me during my internship period. It was completed under the supervision of my faculty, Md. Asif Bin Khaled. I also certify that my work is genuinely based on the requirements provided by my workplace and based on what I have learned and implemented during my internship. I also assure that neither this project nor any part of it has been submitted elsewhere for any degree of recognition.



Signature

14/09/2022

Date

Nafees Rahman Nizhum

Name

Acknowledgement

First of all, and most importantly I like to thank Almighty Allah for giving me an opportunity to complete my under graduation from one of the top private universities in Bangladesh, for an internship in a well of a company where I have implemented most of my knowledge from my university to my internship project. I would also like to express my gratitude to my supervisor Md. Asif Bin Khaled, Lecturer, Department of Computer Science and Engineering, Independent University, Bangladesh (IUB for his valuable guidance and support, compassion, time, insightful comments, and thoughtful advice on various aspects of my internship and the preparation of this report. I've chosen this moment to gratefully acknowledge his contribution. I would also like to express my gratitude to my company supervisor of Ipro technologies limited Mr. Masud Rana (Project Manager) for giving me an opportunity to acquire an internship in an industry-standard project and to start my career as a software engineer. Finally, I would like to express my deepest gratitude to my family for supporting me through the crucial period of my life and internship and through my university life. I would always be grateful to them.

Nafees Rahman Nizhum
September 06, 2022
Dhaka, Bangladesh

Letter of Transmittal

September 14, 2022
Md. Asif Bin Khaled
Lecturer
Department of Computer Science and Engineering
Independent University, Bangladesh.
Subject: Submission of Internship Report Summer, 2022.
Dear Sir,
This is to formally advise you that I, Nafees Rahman Nizhum, a Summer 2022 Intern, would want to submit my internship report on the Western Footwear E-commerce Shoe Website.
I want to express my gratitude for all of your help and guidance throughout my internship project. The internship project would not have been finished without your assistance and support. My internship has given me fresh experiences that have altered my perspective on the corporate world.
I hope this report satisfies all the criteria and requirements and meets your expectations. Additionally, I would like to convey my apologies for any errors I may have made in this report.
Sincerely,
Nafees Rahman Nizhum
ID: 1722115
Department of Computer Science Engineering
Independent University, Bangladesh

Evaluation Committee

Asif Bin Khaled

Signature

Md. Asif Bin Khaled

Name

Supervisor

Signature

MOHAMMAD NOOR NABI

Name

Internal Examiner

M. Rana

Signature

Md. Masud Rana

Name

External Examiner

Signature

Name

Convener

Dr. Mahady Hasan
Head, Department of CSE
School of Engineering & Computer Science
Independent University, Bangladesh (IUB)

Abstract

Day by day e-commerce websites are getting more and more famous and user friendly. At ipro technologies limited and as a web developer of a short team our job was to create an e-commerce site for Western footwear shoe company. Where a user can usually visit the website choose his/her desired product and order it via online in a more time efficient and hassle freeway. The application is going to create a digital solution for online customers/buyers to simplify the online shoe buying system. Company admin and particular employees can access, view items, add items to the cart, and check out their product requisition. I discussed the project's goals, its scope, as well as the details of the project management plan in detail in this report. The report also contains a literature review, project management, and financing, methodology, result and analysis, and future works.

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Chapter 1

Introduction

1.1 Overview of the Work

Online shopping is a regular thing in our daily life nowadays. We can buy so many things from online easily now. Online shoe shopping is also a big need nowadays. People are buying/want to buy their preferable shoes from treatable online e- commerce site. As a wide consumer base can be reached easily through e-commerce. But there is fierce competition among numerous e-commerce websites. Users expect getting what they're searching for fast and easily when they visit an e-commerce website. The brands and actual products that users want to buy are also unknown to them. Regarding what they wish to purchase, they have a quite general idea. Instead than going to specialized e-commerce websites, many customers increasingly conduct their product searches on Google. They think Google will direct them to online stores that carry their merchandise. Any e-commerce website's aim is to serve users in focus in on their broad concepts and decide which things they wish to buy. Consider a consumer who wants to buy a shoe as an example. His or her shoe search should include facets for shoe brands, shoe colors, shoe sizes, and all other attributes. The customer's search for a shoe that suits his or her preferences is reduced to a smaller list as more characteristics or alternatives are chosen from the available facets. If somehow the list is reasonable and the customer prefers one of the mentioned shoes, the sale will be made.

Another problem is that there will be a unique set of aspects to be displayed for each shoe category. No matter whatever category a client is looking at, there will be different aspects to each category, so it needs to still be correctly designed so that buyers can focus on their favorite shoe products. The lesson here is that product category and feature listing should designed more specifically to attract the customer more wisely.

1.2 Objectives

The primary goal of my work is to create a online e- commerce platform to order and buy the shoes from the online.

1. There will be two end users: (i) customers/users, (ii)an admin panel.
2. Users can view the homepage menu with different categories and place orders from their own computers.
3. Admin can create/delete/Edit a user.
4. Admin can view/edit/delete the orders.
5. Admin can insert/delete a product.
6. Customer can log in/register.
7. Customer can view cart option.
8. Customer can checkout the cart option.
9. Admin can view a feedback report.
10. users can search via categories.

1.3 Scopes

As this is a web application, customers can make payments digitally, so data security is important. This application will work using APIs where the requests are validated, and a response will be replied accordingly.

1. After logging in, products will be displayed on a user's homepage and organized by category.
2. Products can be seen in detail, with sizes and colors, in a well-organized and detailed manner.
3. Products can be added by representatives/admin.
4. Authenticated users can look for their desired products, check details, and add to the cart.
5. If users are not authenticated, they must first log in to be authenticated.
6. Orders and requisitions that change at the last minute will be recorded and adjusted with the billing.

Chapter 2

Literature Review

2.1 Relationship with Undergraduate Studies

In my under-graduation studies, I acquired a lot of theories about programming and developing an application from start to finish. Most of the courses include both theoretical and lab work. I learned how to operate in a group in lab sessions, which will benefit me in real-world scenarios where I will have to collaborate with my colleagues to complete and deliver a project.Some of the academic courses that were beneficial to my professional experience include:

CSE 203 Data Structure:

This is the most basic course that helped us with the ideas of several data structures and their applications such as Stack, Queue, Linked List, Array, Pointer and so on.

Database Management (CSE 303):

in this course i taught how to design and plan a project. It covered popular planning and strategy practices such as: Six Element Analysis, Problem Analysis,Rich Picture, Requirement Analysis, Entity Relationship Diagram, Business Process Model, Normalization and many more.

System Analysis and Design (CSE 307):

This course gives an overview of Use Case Diagram, Use Case Scenario, SDLC's and how to adopt each one of them to the project. **Web Application and Internet (CSE 309):** This is the course where the development of web applications was taught. It covered very important technologies that are highly in demand in the industry, such as HTML, CSS, Bootstrap, JavaScript, jQuery, View Engines, MS-SQL.

2.2 Related works

Bata Bangladesh:

Bata is one of the largest shoe company in Bangladesh since 1972. They have shown many footsteps that how shoe company should take their proper steps in this industry. They have their e-commerce shoe website in this country since a long time. So this website is a similar kind of work that the western footwear company was inspired and thought of.

Apex footwear Bangladesh:

Apex is also a big shoe company in Bangladesh since 1997. it also showed many footsteps to the shoe company's which is very grateful for the upcoming shoe business holders and new comers. They have also a e-commerce shoe website from where a customer can easily buy/order an shoe via online and can get his/her desired shoe in a hassle free way and more time efficient way.

Chapter 3

Project Management & Financing

3.1 Work Breakdown Structure

The work breakdown structure divides the work into smaller parts so that it may be managed and approached more easily. WBS is a vital tool for projects since it incorporates scope, cost, and schedule baselines all by itself, guaranteeing that project plans are in sync. A work breakdown structure's organizational chart depicts all a project's processes, making it an important project management tool for planning and scheduling. There are two types of WBS one is Deliverable-based, and another is phase-based. We are going to implement a phase-based WBS for this project. In the above diagram Level

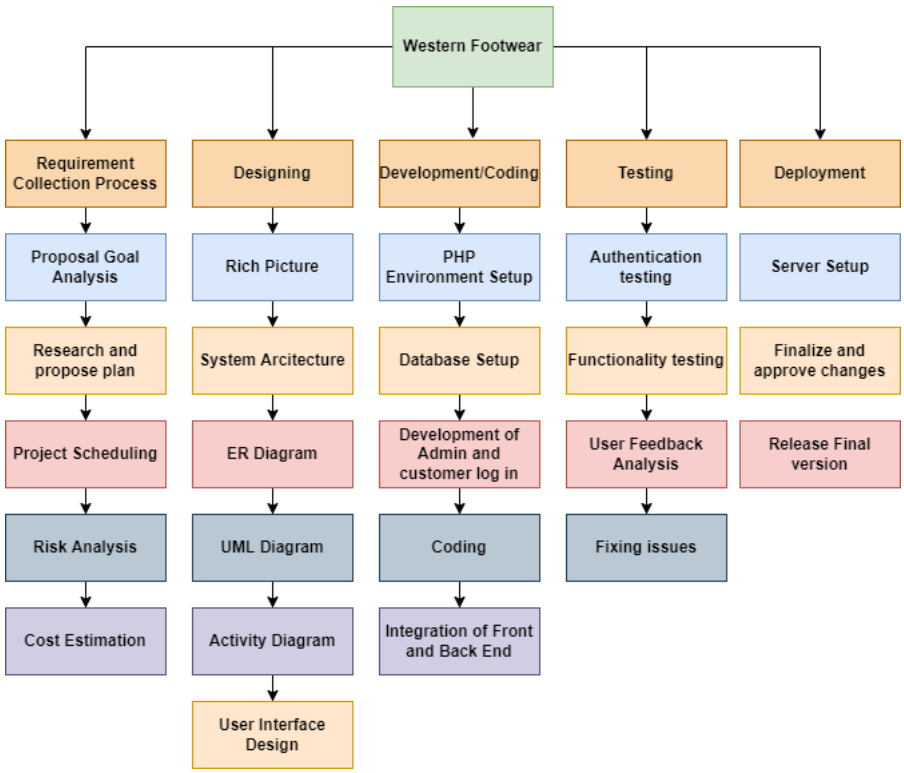


Figure 3.1: Diagram of WBS

1 has six elements. Each of these elements are the phases of the project. The Level 2 Elements are the unique deliverables in every phase. All the lower-level components are deliverables. The project's primary steps include collecting requirements, designing, developing, testing, and deploying. The child tasks are the tasks that must be done to finish the current phase and go to the next phase. We have also made the cost calculation,resource allocation, and risk assessment, all of which are important for WBS and help us gain a better understanding of the project. A WBS also helps to avoid common project issues including missed deadlines, scope creep, and cost overruns, among others. When built as thoroughly as feasible, the WBS serves as a blueprint for completing what looks to be a difficult undertaking. However, when the project is broken down using a WBS, it becomes far more viable and approachable.

3.2 Process/Activity wise Time Distribution

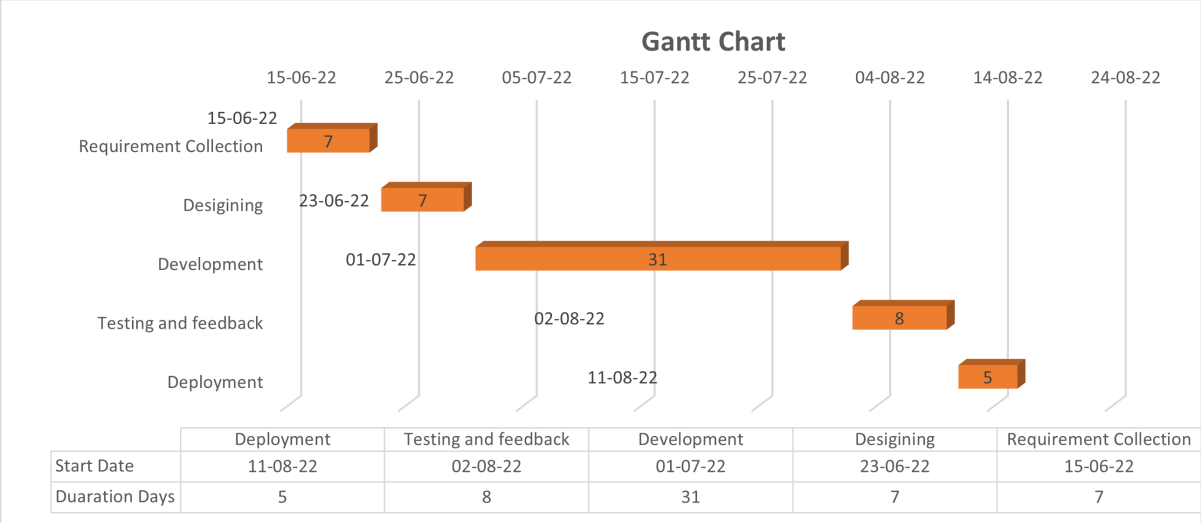
Activity Name	Duration (Days)	Work Percentage
Requirement Collection	7	11
Designing	7	15
Development	30	48
Testing and Feedback	8	17
Deployment	5	9
Total	**57**	**100**

Figure 3.2: Task wise time allocation

It is very important to accurately estimate the overall time required to accomplish the project depending on the activities to be completed. It is also important to create priorities and set goals to complete a successful project. The development phase is by far the most important because it takes the longest to complete. Because we are working in order, if one task is delayed, the rest of the tasks will be delayed as well. As a result, it is important to complete tasks according to the estimated schedule.

3.3 Gantt Chart

One of the most common and effective ways of expressing activity (tasks or events) presented against time is a Gantt chart, which also is commonly used in project management. A list of the activities is shown on the chart's left side, and a suitable time scale is given along the top. A bar is created to indicate each activity, and the position and length of the bar correspond to the activity's start, halfway, and end date. This enables you to see rapidly.



	Deployment	Testing and feedback	Development	Desigining	Requirement Collection
Start Date	11-08-22	02-08-22	01-07-22	23-06-22	15-06-22
Duaration Days	5	8	31	7	7

Figure 3.3: Gantt Chart

3.4 Process wise Resource Allocation

Resource allocation is the method of assigning and planning the use of available resources in a most efficient and cost-effective manner. Resources are a necessity for every project, even if they are occasionally in short supply. As a result, the project management is the practice of allocating these resources at the correct time throughout the project timeline. Therefore, supervising the project and allocating resources so that it operates as smoothly and effectively as feasible is what resource allocation entails. The distribution of resources is shown in the table below.

Task	Resource Allocation
Requirement Collection	10%
Designing	20%
Development	45%
Testing and Feedback	15%
Deployment	10%
Total	100%

Table 3.1: Activity wise Resource Allocation

3.5 Estimated Costing

Among the most crucial elements of project management and planning is cost estimation. It is dependent on how many resources, how much money, and how much time are needed depending on the project's scale.

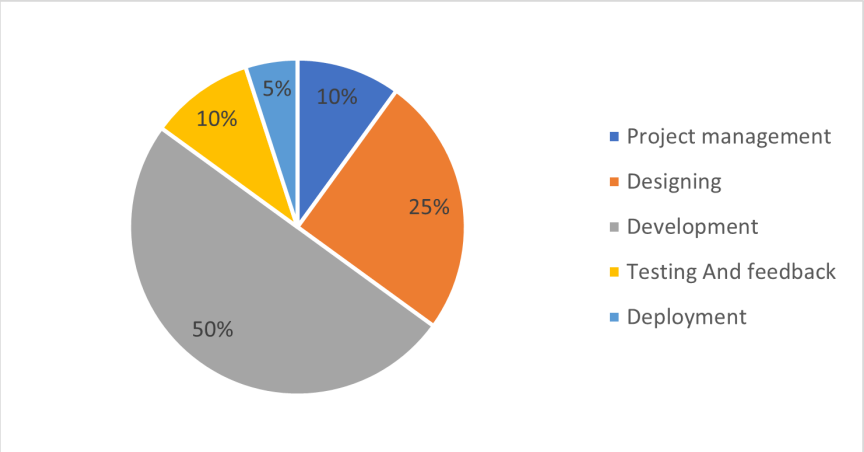


Figure 3.4: Pie Chart of Estimated Costing

Chapter 4

Methodology

A methodology is a collection of problem-solving approaches, practices, processes, techniques,procedures, and standards. They're well-defined processes that show us exactly what to do next,why each step is important in the entire software development life cycle, and how to complete a project stage.
We are using an incremental and iterative development process for this project. Mixing iterative design and system testing is known as iterative and incremental development. The software design process is split into incremental units using the incremental approach. Iterative software development is the practice of repeating software development activities in cycles known as iterations, allowing for gradual development. Every increment builds on the prior version.Up until the best solution is determined, a new version of the software is produced following each iteration. Planning is the first step of incremental and iterative software development, which continues through cycles that incorporate ongoing feedback from users plus incremental feature additions, culminating in the release of finished software at the conclusion of each cycle.

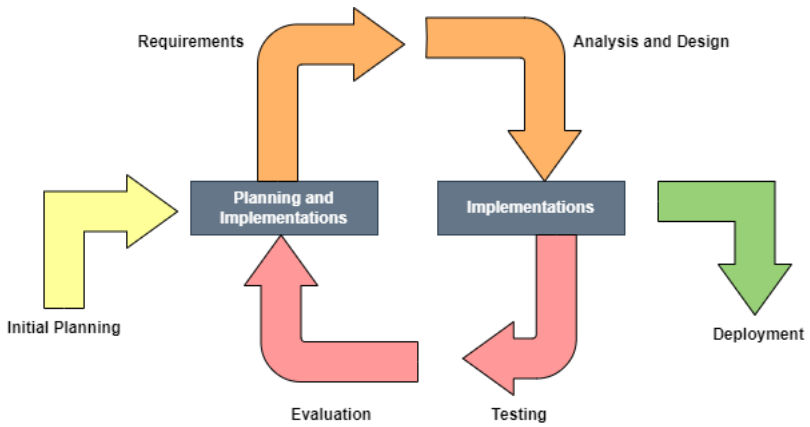


Figure 4.1: Iterative and Incremental Development Process

1. **Planning phrase:** I closely discussed about the project with my organizational supervisor about the project and gathered all the requirements for the various

functionalities that will be included in the web application. I will begin designing the application after I have written down and clarified all the requirements and doubt that I had.

- **Development Phase:** The whole application will be developed with Raw PHP and custom admin site interacting with MySQL database.This phase may take the longest. Besides, we must provide proper authentication and authorization of all the users to maintain the proper security of the application.

- **Testing Phase:** The testing phase is an interesting phase as more and more weird bugs came into action. In this phase, I found out that with big databases, the software would not respond that well. So here I had to rewrite some of my code and had to keep algorithms time and space complexity to improve the speed of the application.

- **Evaluation Phase:** This phase will help us to identify the lacking and problems of the system from a client's perspective. After getting the feedback, the web application can be updated and made more sustainable.

We can see that these approaches reduce overall risk and help the project respond quickly to changes, can quickly and easily adapt to any given change, can achieve transparency and total alignment in the development and testing phases, delivers overall higher quality products, and creates customer satisfaction from the above discussion of how to use each step of the methodology. For these reasons, I have decided to employ the Iterative and Incremental technique to complete my project.

Chapter 5

Body of the Project

5.1 Work Description

The “western footwear” is a web is a web application which will simplify the online shoe ordering. This application can be used by all the users who are willing to visit this website and want to check/buy shoes.In the system, Users will visit into a specific URL and will be able to find universal homepage. There will be Log in and Register option for specific user authentication. In the right nav section which will redirect users into login and register for the company’s staffs. After successful login and registration the staffs can be redirected into their specific homepage where they can view their desired page and options. The user can see his/her orders that are made by them via online and later in the cart option and they can review it and finalize the orders there. There will be a check out and place order button. All the available shoes and its categories will be available on the website which will be viewed and controlled by a custom admin panel which is create using PHP and MySQL database. The admin login section will be redirected through a secret URL which will bring the user to the admin home page. After successful admin login, Admin can add different products and can be able to make significant changes like update, delete, active or inactive any products through their specific home page. Any changes made by the admin will be visualized on the home page of website users.

5.2 Requirement Analysis

Rich Picture

The rich picture illustrates the visual representation of the ”Western Footwear” System’s Web application. We can see how the overall system workflow works in this Rich picture, from the user making an order through the admin’s response to the order.

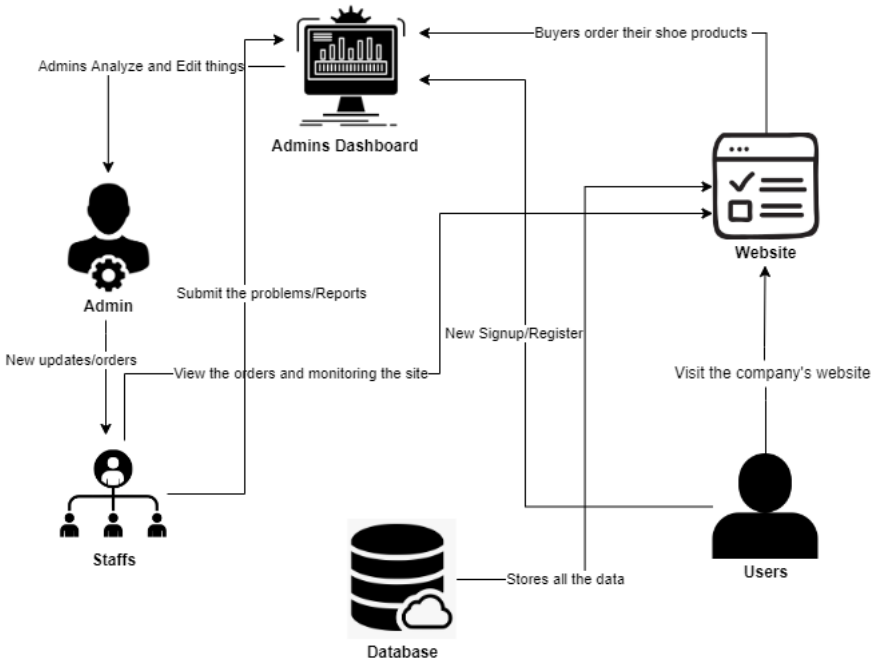


Figure 5.1: Rich Picture

Functional and Non-Functional Requirements

Functional Requirements:

1. When a user registers the database will store the data.
2. When a user tries to login, it will validate if the email and the password is correct or not.
3. A user profile will be created when a new registration happens.
4. User will be redirected into the specific homepage after registration.
5. Users can search for their desired product from the item table.
6. User can add their desired products to cart.
7. User can edit the quantity of a cart item.
8. User can review and delete a cart item.
9. Product should be arranged by categories on the homepage.
10. Products can be added dynamically.
11. All the categories should be shown on the homepage.
12. Users can leave a short note in the contact page.

13. Messages can be handled in the admin dashboard.
14. If a server error/ network error occurs at checkout, the user should be notified immediately.
15. Users have to login before checkout if they are not logged in.

Non-Functional Requirements:

1. Usability – The application will be user-friendly and intuitive for the easy access of the users.
2. Maintainability – The application will be maintained regularly so that, it doesn't become slow or any bug fixes.
3. Reliability – A system is most preferable when it is reliable, that is, the availability of the system is important. Therefore, the application will be built to make it as much reliable as possible.
4. Scalability–The system can be accessed from devices like smartphones and an aesthetically similar web Application for computers will be developed.
5. Security – The system will be secured and personal information like the user's phone numbers, the email address will be safe.

5.3 System Analysis

5.3.1 Six Element Analysis

Process	System Roles					
	Human	Non-CompHardware	Computing Hardware	Software	Database	Network & Communication
1.Registration	Users	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
2.Login	User(Admin/company staffs)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
3.View Category List	User(Admin/company staffs)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
4.View itemdetails	User(Buyers/Admin/company staffs)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
5.Search	Users(Buyers)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)

6.Add tocart	User(Buyers)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
7.**Showing all orders and status**	User(Buyers)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
8.Check out andConfirmation	User(Buyers)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)
9.Last Momentchange	User(Buyers)	N/A	Computer (Laptop/ Desktop) & Smartphone one (Via webbrowser)	1. Operating System 2. Web browser	1. MySQL	Internet Connectivity(Broadband/Mobile Data)

Figure 5.2: Six Elements Analysis

5.3.2 Feasibility Analysis

We need to do a feasibility analysis after obtaining all the necessary information and before the beginning of the development phase, which will take the most time. i.e. a measurement for evaluating a software product in terms of how practical product development will be for the company. Feasibility studies are carried out for a variety of reasons, including establishing whether a software product is suitable in terms of development,implementation, and project value to the company.This Web's feasibility study is primarily concerned with three elements.These are discussed below:

- **Technical Feasibility:** The software, hardware, and other technical requirements of the proposed system are evaluated for technical feasibility. It must be determined whether the required software and hardware are available. This application is built with php which is open source and hence free, and the for database support, we are going to use MySQL, which is also free. Because laptops, computers, and mobile phones may be used to develop and test the output, we can conclude that it is technically possible.

- **Operational Feasibility:** The "Western Footwear" would be a comprehensive solution for its users and buyers through online. The application's users will be (i) the admin, who will administer the application's data via the admin panel, (ii) Company's employees, and (iii) Buyers. The 'Western Footwear' will make online shoe ordering operations more smoothly and efficiently. As a result, we can confidently state that this application is operationally possible.

- **Economic Feasibility:** We can find out the costs and advantages of Economic Feasibility and determine whether the final product is economically feasible or not. This would take both development and production expenses into account. Because the users/customers will benefit from this application by saving time and energy, the finished product will be a worthwhile investment. This app will eventually evolve into a business, which will reduce the cost of renting an actual store, thus we may conclude that this app is economically feasible.

5.3.3 Problem Solution Analysis

- **Technical Vulnerabilities:** We have faced some challenges in fixing technological vulnerabilities and resolving them would surely "infiltrate" our web app during the development process, such as cross-site scripting, SQL injection, and so on ans still going through lots of problems as the project is still undergoing.

- **Authentication and Authorization System:** To prevent unauthorized users from accessing our app's resources/critical data, we need to develop secure user permission and authentication mechanism. PHP provides us with everything we need to develop a secure login and authorization system right out of the box.

5.3.4 Effect and Constraints Analysis

Users will log in or register to place their shoe order through the web application by adding products to their individual carts. According to the website category lists will be shown, and buyers/customers will be able to place orders based on their criteria. The 'Western Footwear' will make online shoe ordering operations more smoothly and efficiently. The staffs crew will notify the admin of the returnable item in accordance with the rules and restrictions. Then, when ordering in the cart is complete and customer confirmed their checkout send a notification to the customer.

5.4 System Design

UML Diagrams

The unified modeling language (UML) is a visual visualization of a system in a diagram (UML). The UML is indeed a development modeling language used in the software engineering field that offers a consistent method to represent the system architecture. In the next part we will describe and show our Western Footwear company's UML diagram from where anyone can get a clear idea of what are the basics going on in our project. **Use-case Diagram:** It is a diagram that depicts the system's visible interactions with

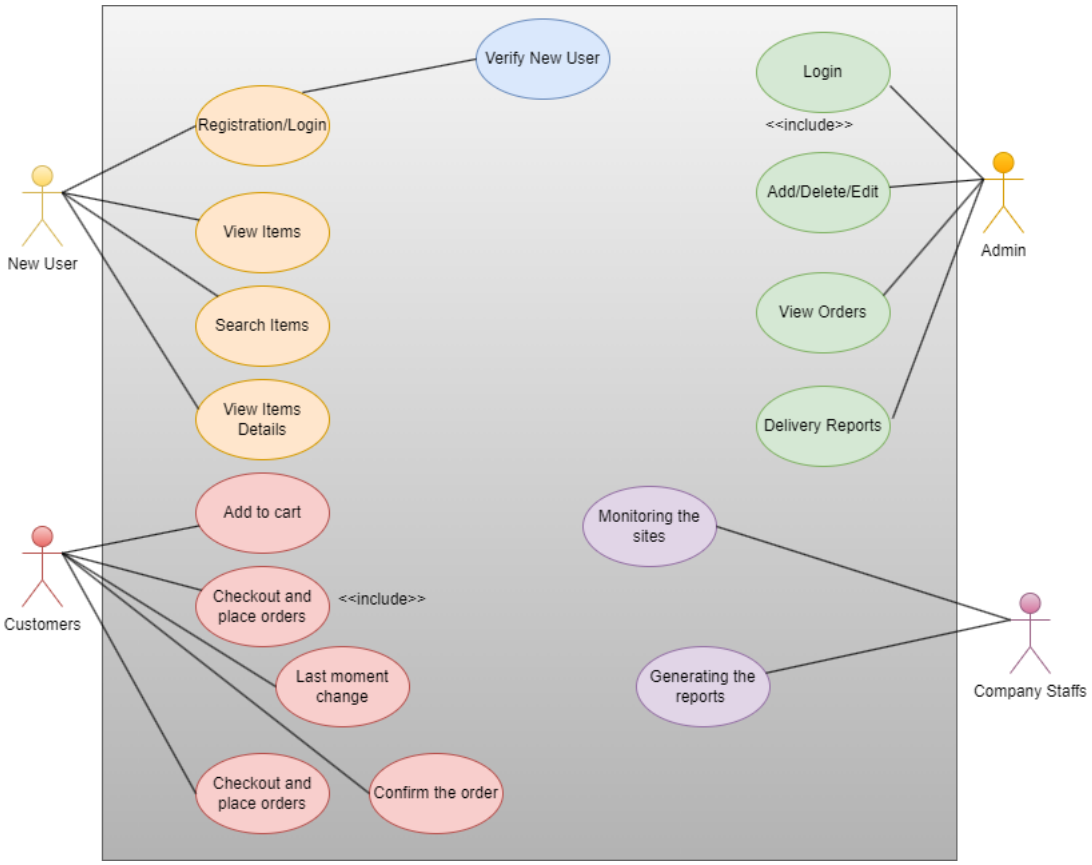


Figure 5.3: UML Diagram of Western footwear

actors (users). This use-case diagram displays and connects the entire system of "Western Footwear" system, as well as important use cases and actors.

Activity Diagram: This Activity diagram describes and depicts the entire system activity that a user engages in when accessing the Western Footwear online application. They can examine their selected shoes and add to cart once they visit the URL and log in successfully, after which they can proceed to checkout and order placement. They will be sent to the login page and prompted to login first if they are not logged in. They will fill out the relevant information on the checkout page and will be able to place a purchase

quickly. Below is a diagram of the activity.

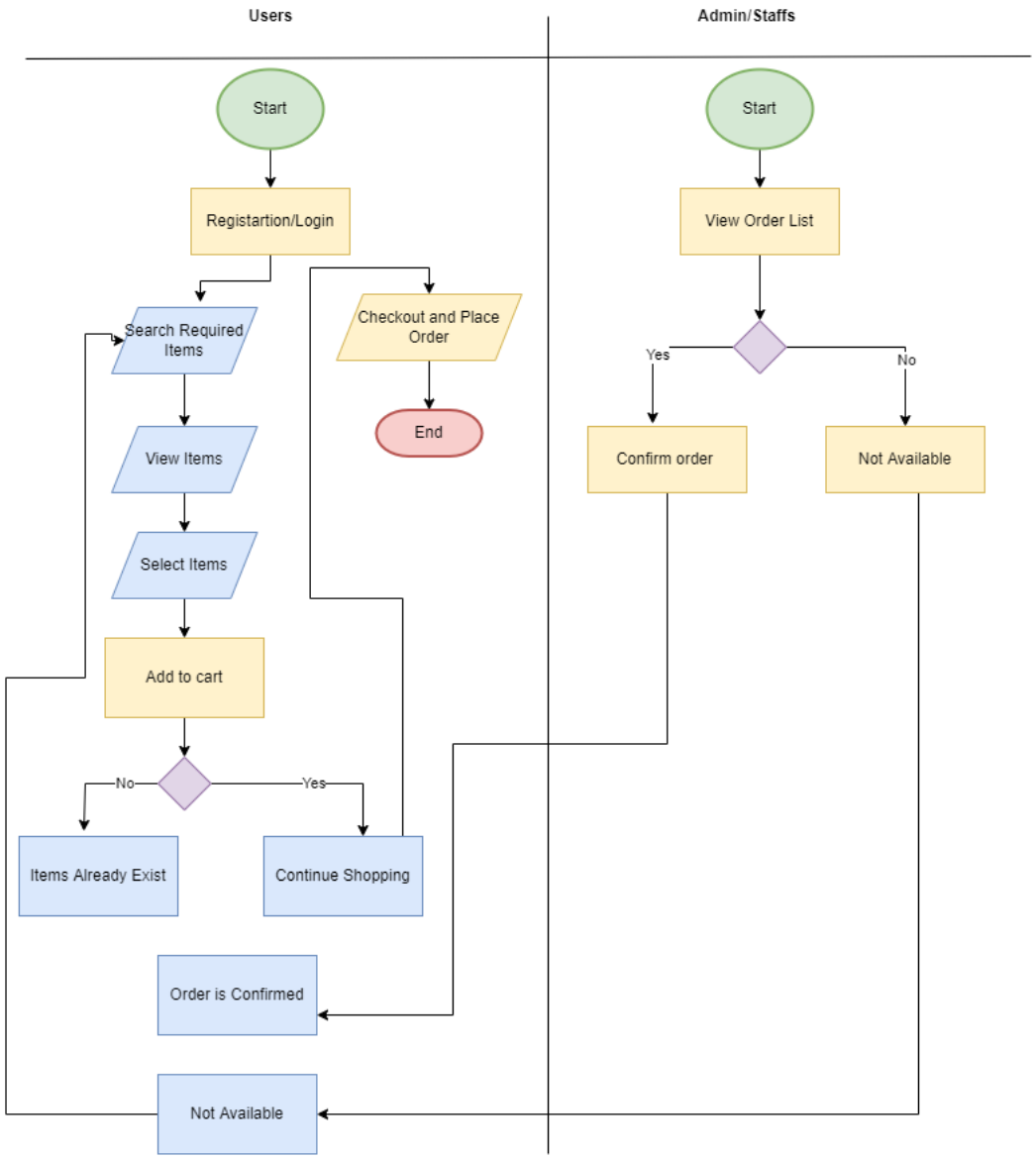


Figure 5.4: Activity Diagram of Western Footwear

In the above we can see the detailed activity diagram of the western footwear company. From here we can understand the activity steps more briefly.

Architecture

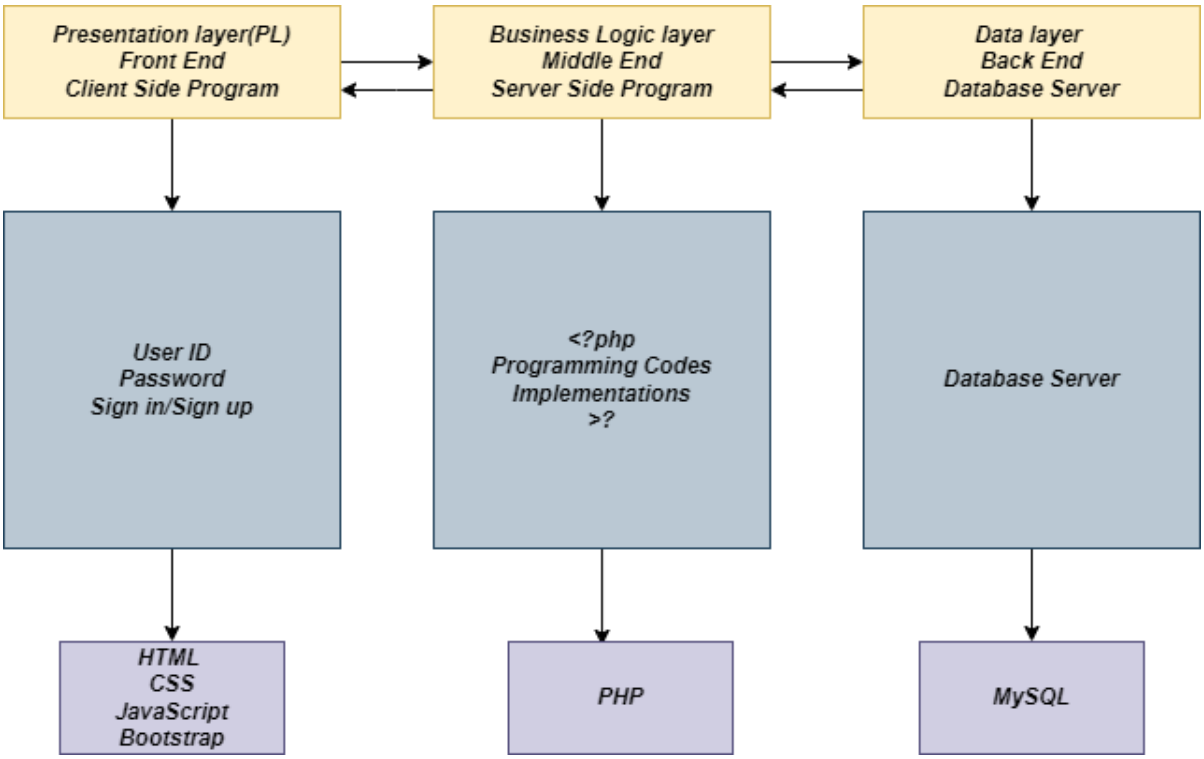


Figure 5.5: Php Architecture

In the above architecture we can see a clear idea about the PHP architecture.As one can see the user access the web browser and views the website and these packets are sent to the server via internet and then these requests are forwarded to database server for fetching or storing data as per credentials. The database we are utilizing is MySQL which receives request of users from web server, validates and responds to it accordingly. The SQL back-end is connected to an efficient front-end UI that is HTML, CSS, Bootstrap, JavaScript based for good customer experience.

5.5 Implementation

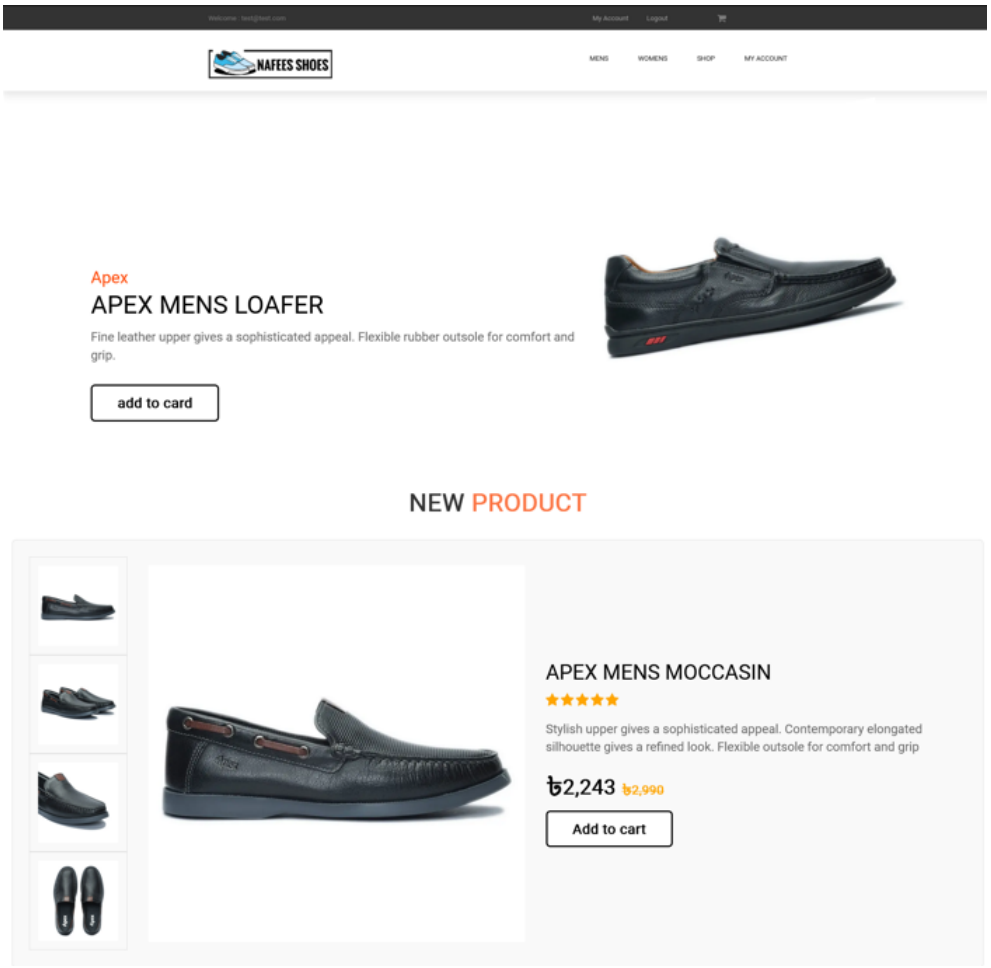


Figure 5.6: Home page

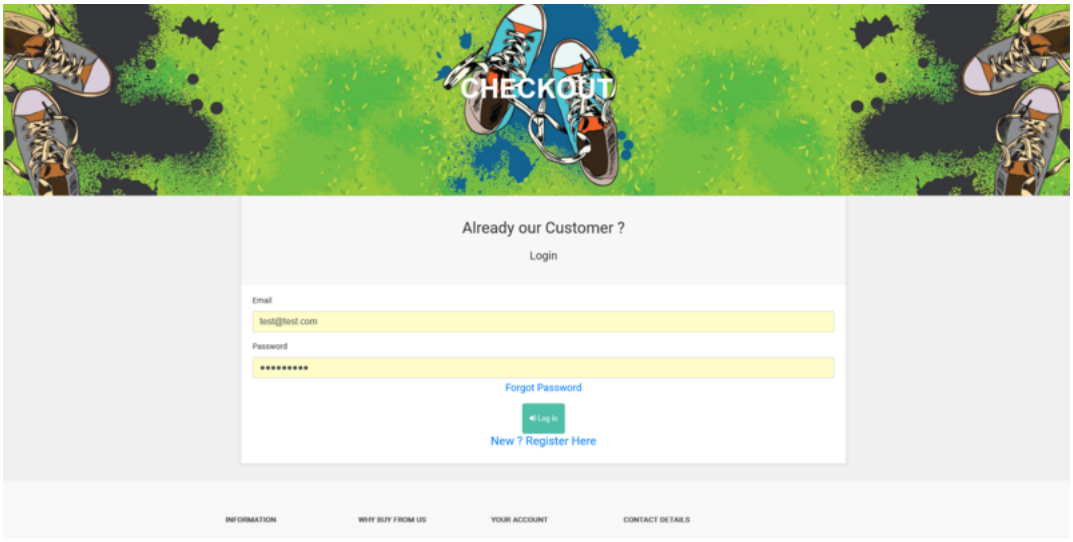


Figure 5.7: log in page

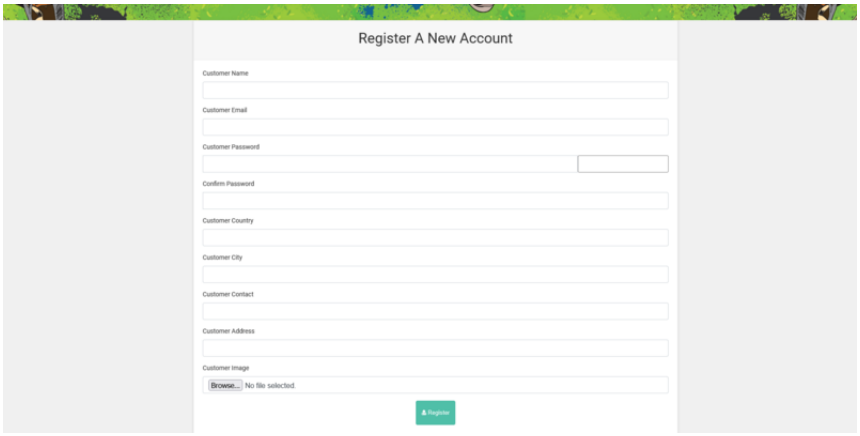


Figure 5.8: Register Page

5.6 Testing

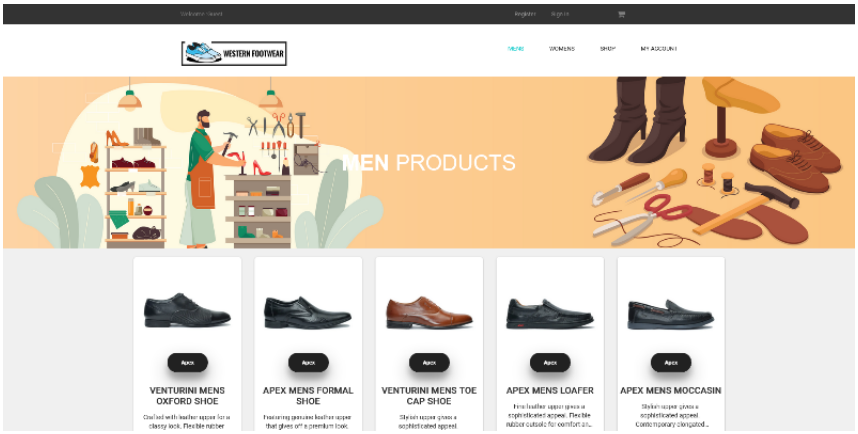


Figure 5.9: Men Products

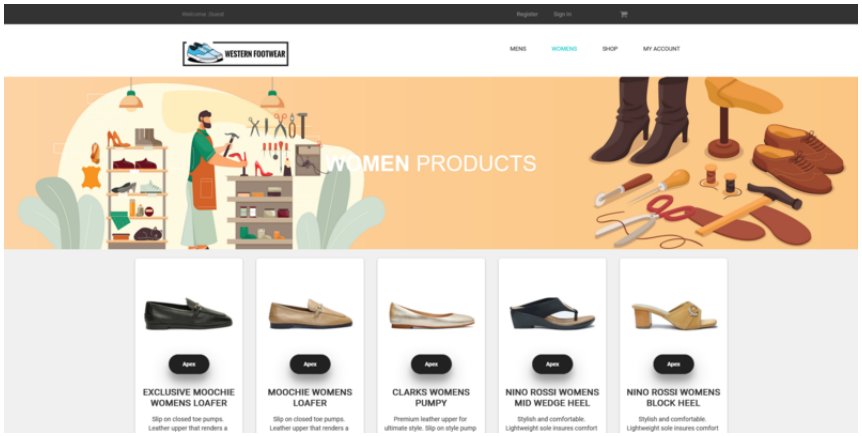


Figure 5.10: Women Products

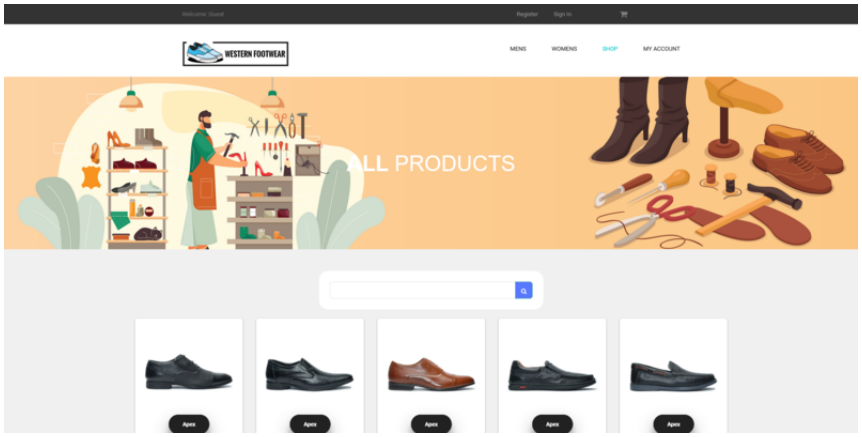


Figure 5.11: All Products

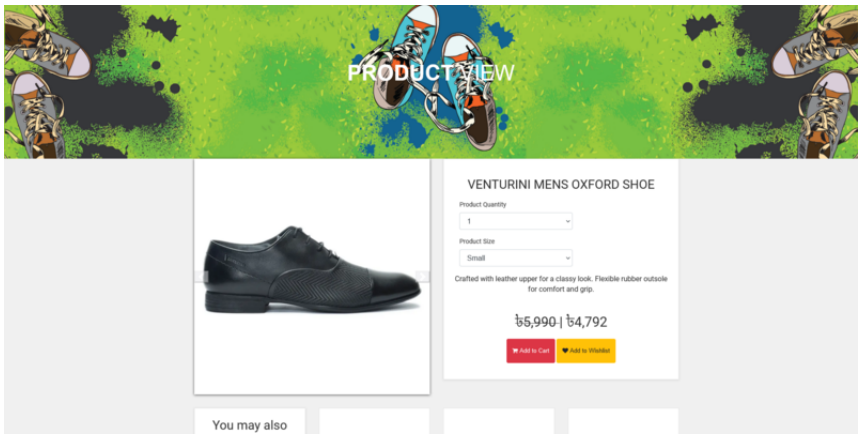


Figure 5.12: Products View

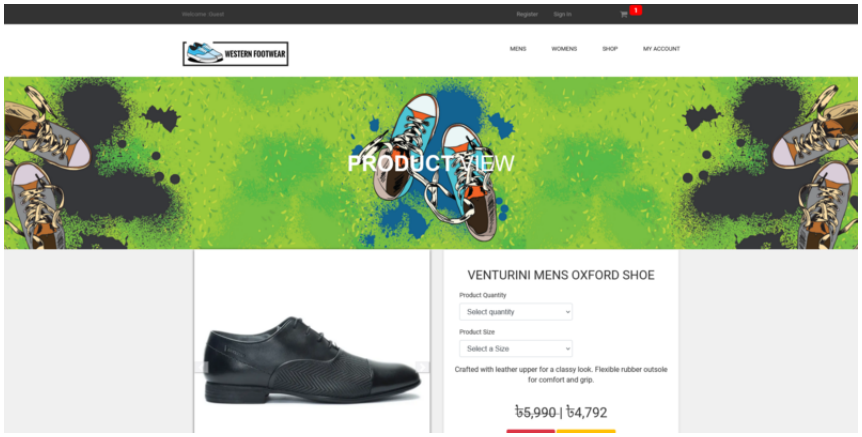


Figure 5.13: Cart Options

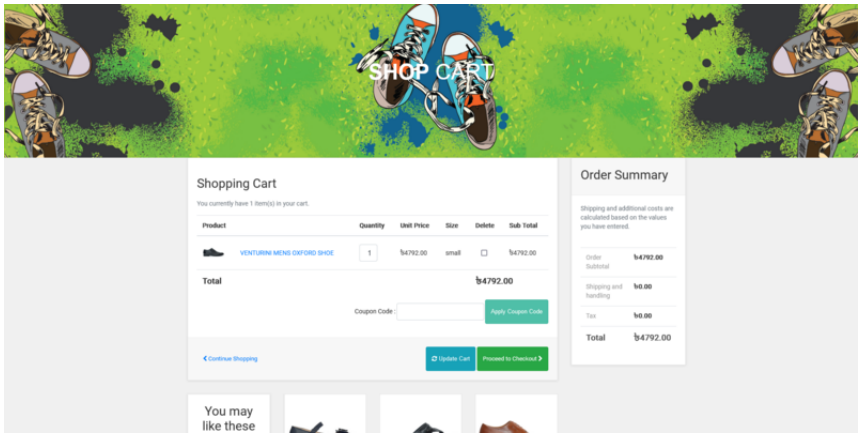


Figure 5.14: Check Out/order Summery

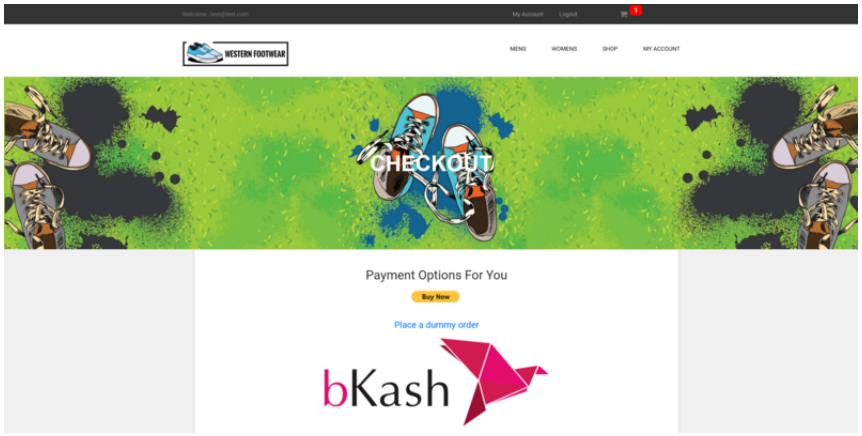


Figure 5.15: Payment Option

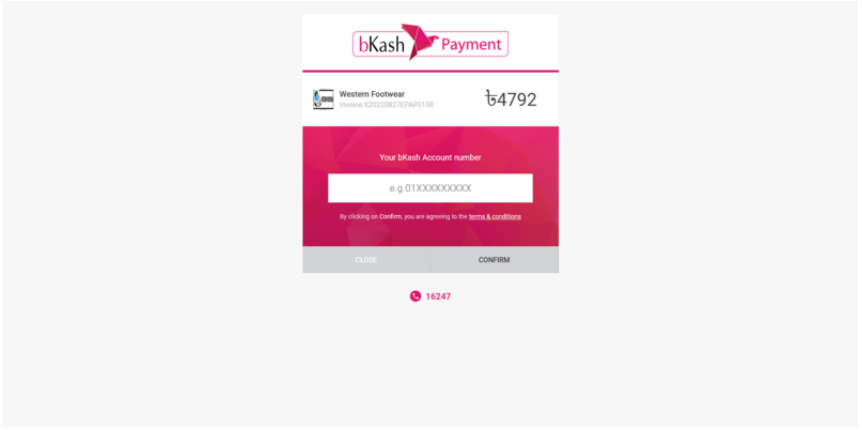


Figure 5.16: Payment Option 2

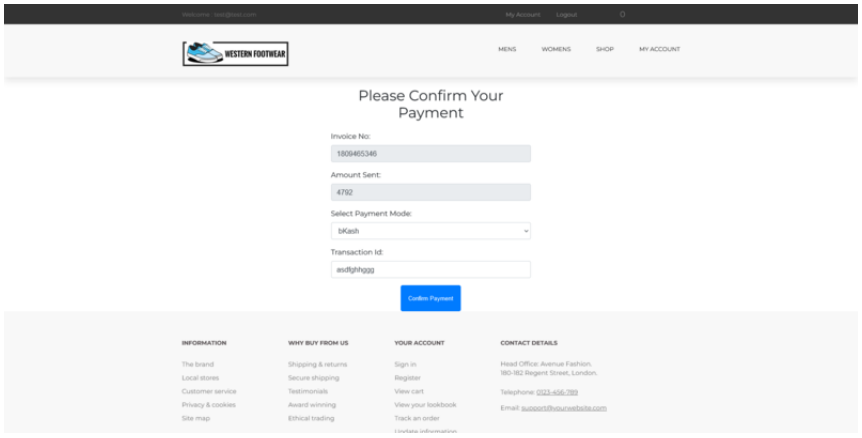


Figure 5.17: Payment Option 3

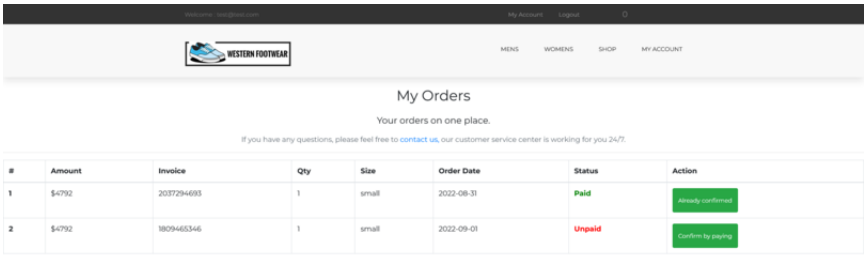


Figure 5.18: My Orders After Payment

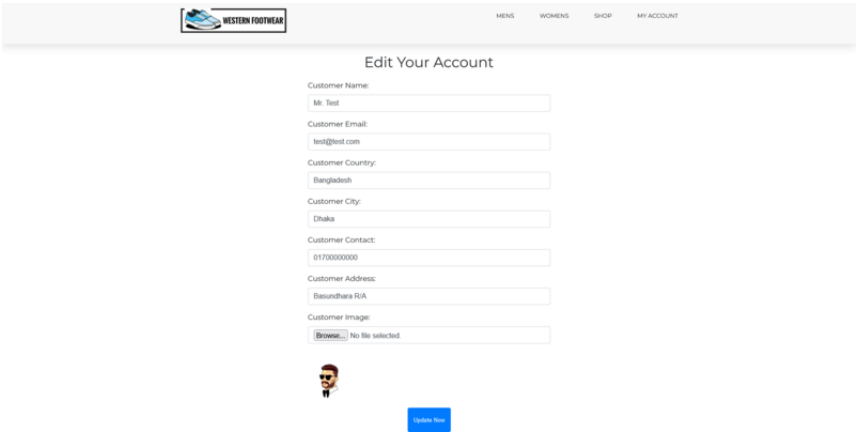


Figure 5.19: Edit Account

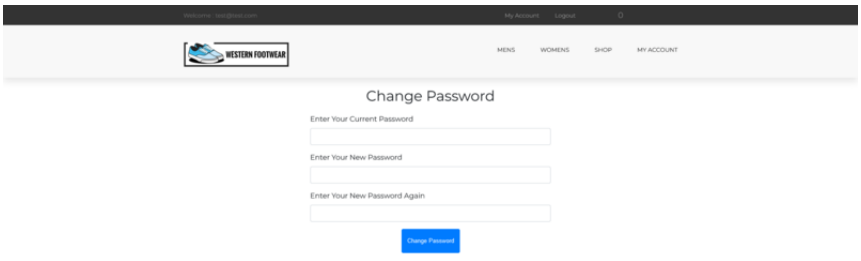


Figure 5.20: Change Password

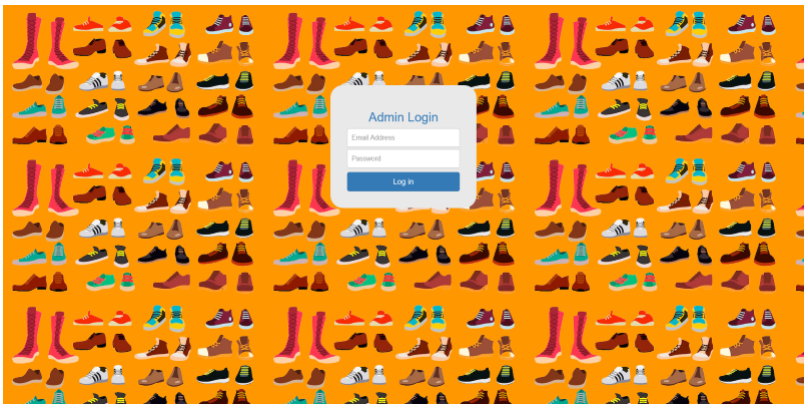


Figure 5.21: Admin Login Page

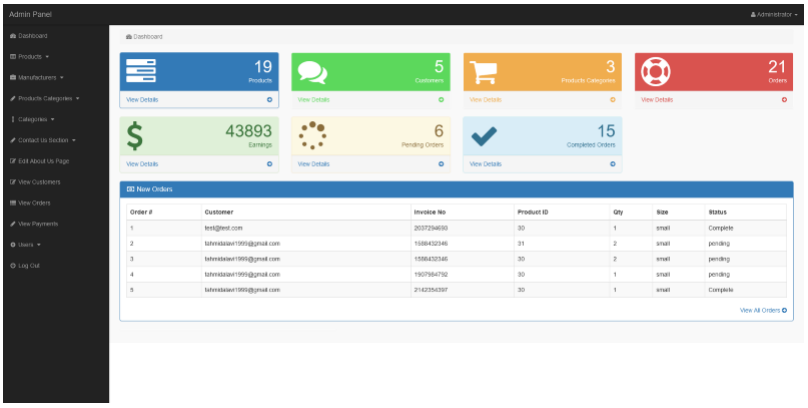


Figure 5.22: Admin Dashboard

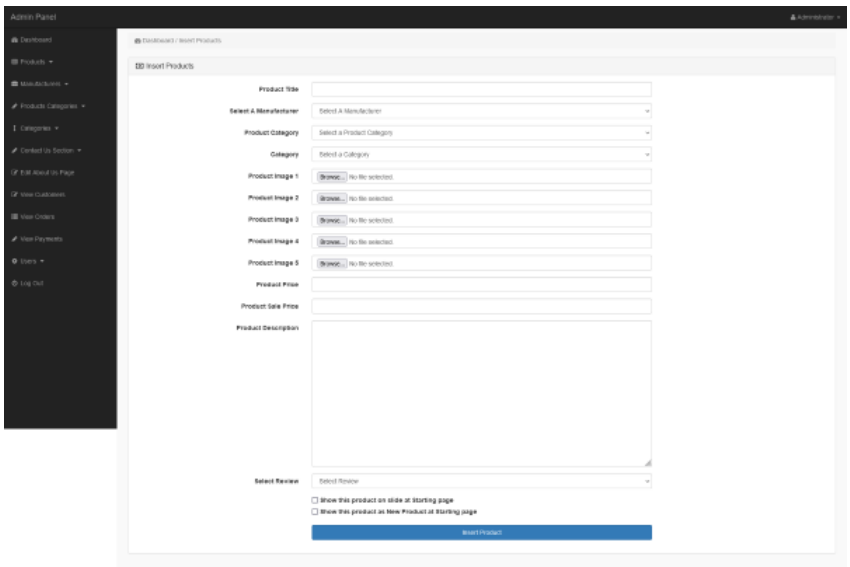


Figure 5.23: Insert products

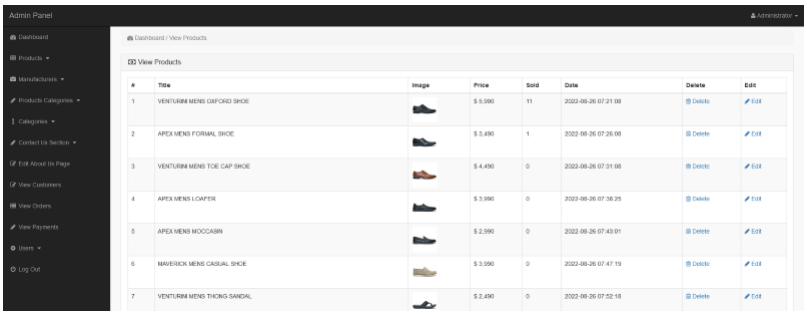


Figure 5.24: View products

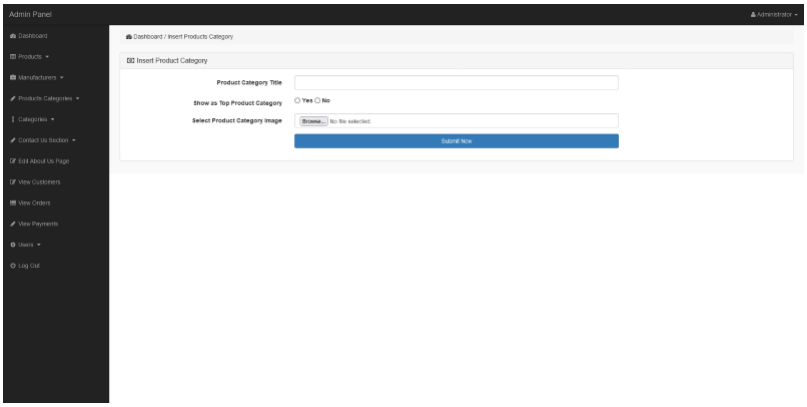


Figure 5.25: Insert product category

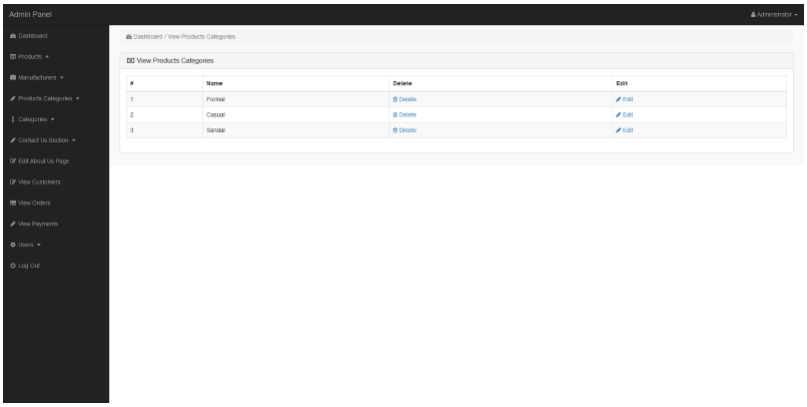


Figure 5.26: View product category

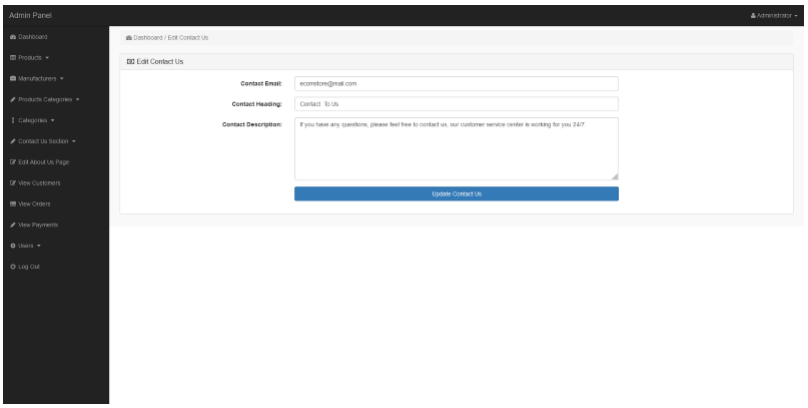


Figure 5.27: Edit Contact Us Page

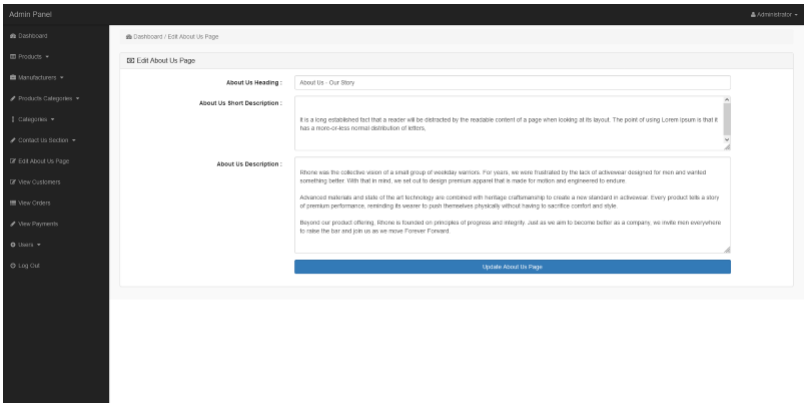


Figure 5.28: Edit Contact Us Page

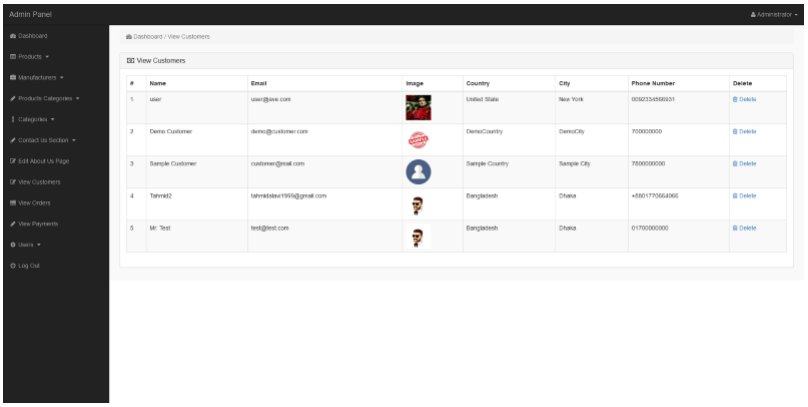


Figure 5.29: View Customer Details

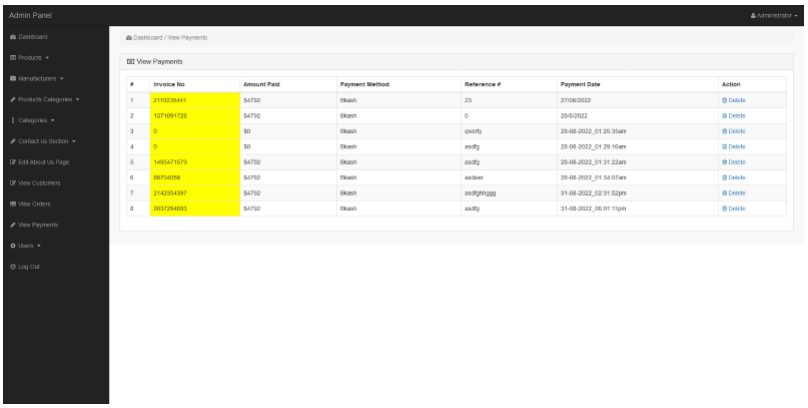


Figure 5.30: View Payment Details

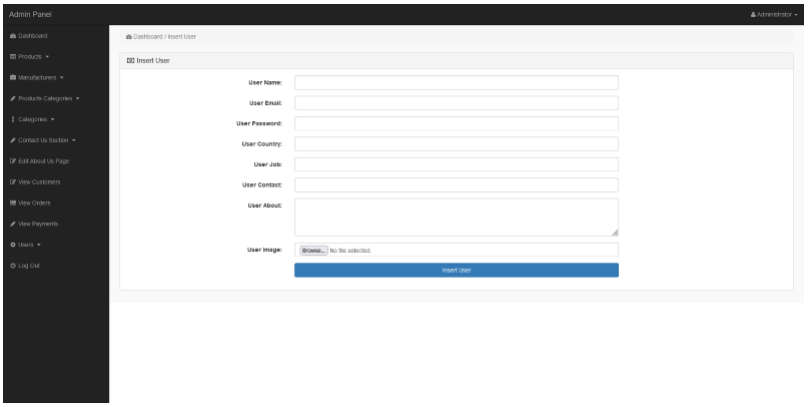


Figure 5.31: Create Users

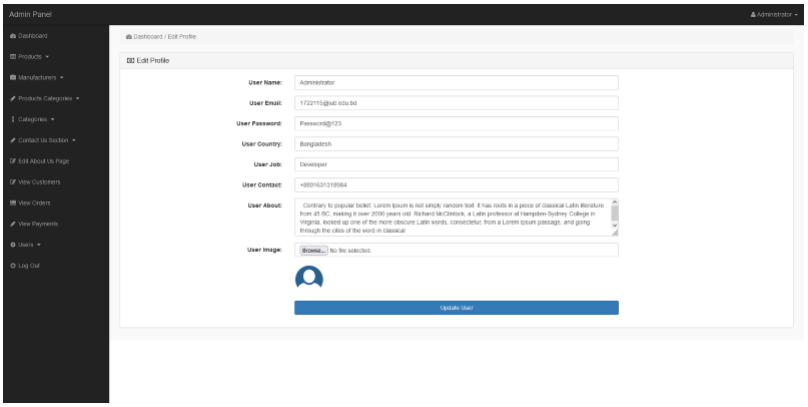


Figure 5.32: Edit Users

Test Case No.	Scenario	Test Steps	Test Data	Expected Results	Actual Result
T-01	**Registration**	Enter full name, email, phone number, and password and press register button.	Name, email, phone number and password	Redirect to login screen	As expected
T-02	**Login**	Enter Valid Email and password in input field and press the login button.	Email and password	Redirect to user dashboard	Successfully logged in
T-03	**View and add item to cart**	Scrolling down the cursor in the user dashboard. Search the desired product and press add to cart button.	Desired product name	Redirected to the dashboard for further selection.	As expected
T-04	**Last Moment Change**	View cart and make required changes and save.	N/A	Redirected into user dashboard.	As expected
T-05	**Checkout**	Go to the cart page click on the checkout button.	N/A	Redirected to user dashboard and invoice generation takes place.	As expected
T-06	**Logout**	Press the logout button.	N/A	Redirected to the universal homepage.	Successfully log out

Figure 5.33: Testing Table

Chapter 6

Results & Analysis

After performing all the test cases, I came up with the following outcomes, which indicate how the app performs in various situations. To avoid bugs when the application is in live mode, proper and thorough testing is important. Approval is the process of ensuring that the developed system meets all the requirements. The main goal of software testing is to find defects in the application. Testing methodologies were used to justify all test cases. The results of a few tests are shown below.

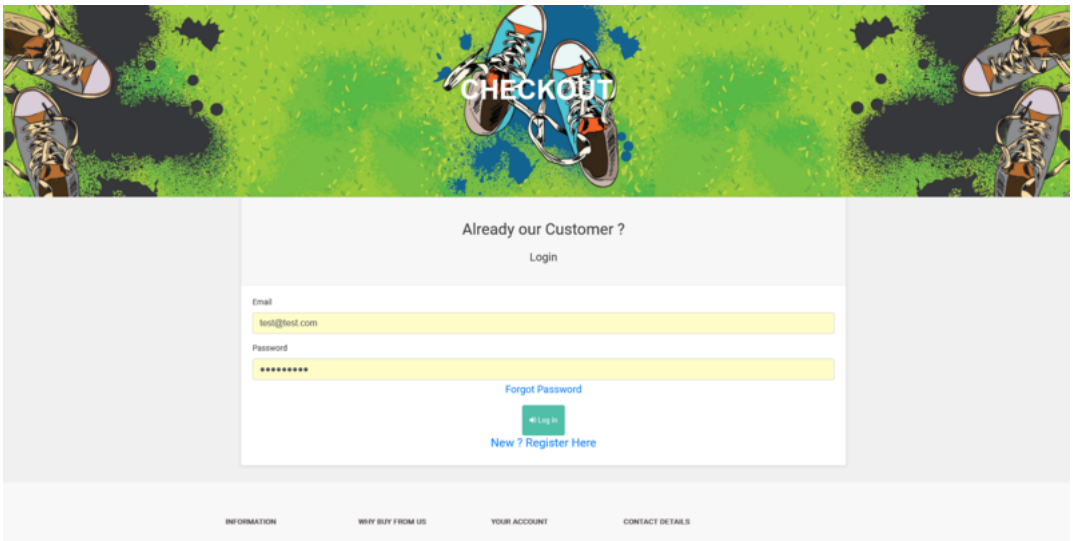


Figure 6.1: Log in page

Registration with empty field: If any of the registration fields were left blank, it will ask you to complete that field if it is required. It will also notify you that the email format is invalid if the email is invalid.

Login with the wrong credentials: If the email is invalid, it will notify you that the email format is incorrect. If both the email and the password are entered, but one of them does not match the database, it will show a message that "Something went wrong,

the credentials do not match our record." If all the provided credentials are correct, it will redirect to the specific user's dashboard.

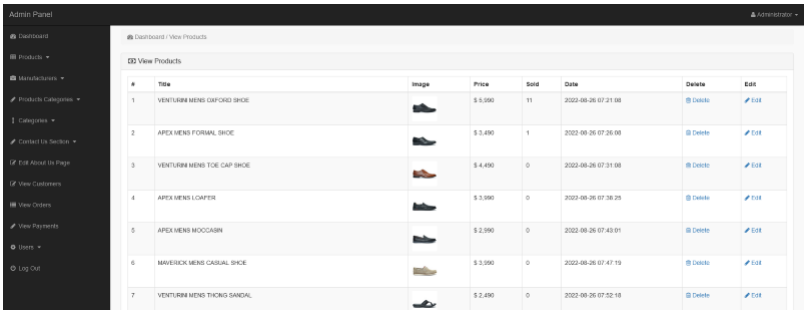


Figure 6.2: View Product Details

Product details page: The user dashboard displays all the available products which are managed dynamically from the admin panel. By clicking on each individual product, the user will be taken to the product's specific details page. They can also add the item from the details page.

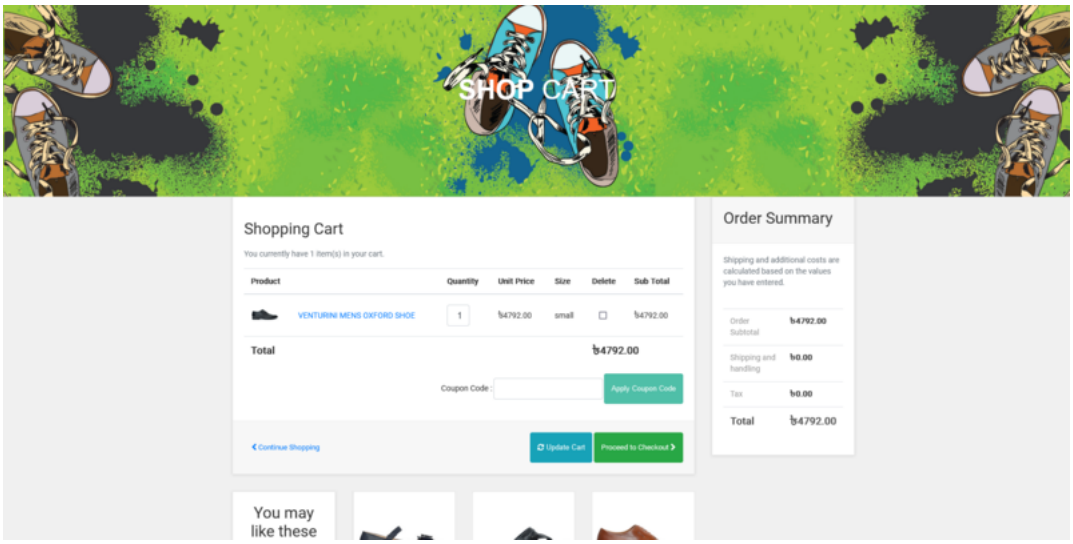


Figure 6.3: Shopping cart and Checkout

Cart and product selection: When a user selects a product and clicks the "Add to cart" button, it will appear in the cart section. Once you've completed the selections, you'll be able to check out and place an order. An invoice will be generated according to the food products requested when the order is placed.

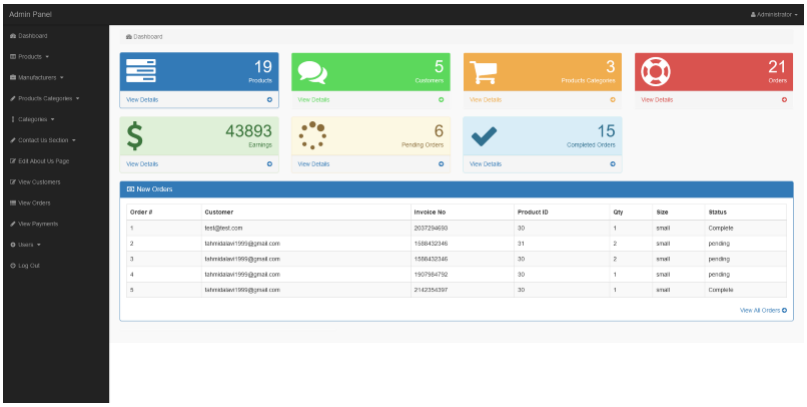


Figure 6.4: Admin dashboard

After a successful login, you will see the following admin's dashboard to control the admin functionalities.

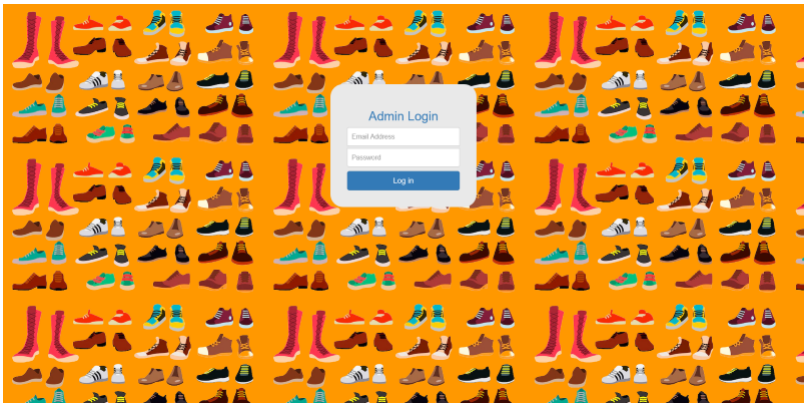


Figure 6.5: Admin login Page

Admin section for dynamic product and order management: We will create a custom admin portal for dynamically managing different catering items from the backend. A secret URL will redirect to the admin login page before that. If the login credentials do not match, the page remains unchanged with the message "Username or password is invalid." After a successful admin login, the user will be redirected to the admin's dashboard, where they can make any necessary changes.

Chapter 7

Project as Engineering Problem Analysis

7.1 Sustainability of the Project/Work

Project sustainability was one of the main focuses when the Western Footwear E-commerce was planned.The Company must keep an eye on the orders, provide timely recommendations, and uplift the items as needed. Each customers do their own requisitions and advises on its sites, and company used to keep track of everything manually. Which is very time-consuming. Informing all departments by hand is also an issue. The main goal was to endure all these tasks of the online site with a product that would fulfill all their online customers.

7.2 Social and Environmental Effects and Analysis

Social Effects:
Nowadays everything is going online based. As people nowadays prefer online shopping rather then by going somewhere which is a time consuming and a hassle also. By creating "Western Footwear" E-commerce website we managed to save a lot of time here.This application will save a lot of time, and employees will be able to manage and monitor their work from anywhere.They would have a lot of free time to do other things. As a result, their social interactions with friends and family would increase getting more time to build strong relationships.
Environmental Effects:
If we think about the environmental effects then we can surely say that as this is a digitised platform now for online show buying we saved a lot of paper.As the web application has no carbon footprint as it is digitized, and it somewhat decrease wastage of paper and cause no damage to environment while keep records of all the information.

7.3 Addressing Ethics and Ethical Issues

Customers are so reliant on their computers and mobile phones these days that an application can acquire a massive amount of internal and external data about them. While developing and launching an application, there are certain laws and ethics that must be followed. Some of them are as follows:

Collecting only relevant user data:

Only the most pertinent user data is collected for the purposes of company security and report generation. The information would be retained and preserved solely in databases, ensuring that it would not fall into the wrong hands.

Managing database security:

The database and backend server are both highly secure. The server's primary cPanel allows someone up to three attempts to log in; if they do not log in during those three attempts, their IP address will be permanently blocked. The database's credentials are managed by the firm itself.

Chapter 8

Lesson Learned

8.1 Problems Faced During this Period

Through my process of making this application I faced a lot of problems.
Understanding the Project Requirement and Office Environment Understanding the initial requirement was difficult for me because, as a new member of the team, I needed to first learn how and what they were working on. The folder structure they used and how they wrote their code.

Adapting to New Technologies:

I have to learn new technologies as my firm told me to various times.

Keeping up to Speed:

As it was my first time, learning new technologies and putting them to use was a slow process for me initially.

Identifying and Fixing Bugs:

It was difficult to identify a bug at first because the language was unfamiliar to me. however, some bugs take a long time to identify and fix.

8.2 Solution of those Problems

Understanding the Project Requirement and Office Environment:

I learnt how to properly structure code, write the model, view, and controllers, which coding pattern to use, and how to write less code to accomplish the same amount of work.

Adapting to New Technologies:

After my office hours were over, I went home every day and learned PHP technology at night in order to keep up with my internship work. This project would not have been completed if I hadn't put in those extra hours.

Keeping up to Speed:

My work speed was slow because I was learning new technologies and applying them to

a real- world project. I was able to enhance my speed with regular effort.

Identifying and Fixing Bugs:

I learnt how to properly debug as well as some quick and easy debugging techniques from the senior developers.

Chapter 9

Future Work & Conclusion

9.1 Future Works

This are the list of features that could be added in the application:
Mobile Application:
We could also develop a mobile application for Android/iOS. It will make the work more convenient and easier for everyone.
Chat System:
Users would benefit from a live chatting system since they could contact immediately with the support personnel without having to wait.
Home Delivery Option:
Home delivery option will be a great option to be added in this application as many customers would want this option.

9.2 Conclusion

As i discussed and tried to described and briefed all the aspects of my projects which is based on PHP above the report thoroughly.
I could never have imagined working as a full-time software developer before my undergraduate studies. I continued to learn new things from each of my respected faculty members, which is why I am here now. Maybe the position i am in right now wouldn't have been possible without them. I truly appreciate all of the faculty's efforts, as they attended classes early in the morning, late in the evening, and even ate lunch late to attend our classes. Our teachers, who had led us here, are the actual heroes. Thank you to all of my professors; being a software engineer would be a dream without them.

Bibliography

[1] A. Cerezo-Narváez, A. Pastor-Fernández, M. Otero-Mateo, and P. Ballesteros-Pérez, "Integration of cost and work breakdown structures in the management of construction projects," *Applied sciences*, vol. 10, no. 4, p. 1386, 2020.

[2] H. Gantt, "Gantt chart," 2015.

[3] G. Silvius, R. SChIPPER, J. Planko, and J. Van den Brink, *Sustainability in project management*. Gower Publishing, Ltd., 2012.

[4] B. Paech, A. H. Dutoit, D. Kerkow, and A. Von Knethen, "Functional requirements, non-functional requirements, and architecture should not be separated-a position paper," *REFSQ, Essen, Germany (September 2002)*, 2002.

[5] A. Lynch, "UML Diagram - An Easy and Comprehensive Guide," 2022.

[6] P. M. Guide, "Iterative and Incremental Development in Agile," Jan. 2018. publisher: https://www.wrike.com/.

[1] [2] [3] [4] [5] [6]

An Undergraduate Internship on E-commerce Shoe Website of Western Footwear

By

Nafees Rahman Nizhum

Student ID: **1722115**

Summer, 2022

Consent Form

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

Asif Bin Khaled
(Signature of the Supervisor)

Md. Asif Bin Khaled , Lecturer, SETS, IUB
Department of Computer Science & Engineering
Independent University, Bangladesh