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An Undergraduate Internship/Fashion World eCommerce

By

Adiba Haque

Student ID: **1931051**

Summer, 2023

Supervisor:

Dr. Md. Tarek Habib

Assistant Professor

Department of Computer Science & Engineering

Independent University, Bangladesh

September 24, 2023

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

Department of Computer Science & Engineering

Independent University, Bangladesh

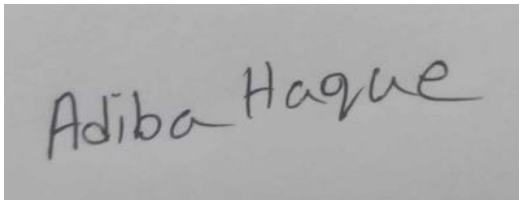
Attestation

Adiba Haque (ID: 1931051) therefore attests that the report titled "Fashion World: An eCommerce Website" was created and submitted in part fulfillment of the requirements for the Degree in Computer Science and Engineering from Independent University, Bangladesh (IUB).

I want to express my gratitude to my mentor, Dr. MD Tarek Habib, for his guidance and encouragement during the internship. His priceless opinions and expertise have significantly aided in the project's success.

I also vouch for the fact that every piece of work in this report is original and reflects the knowledge and skills I developed during the internship. Any information sources used in this project have all been acknowledged and attributed correctly.

Please get in touch with Muhammad Shohidullah Kaisar Islam, my internship supervisor at Appnap, by email at for more information or clarification on this project.



19/10/2023

Signature

Date:

Adiba Haque

Name

Acknowledgement

I would want to convey my sincere gratitude to the Almighty for giving me the chance to complete my internship successfully. I want to express my sincere gratitude to my family, friends, and senior class members who offered continuous support and inspiration during my academic career and internship. They have continually inspired me with their love and belief in me.

I also want to thank the professionals and specialists in the field of computer science and software development who kindly contributed their knowledge and materials through online communities and scholarly publications. My knowledge and abilities were greatly improved by their efforts.

My supervisor, Dr. MD Tarek Habib, an assistant professor of computer science and engineering at Independent University in Bangladesh, deserves a lot of credit. His assistance and direction were vital as I prepared for my internship and report. I owe Independent University, Bangladesh a debt of gratitude for giving me a thorough education in computer science and engineering that has served as a solid basis for my professional development.

I would like to express my profound gratitude to Muhammad Shohidullah Kaisar Islam, my industrial supervisor at Appnap, for his generosity, support, and direction throughout my internship. I was motivated to go above and above by his encouragement and guidance.

I owe a great deal of gratitude to everyone who helped me with my dissertation and internship. This experience will undoubtedly help me in my future aspirations in the field of computer science, I am certain of it. I sincerely thank everyone who has contributed to my path.

An Undergraduate Internship/Project on

Fashion World E-Commerce Website

By

Adiba Haque

Student ID: **1931051**

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/or Ithenticate plagiarism checker, and the score is:

Turnitin Score (%) : 08%

Dr. Md. Tarek Habib
Assistant Professor | CSE
Department of Computer Science & Engineering
Independent University, Bangladesh

Letter of Transmittal

[24.09.23]

Dr. MD Tarek Habib
Assistant Professor
Department of Computer Science and Engineering, School of Engineering and Computer Science.

Subject: Submission of Internship Report for Graduation Completion

Dear Sir,
Kindly, Mr.
I'm writing this letter to submit my internship report as required by the curriculum for the computer science and engineering bachelor's program. It has been a privilege to be under your direction and supervision for the entire time I was an intern. This report summarizes my three-month internship at "Appnap," where I had the honor of working under Muhammad Shohidullah Kaisar Islam's supervision.

Throughout my internship, I fully immersed myself in the corporate atmosphere and obtained valuable academic and practical experience. Using the knowledge and experiences I gained throughout my internship, I have worked very hard to make sure that this report is both useful and thorough. I have carefully followed the offered instructions, providing thorough information in each section that is necessary.

I truly hope that my report satisfies the standards of the internship program. I would be very grateful if you would accept this report and provide your insightful opinion. It would be a great honor if you found this report to be informative and helpful, giving you a clear knowledge of the subjects covered.

I want to say thank you for your continuous support and advice during this internship experience. I appreciate the chance to grow and learn under your guidance. I'm looking forward to hearing your thoughts on the report.

Yours sincerely,
Adiba Haque
ID: 1931051
Department of Computer Science and Engineering
Independent University, Bangladesh.

Evaluation Committee

Supervision Panel

Academic Supervisor Name: Dr. Md. Tarek Habib	Industry Supervisor Name: Shohidullah Kaisar

Panel Members

Panel Member-1 Name: Mr. Sajed Imtenanul	Panel Member-2 Name: Mr. Md. Fahad Monir

Office Use

Program Coordinator Name: Subrata Kumar Dey	Head of Department Computer Science & Engineering Name: Mahady Hasan

Abstract

The "Fashion World" eCommerce project is a visionary undertaking within the fashion industry. With a focus on seamlessly connecting style and convenience, this project aims to redefine online retail. By curating a diverse range of fashion products, from apparel and accessories to footwear and beauty items, Fashion World seeks to offer customers an all-encompassing shopping experience. The platform's user-centric design incorporates cutting-edge features such as personalized recommendations and virtual try-ons, making it a destination for fashion enthusiasts to explore and express their unique styles. Moreover, Fashion World places paramount importance on security, implementing robust cybersecurity measures to ensure safe transactions and protect customer data. With a commitment to agility and adaptability, the project continuously evolves, staying attuned to market trends and customer preferences. In summary, the "Fashion World" eCommerce project embodies a vision where fashion meets technology, providing a secure, engaging, and stylish platform for consumers to access their fashion needs with unparalleled ease.

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Chapter 1- Introduction

1.1 Overview/Background of the Work

Students who take part in internships get invaluable practical experience, which enables them to focus on their career objectives and reach their full potential.. These courses assist students in putting their theoretical knowledge into practice in the real world and in developing their current talents.
As a requirement for graduation, the "Computer Science and Engineering" curriculum of Independent University, Bangladesh offers internship possibilities. I worked at "Appnap Technologies Limited," a reputable company, for three months while an undergraduate student.
This report goes into more detail about my internship at "Appnap Technologies Limited. "It gives a summary of the work I've done, what I've learned from it, and how it's helped me advance professionally.

1.2 Objectives

I started my internship as a Trainee at "Appnap Technologies Limited" on 10, June, 2023. During this internship, I had the privilege of working on the development of an eCommerce Project. This application was constructed using Laravel. The primary objective of this application was to modernize the process of online eCommerce shop and provide different services

In this project, our primary objectives are to develop a user-friendly eCommerce platform and an accompanying admin portal. The eCommerce platform aims to provide customers with a seamless shopping experience, enabling them to create accounts, explore product listings, manage their carts, and complete orders securely. We also intend to integrate secure payment processing mechanisms to instill confidence in customers during online transactions. Efficient inventory management is another key goal, ensuring that products are readily available, minimizing stockouts, and optimizing restocking processes. The project also entails user account management features, allowing customers to maintain profiles, access order histories, and manage account settings, enhancing their overall experience. Simultaneously, the admin portal will empower administrators to efficiently manage orders, view order details, process requests, and maintain an up-to-date product catalog.

Our project's secondary objectives encompass ensuring multi-device accessibility with responsive design, seamless communication channels between customers and service providers, and integration of external APIs for real-time data processing. We also aim to streamline the onboarding process for service providers, ensuring a straightforward

registration and verification process. The project places significant emphasis on user experience enhancement through iterative improvements based on feedback and usability testing. Scalability is a core consideration, enabling future expansion and feature additions. Data security and privacy measures will be established to secure customer and transaction data, develop trust, and ensure compliance with data privacy requirements. Moreover, the project aims to establish a digital marketing strategy to promote the platform, attract a broad user base, and maintain a strong online presence. Lastly, we prioritize sustainability and ethical practices, striving to contribute positively to the eCommerce industry and society at large.

In a nutshell, my project focused on building a purchasing website for AppNap, a vibrant e-commerce company. The goal was to leverage the capabilities of the Laravel framework to create an intuitive, feature-rich online retail platform that was suited to AppNap's unique services and brand identity. Through the seamless integration of payment gateways, inventory management systems, and potent content management tools, the project intends to provide clients with a safe and straightforward shopping experience while also enabling effective website administration for the AppNap team.

1.3 Scopes

- **User-Centric Shopping Experience:** The project's scope involves designing and creating an eCommerce website with a user experience focus that makes it simple for customers to navigate, locate what they're looking for, and finish transactions quickly. In order to provide accessibility across devices, this also involves responsive design.

- **Comprehensive Product Management:** The platform will provide administrators with the capability to upload, update, and manage product listings effectively. This involves categorizing products, adding descriptions, and maintaining an up-to-date catalog.

- **Secure Payment Processing:** Ensuring secure and reliable payment processing is within the project scope. The platform will integrate with trusted payment gateways to facilitate safe transactions.

- **Inventory Optimization:** The project encompasses developing a robust inventory management system to optimize stock levels, track product performance, and automate restocking processes.

- **User Account Management:** Users will have the ability to create accounts, manage their profiles, access order histories, and reset passwords. Admins will have tools to manage user accounts as well.

- **Admin Portal:** The project includes the development of an admin portal with features for order management, including order processing, tracking, and reporting.

- **Communication Channels**: The project will facilitate communication between customers and service providers for inquiries, appointment scheduling, and issue resolution.

- **Onboarding for Service Providers:** A user-friendly onboarding process for service providers, including registration and verification, will be implemented to simplify their participation.

- **User Feedback and Iterative Improvement:** Continuous improvement based on user feedback and usability testing is within the project scope to enhance the overall user experience.

- **Scalability and Future Expansion**: The project will be designed to accommodate future expansion, additional features, and the potential inclusion of new service categories.

- **Data Security and Privacy:** Robust data security measures will be implemented to protect customer and transaction data, ensuring compliance with data privacy regulations.

- **Digital Marketing Strategy**: Developing a digital marketing strategy to promote the platform, attract users, and establish a strong online presence is part of the project scope.

- **Sustainability and Ethical Practices:** The project includes considerations for eco-friendly and socially responsible practices, contributing positively to the eCommerce industry and society.

Chapter 2 - Literature Review

2.1 Relationship with Undergraduate Studies

The information and abilities I developed while pursuing my undergraduate degree at IUB were extremely important in the creation of the "Fashion World" eCommerce Website. It would have been far more difficult to complete this project without the foundation these classes offered. Some of the most important courses that have proven especially helpful include:

- CSE213 (Object-Oriented Programming in Java): The subject matter covered in CSE213 (Object-Oriented Programming in Java) was the foundational ideas of OOP in Java. Since I am using PHP, another object-oriented programming language, this knowledge has been immediately applied to the project.

- CSE309 (Web Application): The web application course was a great learning opportunity, as it introduced me to a variety of coding languages. It served as the starting point of my web development career and is directly relevant to my internship assignment.

- CSE307 (System Analysis and Design): Techniques for requirement analysis and diagramming were presented in this course. These abilities were crucial for comprehending client needs and subsequently building the software in line with them.

- CSE303 (Database Management): A database administration course enabled me to comprehend essential concepts like entity-relationship (ER) diagrams and database design. In my project, I created the project's database using SQL Server Management Studio.

- CSE203 & 211 (Data Structures and Algorithms): I gained a deeper understanding of data structures and algorithms through these classes, It facilitated my adjustment to the peculiarities of a new programming language's architecture.

2.2 Related works

Prior research in the realm of fashion eCommerce underscores the paramount importance of user-centric design, emphasizing the significance of intuitive and visually appealing interfaces to enhance the online shopping experience. Studies on personalized product recommendations have demonstrated their effectiveness in increasing user engagement and satisfaction, informing the integration of recommendation engines in the project. Furthermore, insights from M-Commerce trends have guided the project's focus on mobile optimization to cater to the growing audience of mobile shoppers. Sustainability initiatives within the fashion industry and research on ethical practices have influenced the project's consideration of eco-friendly and socially responsible elements. Payment security studies offer valuable guidance in ensuring secure financial transactions, and fashion trend analysis provides insights for optimizing product selections and staying attuned to ever-evolving fashion preferences. These relevant works collectively contribute to shaping the "Fashion World" eCommerce project in alignment with industry best practices and user expectation

Chapter 3 - Project Management & Financing

3.1 Work Breakdown Structure

An organized description of project operations is given by a work breakdown schedule (WBS), which is a graphical representation of the project activities and their links. It classifies and divides a project into manageable components in an effort to help project managers organize and oversee a project. With a WBS, you can assign tasks, allocate resources efficiently, and monitor project progress. When paired with a Gantt chart, a WBS can be extremely thorough, guaranteeing precisely defined tasks and promoting collaboration. The WBS, which facilitates project planning, execution, and tracking, is essentially an essential tool for project management.

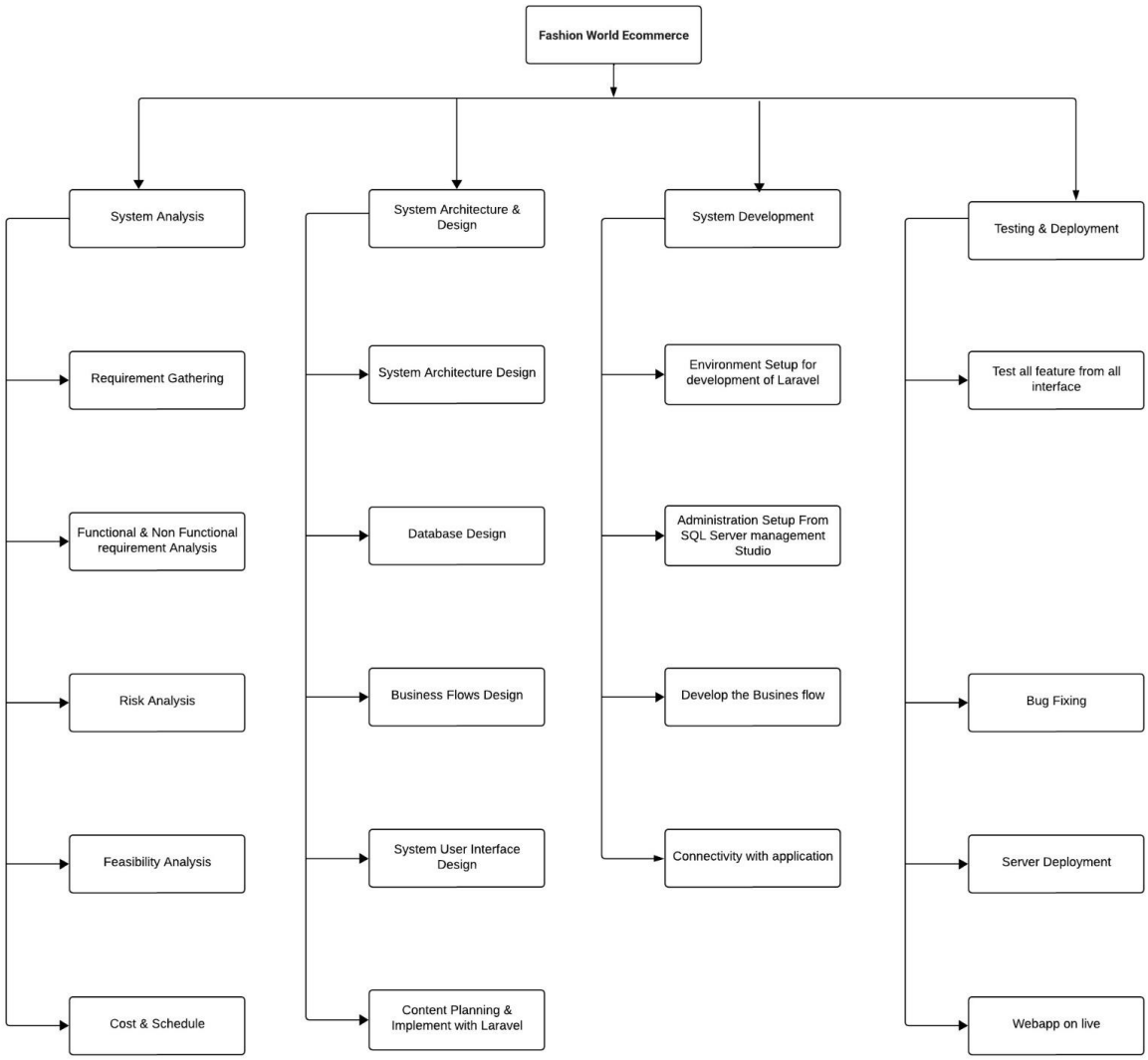


Fig 3.1 Work Breakdown Structure Diagram.

3.2 Process/Activity wise Time Distribution

The estimated time needed to finish the project effectively is greatly influenced by the process/activity-wise time distribution. To make sure the project is finished on time, the key path must be found. The lengthiest list of tasks that must be completed on time is along the crucial route. Every task on a crucial route depends on how the one before it turns out. The actual project consists of a limited number of precisely defined tasks that need to be completed in a specific order in order to provide the desired outcomes. Through comprehension of the crucial path and the temporal connections among assignments, project managers are able to assign resources to a project in a way that ensures milestones are fulfilled within the allotted time period.

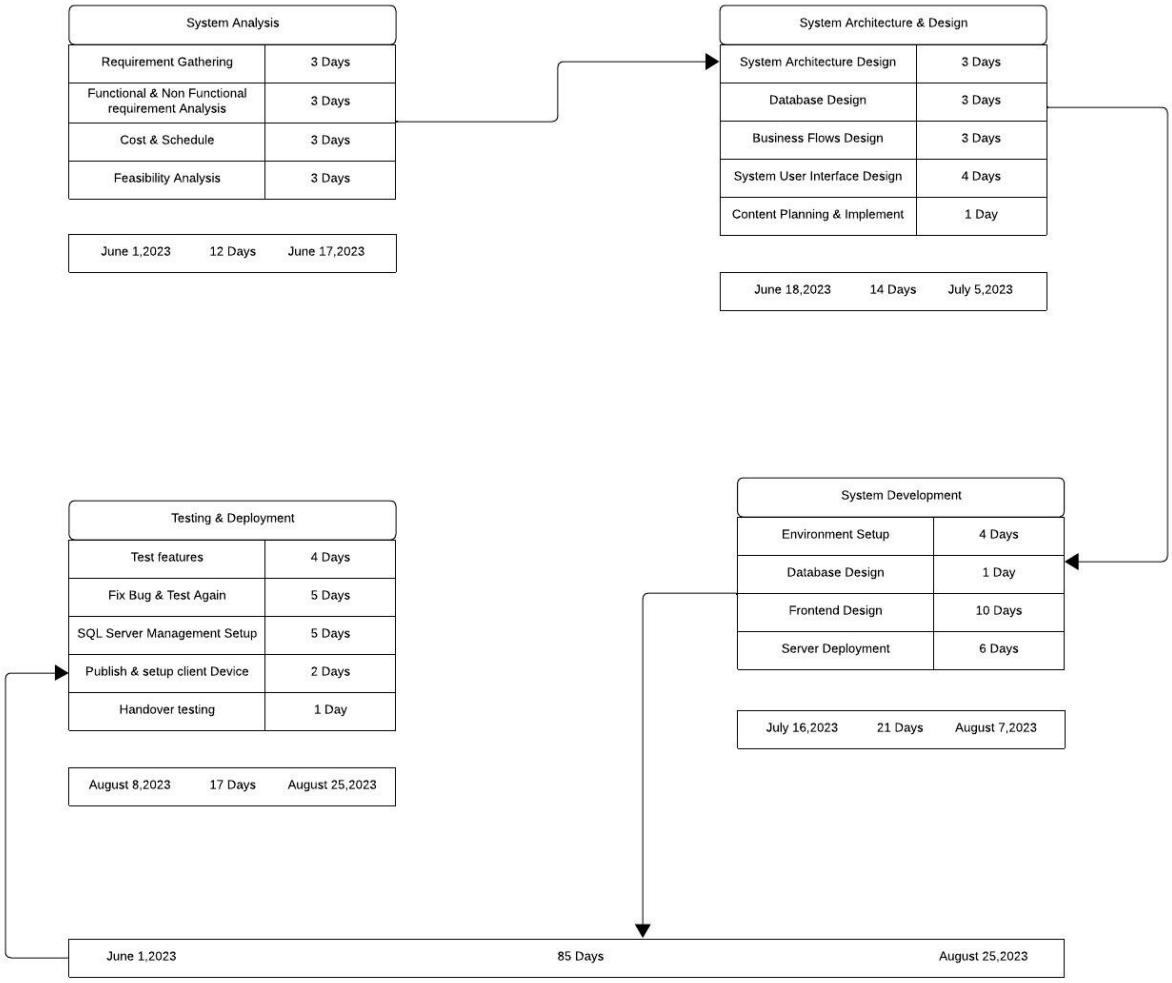


Fig 3.2 Process/Activity wise Time Distribution Diagram

3.3 Gantt Chart

A Gantt chart was employed in the application project's planning phase. Gantt charts are widely used in project management to monitor and display project timeframes. They offer useful information on resource allocation, task creation, dependencies, and priorities. Gantt charts, which use a bar chart format, provide a clear picture of the tasks and the timeframes to which they are related. Developers were found to be the most important resource for the project, and office PCs and servers were required for implementation. Each employee worked together to finish the project after receiving distinct responsibilities with due dates. The steps of the project are thoroughly described in the section that follows. Sadly, it was difficult to make the Gantt chart due to company regulations.

3.4 Process/Activity wise Resource Allocation

In the "Fashion World" eCommerce project, resource allocation was meticulously planned to ensure the efficient execution of various processes and activities.

- **Product Catalog Management:** Resources were allocated to curate and update the product catalog, including fashion items, descriptions, and images. Content creators, photographers, and graphic designers played pivotal roles in this process.

- **Website Development and Maintenance:** The development and continuous maintenance of the eCommerce website required the expertise of web developers, UX designers, and IT administrators. This team was responsible for frontend and backend development, ensuring seamless user experiences.

- **Order Processing and Fulfillment:** A dedicated team handled order processing, which included order verification, packaging, and dispatch. Warehouse personnel, order processors, and logistics experts were allocated for this crucial task.

- **Customer Support:** A customer support team was in place to address customer inquiries, resolve issues, and provide assistance throughout the shopping journey. Customer support representatives were allocated to ensure prompt and effective communication with customers.

- **Payment Processing and Security: Specialists** in payment gateway integration and cybersecurity were allocated to ensure secure and reliable payment processing. This team focused on safeguarding customer financial information.

- **Marketing and Promotion:** Resource allocation for marketing activities encompassed digital marketers, content creators, and social media managers. Their efforts included digital advertising, content creation, and social media campaigns to promote the platform.

- **Inventory Management:** Inventory managers and data analysts were allocated to optimize stock levels, track product performance, and manage restocking processes efficiently.

- **Data Analytics:** A team of data analysts was responsible for extracting valuable insights from user behavior, sales data, and market trends, helping refine marketing strategies and product offerings.

- **Sustainability Initiatives:** Resources were allocated to research and implement sustainable practices in the fashion industry, collaborating with eco-friendly suppliers and ensuring ethical sourcing of products.

- **IT Infrastructure Maintenance:** IT professionals managed server maintenance, software updates, and database management to ensure the platform's reliability and security.

3.5 Estimated Costing

In the estimation of project costs for "Fashion World," a comprehensive approach was adopted to account for various aspects of development, maintenance, and sustainability initiatives. The key cost components include:

- **Development Costs:** This segment encompasses expenses related to web development, frontend and backend design, and database setup. It includes salaries for developers and designers, software licenses, and development tools.

- **Infrastructure Costs:** Costs associated with IT infrastructure, including server hosting, cloud services, and domain registration, were factored in to ensure a robust and secure online platform.

- **Marketing and Promotion:** Budget allocations for digital marketing campaigns, advertising costs, content creation, and social media management were calculated to expand the platform's reach and attract customers.

- **Inventory Management:** Expenses for inventory management software, warehouse space, and staff salaries responsible for stock control and logistics were considered.

- **Customer Support:** Costs for hiring and training customer support representatives and implementing a ticketing system to enhance customer service were included.

- **Payment Processing Fees:** This component accounted for transaction fees associated with payment gateways and credit card processing.

- **Data Analytics:** The cost of data analytics tools and personnel specializing in data analysis was factored in for market research and performance tracking.

- **Sustainability Initiatives:** Allocations for research into sustainable fashion practices, ethical sourcing, and partnerships with eco-friendly suppliers were included to promote ethical fashion practices.

- **Maintenance and Upkeep:** Funds were set aside for ongoing website maintenance, software updates, security enhancements, and server maintenance.

- **Contingency and Miscellaneous:** A contingency budget was established to address unforeseen expenses, and miscellaneous costs such as legal fees and compliance measures were counted.

The estimation process involved careful consideration of each cost component, ensuring a realistic projection of expenses for the successful development, launch, and operation of the "Fashion World" eCommerce platform. Though the project we are involved in a demo project for the company which is why the detailed costing was not mentioned.

Chapter 4 - Methodology

1. Project Launch:

- Describe the goals, deliverables, and restrictions to establish the project's scope.
- List important parties involved in the project, such as sponsors, team members, management, and end users.
- Create a project charter that gives a thorough description of the project's objectives and high-level strategy.

2. Gathering of Requirements:

- Hold in-depth conversations with key stakeholders to elicit specific requirements for the eCommerce platform, such as desired features, functionalities, and designs.
- Carry out in-depth market research to comprehend consumer expectations, business trends, and rivals in the fashion eCommerce market.

3. Preparation

- Draft a thorough project plan with estimated costs, timetables, and resource allocation.
- Create a Work Breakdown Structure (WBS) to organize the project's tasks and subtasks into digestible chunks.
- Create a project schedule with clear dependencies and milestones.
- Establish roles and duties for the project team members to ensure task execution is clear.

4. Development and Design

- Create an appealing and user-friendly design for the eCommerce website's user interface (UI) and user experience (UX).
- Create the platform's frontend and backend in accordance with the demands of the project.
- Use secure checkout procedures and payment gateways to enable secure transactions.
- Include methods for order processing and effective inventory management.
- Use data analytics tools to monitor user behavior, sales information,

5. Evaluation

- Thoroughly test the eCommerce platform to find and fix any problems or difficulties and guarantee a smooth customer experience.

- Test the platform's usability to make sure it's simple to use and navigate.
- Strictly test payment processing to ensure safe and trustworthy transactions.
- To ensure proper data collecting and reporting, validate data analytics tools.

6. Implementation

- Construct the necessary infrastructure and configure servers in advance of the platform's debut.
- Transfer the platform's configuration from the development environment to the manufacturing environment.
- Perform final testing in the real-world setting to make sure the launch goes off without a hitch.

7. Promotion and marketing

- Create content, launch social media campaigns, and use online advertising as part of your digital marketing efforts to reach your target market.
- Constantly assess the success of marketing initiatives and make data-driven improvements to draw in and keep customers.

8. Sustainability-related initiatives

- Work with environmentally friendly vendors and incorporate sustainability principles into the selection and packaging of products.
- Inform users of the platform's dedication to ethical and environmentally friendly fashion methods.

9. Maintenance and Operations:

- Create standard operating procedures for managing servers, updating security, and maintaining websites. • Track platform performance and user input to pinpoint areas that could use improvement.

10. Assessment and comments:

- Ask for customer input to pinpoint problem areas and learn more about how satisfied consumers are.
- Review employee performance on a regular basis to see whether project goals and KPIs have been met.
- Based on the findings of the evaluation, alter project tactics, as necessary.

11. Reporting and documentation

- Keep complete records of all project-related activities, such as requirements, design choices, and test outcomes.
- Produce regular progress reports to notify stakeholders of the project's progress and any changes from the original plan.

12. Conclusion

- Review the project to find areas for future growth, best practices, and lessons learned.
- Share in the success of the project with the team and stakeholders.
- Archive project materials and documentation for future use and potential growth.

Chapter 5 - Body of the Project

The details of the project are addressed throughout the body of the chapter. The reader receives thorough project information from this article. A thorough job description, a study of the project's requirements, a system analysis, a system design, development, and testing are all contained in the documents that make up this chapter.

5.1 Work Description

The main purpose of the "Fashion World" eCommerce project is to establish a captivating and user-centric online platform that caters to the fashion-conscious customer base, offering a wide array of trendy and diverse fashion collections. "Fashion World" aspires to create an engaging digital fashion destination, where customers can seamlessly explore and shop for a variety of fashion categories, including clothing, accessories, and footwear. The platform will prioritize an immersive and visually appealing user interface, ensuring a delightful shopping experience. With "Fashion World," customers will have the convenience of browsing and ordering the latest fashion trends from the comfort of their homes, eliminating the need for physical shopping trips.

Traditionally, the fashion retail industry relied heavily on physical stores, limiting customers' choices and accessibility. "Fashion World" seeks to disrupt this traditional approach by providing a comprehensive and diverse online fashion marketplace. Customers will be able to effortlessly navigate the platform, discover new styles, and make informed fashion choices. "Fashion World" empowers customers to stay on top of current fashion trends, enhancing their fashion experiences while offering a seamless and secure shopping environment. This work description underscores the project's core objective: to create a modern, customer-centric fashion eCommerce platform that redefines the way individuals engage with fashion, providing accessibility, variety, and style in a digital landscape.

5.2 Requirement Analysis

5.2.1 Rich Picture

When evaluating, acknowledging, and identifying a situation, use a rich picture to help you visualize it and create a mental model of it. A complete explanation promotes conversation and leads to a body of knowledge that is shared by all participants. The combined behaviors of the three different system users—in-service clients and suppliers—are shown throughout the entire graph. The system's administration includes keeping an eye on user accounts, service categories, and provider profiles. The person carrying out different responsibilities, such as receiving service requests, revising their availability, and fulfilling service orders, is shown as the service provider. The client is represented as someone who spends money, wants services, and provides feedback. In addition to the database that forms the basis for organizing and storing system data, the database image from SQL Server Management Studio is also provided.

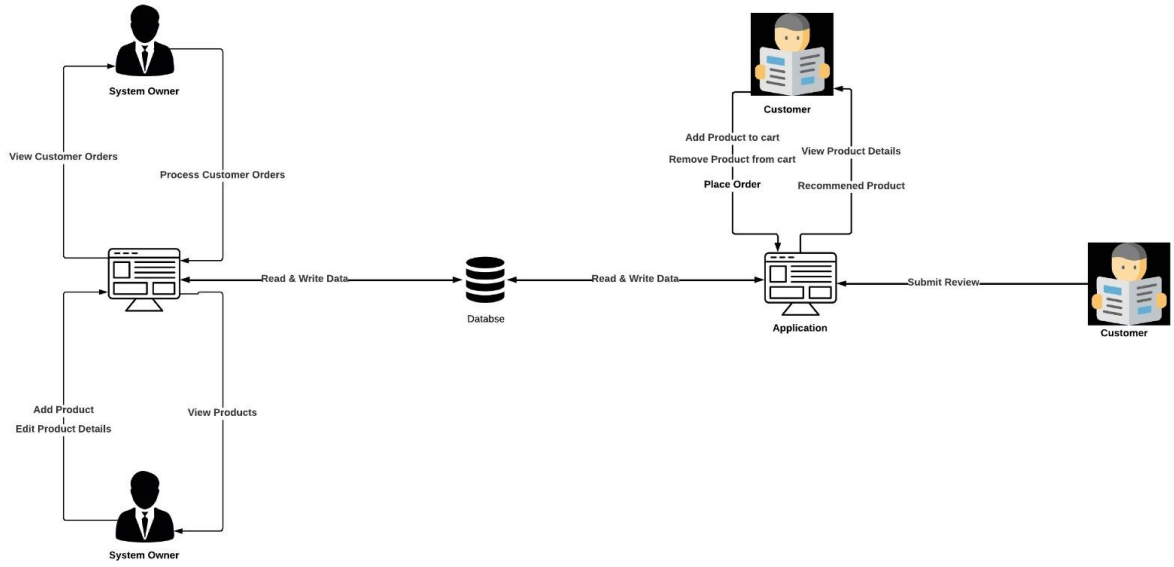


Fig 5.1 Rich Picture

5.2.2 Functional

In essence, functional requirements specify what a system must be able to accomplish.

1. Registration of Users and Account Management:
    - Users should be able to sign up for accounts by giving personal information.
    - Users must have the option to log in and log out of their accounts.
    - Users should be able to retrieve and reset their passwords.

2. Product Catalog:
    - The system must display a catalog of fashion products, categorized by type (e.g., clothing, accessories, footwear).
    - Users should be able to search and filter goods by category, price range, brand, and size.

3. Product Details:
    - Users should be able to view detailed product information, including images, descriptions, prices, available sizes, and customer reviews.
    - The system should display related products to encourage cross-selling.

4. Shopping Cart:
    - Users should be able to add and delete products from their shopping carts.
    - The total cost of the products in the cart must be calculated and shown by the system.
    - Users should be able to view and alter the contents of their shopping cart.

5. Checkout and Payment:
    - Users must be taken through a secure checkout procedure, which includes providing shipping and paying information.
    - A variety of payment methods, such as credit/debit cards and digital wallets, should be accepted.
    - Users should get order confirmation emails upon successful payment.

6. Order History and Tracking:
    - Users should be able to view their purchase history, which should include order details, statuses, and tracking information.
    - The system should give real-time order tracking updates.

7. User Reviews and Ratings:
    - Registered users should be able to write evaluations and ratings for things they have purchased.
    - Users may read reviews and examine average ratings to make educated purchasing selections.

8. User Profiles:
    - Users' personal information, including shipping addresses and payment methods, should be up to date.
    - Registered users can save favorite products and track their preferences.

9. Admin Panel:
    - Administrators should have access to an admin panel to manage product listings, user accounts, and orders.
    - Admins can edit or remove products, review and moderate user reviews, and process orders.

10. Customer Support:

- Users should have access to customer support options, such as live chat, email, or a contact form, for assistance with inquiries or issues.

11. Security and Data Protection:
    - The system must prioritize the security of user data, including payment information and personal details.
    - Encryption and secure authentication mechanisms should be implemented.

5.2.3 Non-Functional Requirements

They are referred to as a system's "quality attributes". It is a prerequisite that lays forth the parameters for assessing a system's effectiveness.

- **Security:** By implementing safe authentication and data encryption techniques, the system will protect the integrity and confidentiality of user data.

- **Performance:** The system should be able to handle multiple users at once and be responsive in order to provide a seamless user experience free from lags or slowdowns.

- **Usability:** Users should be able to navigate the system and accomplish activities with ease if the user interface is clear and easy to use.

- **Reliability:** It is imperative that the system remains trustworthy and available at all times to prevent downtime and ensure uninterrupted operation.

- **Scalability:** Future development should be supported by the system's scalability, which will enable the addition of more service providers and clients without impairing performance.

- **Compatibility:** Web browsers and mobile operating systems should be among the many platforms and devices that the system is compatible with.

- **Localization:** The system ought to support many languages and regional settings in order to accommodate users from different nations.

- **Accessibility:** The system should be usable by people with impairments and should adhere to accessibility rules and standards.

- **Data Backup and Recovery:** Maintaining regular data backups and having a plan in place for data recovery in the case of system failures or natural catastrophes are important precautions to take to prevent data loss.

5.3 System Analysis

5.3.1 Six Element Analysis

Process	System Roles					
	Human	Non-Computing Hardware	Computing Hardware	Software	Database	Networking & Communication
Administrators should have access	**Administrators:** Individuals responsible for overseeing and managing the system, including accessing and using the admin panel to perform administrative tasks.	**Book:** book to which data will be appended. **Paper:** A sheet of paper with book details printed on it is possible.	**Server Infrastructure:** the server architecture that houses the databases and admin panel software, allowing administrators to communicate with the backend of the eCommerce platform. Customer **Client Devices:** The devices that end users utilize to access and interact with the Industrial Dashboard, such as desktop computers and mobile devices.	**Admin Panel Software:** The software application or interface that provides administrators with the tools and features necessary for managing and configuring the eCommerce platform.	**User Access Database:** A database that stores information related to user access control, including the roles and permissions of administrators.	**Network Infrastructure:** The components and underlying network architecture that enable the Industrial Dashboard to transmit data to data sources and end users with ease. **Data Communication Protocols:** the methods and procedures used to transmit data securely and efficiently across different system components while maintaining the integrity and confidenti

			Printer: Book details could be printed using it.			ality of the data.
Users adding and removing items from carts	**End-Users:** Individuals who access the eCommerce platform to browse, shop, and manage items in their shopping carts..	**Book:** book to which data will be appended. **Paper:** A sheet of paper with book details printed on it is possible.	**Client Devices:** the gadgets end consumers use to connect to and utilize the eCommerce platform. These gadgets may consist of laptops,	**Shopping Cart Software:** The software component responsible for managing the shopping cart functionality on the eCommerce platform, allowing users to add and remove items.	**Data Sources:** A database that stores information about the items added to a user's shopping cart, including product details, quantities, and prices.	**Network Infrastructure:** The underlying network architecture and parts that make it possible for the Industrial Dashboard to convey data easily to data sources and end users.

			tablets, cellphones, and desktop PCs.			**Data Communication Protocols:** the protocols and techniques used for efficient and secure data communication between various system components, preserving the secrecy and integrity of the data.
Admins can edit or remove products	**Administrators:** Individuals or authorized personnel responsible for managing the eCommerce platform, overseeing operations, and making administrative decisions, including editing or removing products.	**Book:** book to which data will be appended. **Paper:** A sheet of paper with book details printed on it is possible.	**Server Infrastructure:** The server infrastructure hosting the eCommerce platform's admin panel software and databases, enabling administrators to interact with the platform's backend and perform product management tasks. **Client Devices:** Administrators use client devices to access data environment, where they	**Admin Panel Software:** The software interface used by administrators to access and manage the eCommerce platform. It provides tools and features for editing or removing products.	**Data Sources:** A database that stores information about the products available on the eCommerce platform, including details like product descriptions, prices, and inventory levels. Administrators can modify this database to edit or remove products.	**Network Infrastructure:** The components and underlying network architecture that enable the Industrial Dashboard to transmit data to data sources and end users with ease. **Data Communication Protocols:** the protocols and techniques used for efficient and secure data communication between various system component

			configure data connections and transformation pipelines.			s, preserving the secrecy and integrity of the data.

5.3.2 Feasibility Analysis

- **Technical Feasibility:**
  The technical feasibility of the Fashion World eCommerce project is robust, owing to its utilization of contemporary web development technologies and frameworks. The choice of robust and scalable programming languages, coupled with the integration of secure application programming interfaces (APIs), ensures the project's capability to meet the demands of a growing user base. Furthermore, the system architecture is designed to accommodate future enhancements, thereby enhancing its long-term sustainability. Security measures, including data encryption and regular security audits, are integrated to protect user data and transactions. Continuous updates and maintenance will be crucial to adapt to evolving technology trends and maintain the system's technical viability.

- **Economic Feasibility:**
  The economic feasibility assessment underscores the potential for financial viability within the Fashion World eCommerce project. Cost estimates encompassing development, maintenance, marketing, and operational expenses align with revenue projections, suggesting a feasible return on investment. The revenue model, which includes transaction fees, subscription plans for premium services, and targeted advertising, demonstrates a diversified income stream. A phased approach to expenditures and revenue generation will be employed, ensuring financial stability during the project's growth stages. However, continuous monitoring of financial metrics and flexibility in adapting to market dynamics will be necessary to ensure economic feasibility throughout the project's lifecycle.

- **Operational Feasibility:**
  From an operational perspective, the Fashion World eCommerce project demonstrates strong feasibility. Adequate human resources, including development teams, customer support staff, and administrators, are available to manage and operate the platform efficiently. The project aligns with existing business processes and leverages best practices in eCommerce management, contributing to operational efficiency. Moreover, user acceptance testing and feedback mechanisms are integrated into the operational framework to address any usability issues promptly. Ensuring that the platform remains user-friendly and responsive to user needs will be essential for sustained operational feasibility.

- **Social and Market Feasibility:**
  The social and market feasibility analysis reveals that the Fashion World eCommerce project aligns with evolving consumer preferences for online shopping and digital interactions. Market research indicates a growing demand for diverse and user-centric eCommerce platforms, which positions the project favorably. Moreover, the project addresses societal trends related to convenience, accessibility, and the integration of fashion-related services. The potential for market growth and user acquisition is promising, with a focus on targeted marketing, user engagement, and expansion strategies. However, staying attuned to changing market dynamics, user preferences, and competitive forces is imperative for maintaining social and market feasibility over time. Conducting periodic market research and adapting strategies accordingly will be pivotal for long-term success.

5.3.3 Problem Solution Analysis

Problem solution analysis is an essential component of project planning and management, as it helps identify challenges and devise effective strategies to address them. Here's a breakdown of the problem solution analysis for your Fashion World eCommerce project:

1. **Problem Identification:**

- The first step in the problem solution analysis is to identify the key challenges and issues that the Fashion World eCommerce project may encounter. Some potential challenges include:

- Competition: The eCommerce market is highly competitive, with numerous established players and new entrants. Standing out in this crowded space can be a significant challenge.

- User Trust and Security: Building and maintaining trust among users is crucial for an eCommerce platform. Ensuring the security of user data and transactions is paramount.

- Scalability: As the user base grows, the platform must scale efficiently to accommodate increased traffic, orders, and data.

- User Experience: User experience plays a vital role in eCommerce success. Ensuring a seamless and intuitive shopping experience is a continuous challenge.

- Inventory Management: Managing a diverse range of products and ensuring accurate stock levels can be complex.

2. **Solution Development:**

- Once the challenges are identified, the next step is to devise solutions to address each of them:

- Competitive Edge: To stand out in the competitive eCommerce landscape, the project can focus on offering unique and exclusive products, personalized recommendations, and exceptional customer service. Regular market research can help identify trends and customer preferences.

- Security Measures: User trust may be increased by using strong security measures such as data encryption, secure payment channels, and frequent security audits. It is critical to follow data protection regulations.

- Scalable Architecture: The project can adopt a scalable architecture that can expand seamlessly with growing user demands. This includes cloud-based infrastructure, load balancing, and efficient database management.

- User-Centric Design: Continuously improving the user experience is crucial. User feedback, sample testing, and responsive design can enhance the platform's usability and appeal.

- Inventory Optimization: Implementing an efficient inventory management system, integrating with suppliers, and utilizing data analytics for demand forecasting can help streamline inventory management.

3. Implementation and Monitoring:

- After devising solutions, the project team should implement them systematically. This includes developing and integrating necessary features, conducting thorough testing, and monitoring performance. Regular assessments and feedback from users can help fine-tune the solutions.

4. Contingency Planning:
- In addition to primary solutions, it's essential to have contingency plans in place. These plans should address potential issues that may arise during project implementation. For example, if a key supplier faces disruptions, having alternative suppliers identified can prevent inventory shortages.

5.3.4 Effect and Constraints Analysis

Effect and constraints analysis is a crucial aspect of project planning and evaluation. It involves assessing the potential impacts or effects of a project, as well as identifying any constraints or limitations that may hinder its successful execution. In the context of your Fashion World eCommerce project, let's delve into the effect and constraints analysis:

1 Effect Analysis:

- Market Expansion: The Fashion World eCommerce project has the potential to significantly expand the market reach of fashion products. By providing an online platform, it can tap into a global customer base, transcending geographical boundaries and time zones. This expansion can lead to increased sales and revenue.

- Revenue Growth: A successful eCommerce platform can lead to substantial revenue growth. The project has the potential to generate income through product sales, advertising, and partnerships, contributing to the financial sustainability of the business.

- Customer Convenience: The project aims to enhance customer convenience by offering a user-friendly platform for shopping. Customers can browse a wide range of fashion products, place orders, and make payments from the comfort of their homes, increasing overall satisfaction and retention.

- Data-Driven Decision-Making: With the right analytics tools in place, the project can gain valuable insights into customer preferences, purchasing behavior, and market trends. This data can inform marketing strategies, product offerings, and inventory management, leading to more informed decisions and improved customer experiences.

2 Constraints Analysis:

- Budget Limitations: Like any project, budget constraints can pose challenges. Limited financial resources may impact the ability to invest in advanced technology, marketing, and customer support. It's essential to allocate resources wisely and seek additional funding if necessary.

- Technical Challenges: Developing and maintaining a robust eCommerce platform requires technical expertise. Technical challenges, such as server maintenance, security, and scalability, need to be addressed effectively. This may require skilled personnel and ongoing technical support.

- Market Competition: The eCommerce market is highly competitive, with established players and new entrants. Existing and emerging competitors can pose constraints on market share and profitability. The project must continuously innovate and differentiate itself to stand out.

- Regulatory Compliance: Compliance with local and international regulations, including data protection and consumer rights, is paramount. Failure to adhere to these regulations can lead to legal constraints and reputational damage. Legal and regulatory experts may be needed to navigate compliance requirements.

- Resource Availability: Availability of skilled personnel, reliable suppliers, and efficient logistics support can affect project execution. Sourcing products, managing inventory, and ensuring timely deliveries are critical considerations. Building strong supplier relationships is key.

3 Mitigation Strategies:

To address these constraints and maximize the project's effects, consider the following mitigation strategies:

- Financial Planning: Develop a comprehensive budget and financial plan. Explore potential funding sources, such as loans or investors, to overcome budget limitations.

- Technical Expertise: Invest in hiring or collaborating with experienced technical professionals to manage and maintain the platform effectively. Regular training and upskilling can also help address technical challenges.

- Competitive Advantage: Focus on unique selling propositions (USPs) such as product exclusivity, exceptional customer service, or innovative marketing strategies to differentiate your platform in the competitive market.

- Regulatory Compliance: Stay informed about relevant regulations and proactively implement compliance measures. Engage legal and regulatory experts if needed to ensure adherence.

- Resource Management: Efficiently manage resources by optimizing inventory, forming strategic partnerships with reliable suppliers, and ensuring a streamlined supply chain.

5.4 System Design

5.4.1 UML Diagrams

UML diagrams, which are based on the Unified Modeling Language (UML), are illustrations of several system components. Actors, roles, actions, classes, and artifacts are just a few of the many software program aspects that provide a common vocabulary for expressing and characterizing. Understanding, modifying, maintaining, and documenting system data are all made easier with the help of UML diagrams. They make complicated software systems easier to comprehend and communicate because they let software engineers, designers, and stakeholders see the structure, behavior, and interactions within the system.

Entity Relation Diagram for Fashion World

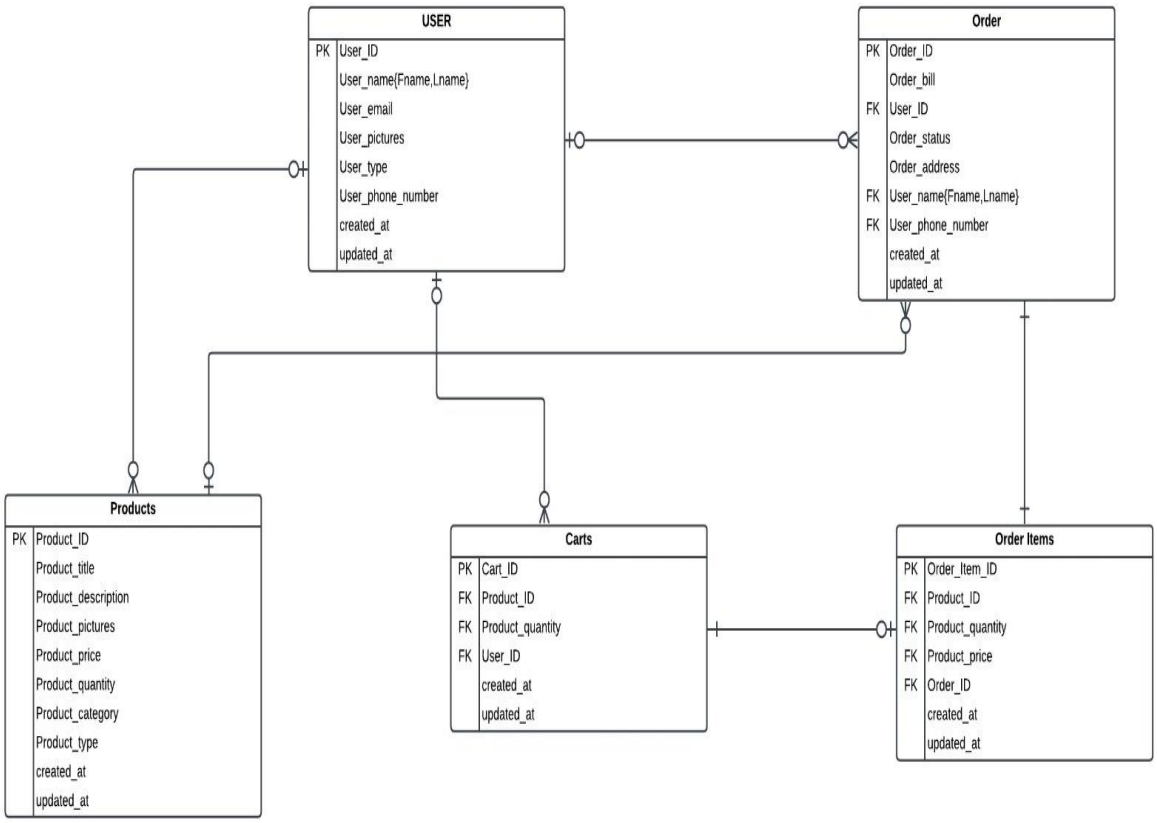


Fig 5.2 Use Case Diagram for Fashion World

Use Case Diagram for Fashion World

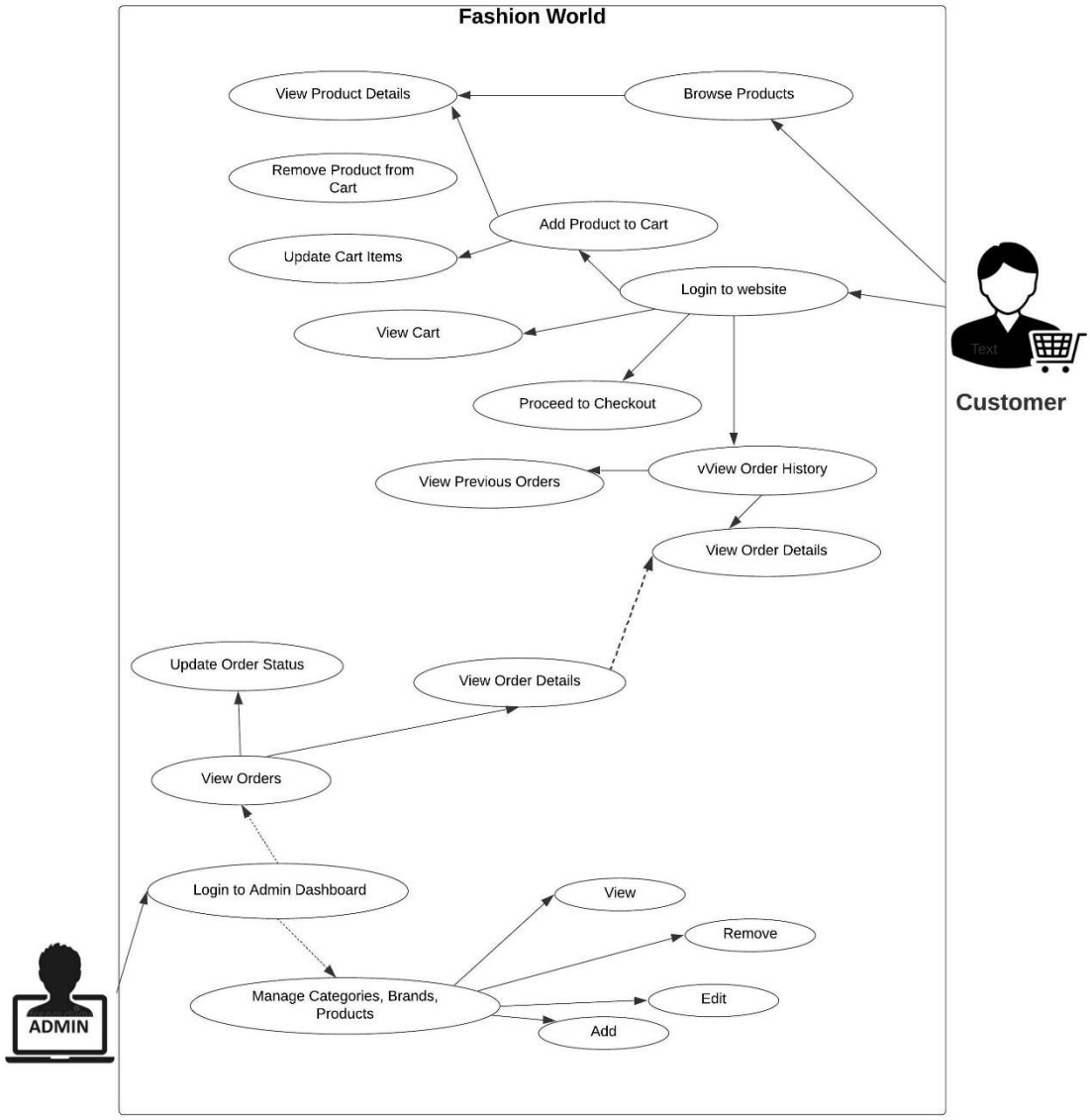


Fig 5.3 Use Case Diagram for Fashion World

5.5 Implementation

After successfully completing all phases of the Fashion World eCommerce project, it is with great pride and enthusiasm that we present the tangible output of our endeavors – the fully functional and feature-rich eCommerce website. This achievement is the culmination of meticulous planning, diligent execution, and unwavering commitment to creating a user-centric and dynamic platform for online shopping.

The Fashion World eCommerce website is a comprehensive digital marketplace that offers users an immersive and convenient shopping experience. It boasts a visually appealing and user-friendly interface designed to captivate visitors and guide them seamlessly through the world of fashion and style. The website's responsive design ensures accessibility across various devices, including desktops, laptops, tablets, and smartphones, catering to the diverse preferences of our user base.

At its core, the platform showcases a meticulously curated product catalog that spans a wide spectrum of fashion items, each thoughtfully detailed with descriptions, high-resolution images, pricing, and essential attributes. Navigating this virtual marketplace is made effortless with robust search and filter options, enabling users to discover their desired products with ease. Adding items to the shopping cart is a breeze, and our secure and efficient checkout system ensures a smooth and trustworthy transaction process.

One of the cornerstones of our eCommerce website is user account management, allowing customers to register, personalize their profiles, and conveniently track their orders. In addition to enhancing user experience, this feature streamlines order processing and fosters customer loyalty.

Moreover, stringent security protocols and rigorous testing have been implemented to fortify the website against potential threats, safeguarding user data and transactions. Our integration of secure payment gateways ensures that financial transactions are conducted in accordance with industry standards, providing users with peace of mind.

As we embark on this new phase, post-implementation, our commitment to the website's success remains unwavering. We are prepared to continuously monitor and maintain the platform to ensure optimal performance and user satisfaction. Marketing and promotional strategies will be executed to attract and retain a growing customer base. Our scalability measures are poised to accommodate future expansion, and we remain agile in our approach, ready to incorporate emerging eCommerce trends and technologies.

The output of the Fashion World eCommerce website represents not only a remarkable achievement but also a promising beginning. It is a testament to our dedication to delivering a top-tier online shopping experience to our valued customers. As we move forward, we are excited to witness the growth and evolution of this platform, aiming to establish it as a thriving and adaptive hub for fashion enthusiasts worldwide.

General Page

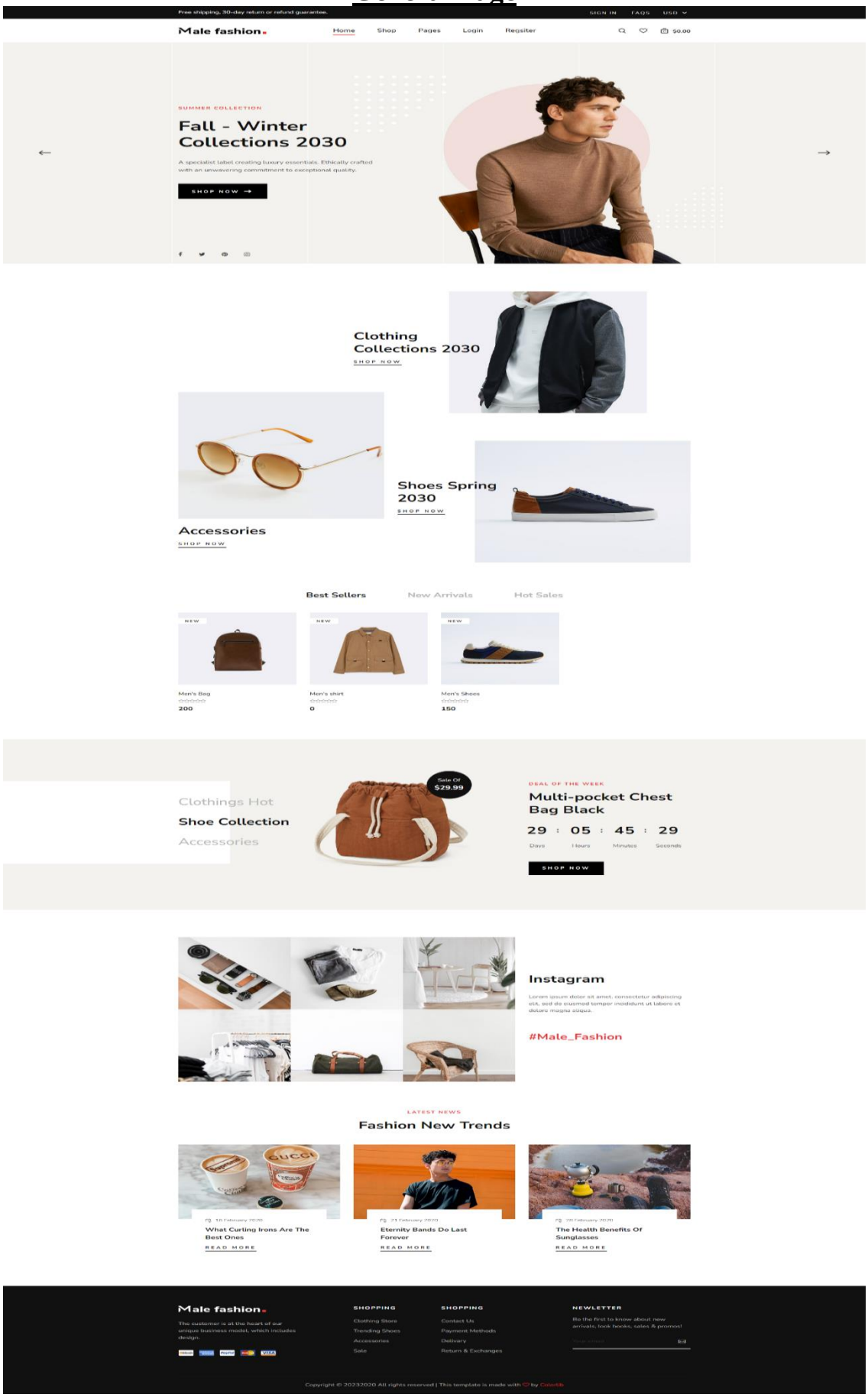


Fig 5.4 General Side Screenshot for Fashion World

Admin Dashboard

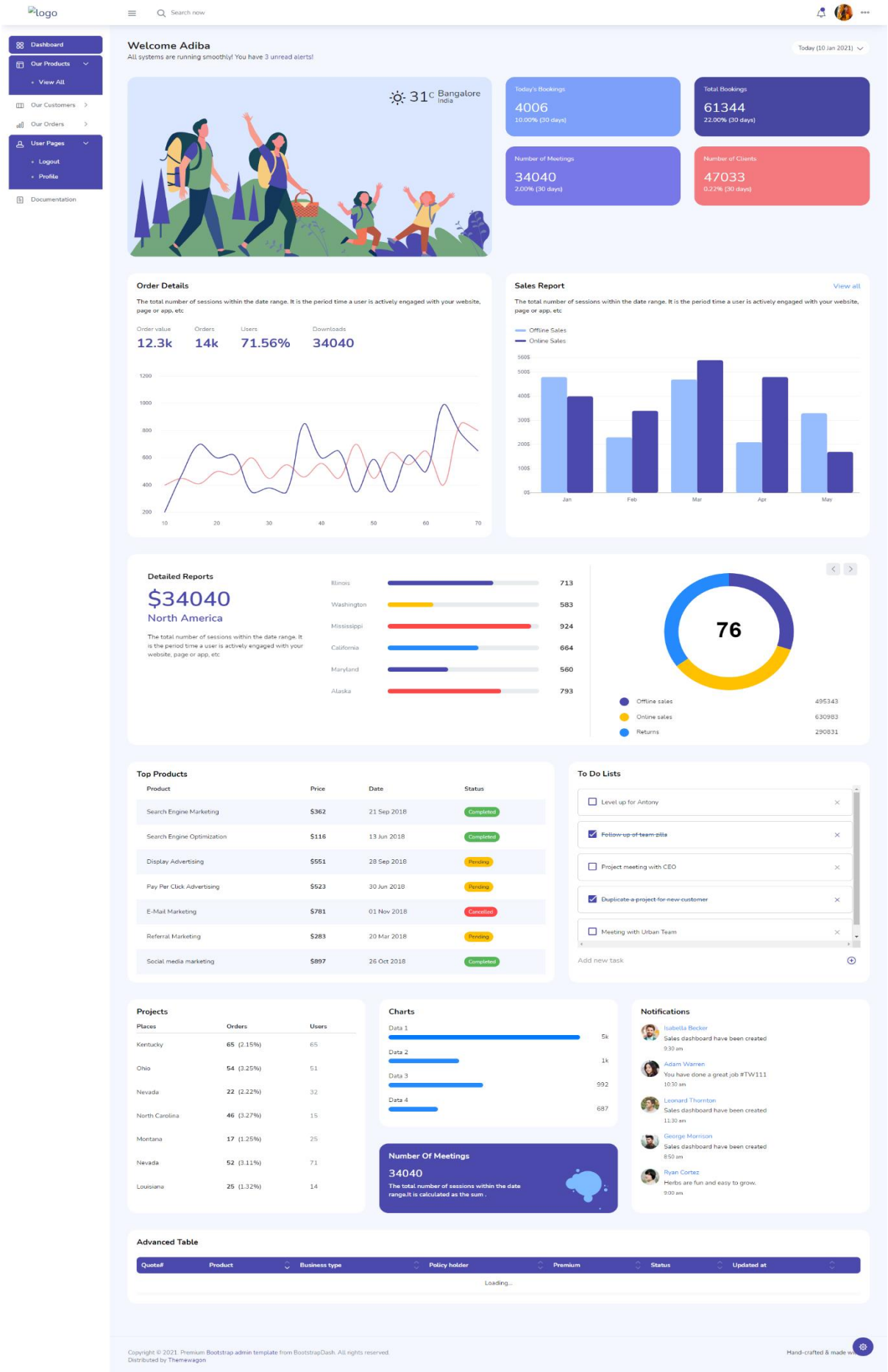


Fig 5.5 Admin Dashboard for Fashion World

Customer Side

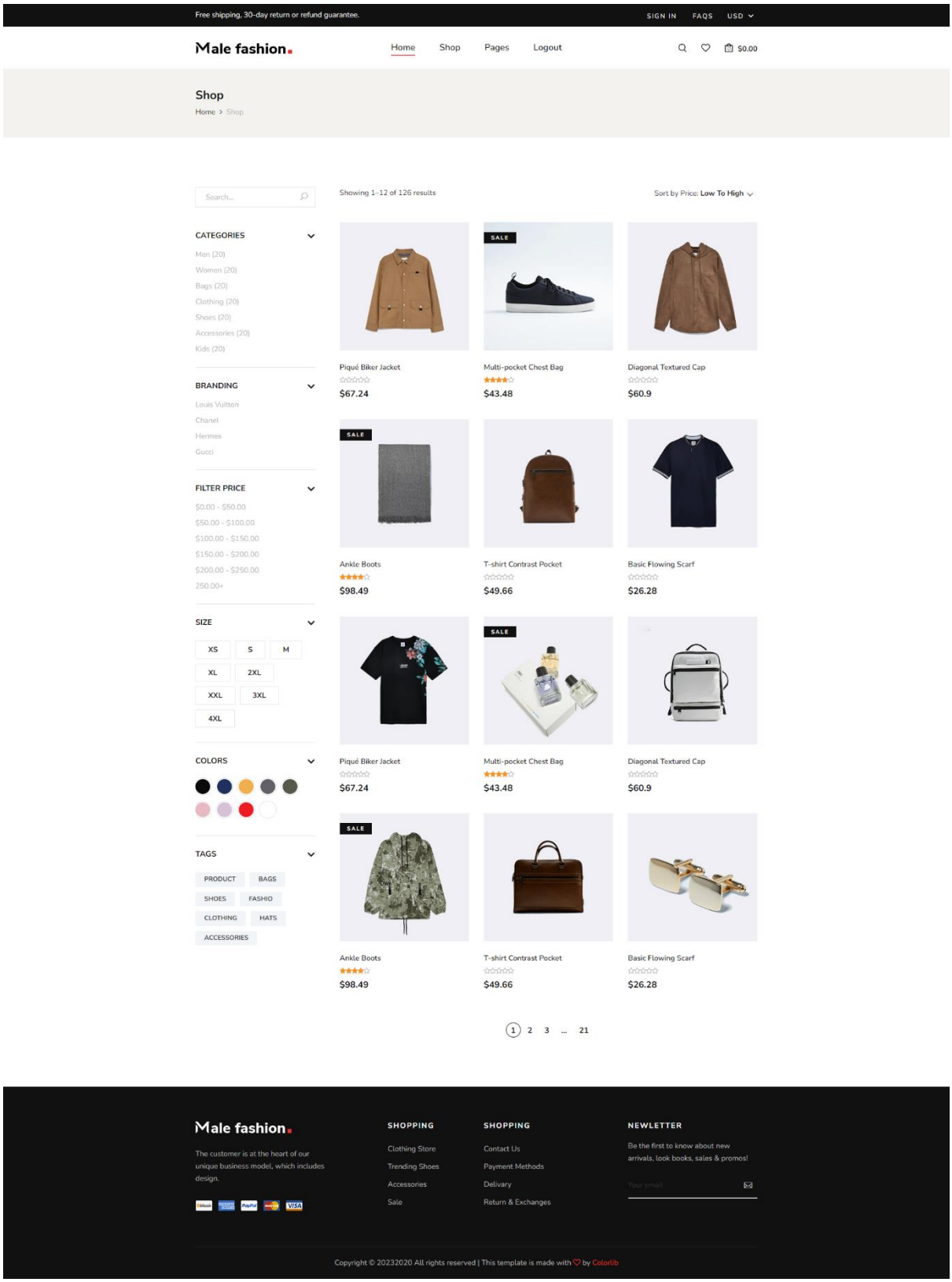


Fig 5.6 Customer Side Screenshot for Fashion World

5.6 Testing

5.6.1 Input

In the testing phase of the Fashion World eCommerce project, rigorous evaluation of input parameters and data is conducted to ensure that the system can effectively handle a variety of scenarios. This includes assessing the system's responsiveness to different user inputs, such as search queries, product selections, user registrations, and payment information. Input validation and verification procedures are applied to confirm that the system can process user-provided data accurately and securely.

5.6.2 Output

Output verification is a critical aspect of testing, where the system's responses and outputs are thoroughly examined. This involves scrutinizing the website's behavior when users perform actions like adding items to the cart, initiating the checkout process, and receiving order confirmations. It also encompasses validating the accuracy of displayed product information, pricing, and shipping details.

5.6.3 Designing Test Cases

A collection of test cases is painstakingly created to guarantee thorough testing coverage. These test cases cover a range of user journeys, including product selection and browsing, as well as payment processing and account administration. Each test case is specifically designed to evaluate particular user interactions and functionalities. The system's ability to gracefully manage exceptions is tested with particular attention paid to edge situations and probable fault scenarios.

5.6.4 Test Results

The test results are systematically recorded and validated against predefined criteria. This phase involves comparing expected outcomes with actual results to identify discrepancies and anomalies. Any issues, defects, or inconsistencies encountered during testing are meticulously documented and categorized based on their severity. Subsequently, the development team addresses these issues and retests the affected components until they meet the required quality standards.

The testing phase serves as a critical quality assurance checkpoint, ensuring that the Fashion World eCommerce platform delivers a seamless and error-free shopping experience to users. By rigorously assessing input parameters, validating output responses, designing comprehensive test cases, and meticulously reviewing test results, we guarantee the reliability, functionality, and security of the eCommerce website.

Chapter 6 - Results & Analysis

We will look at the project/work findings and evaluate their consequences in this part. The Fashion World system's architecture and execution serve as the foundation for the results. Let's look into the findings and conduct a thorough study.

- **We have the Routes for both Admin and User where it routes the request to its database**

```php
<?php

use Illuminate\Support\Facades\Route;
use App\Http\Controllers\MainController;
use App\Http\Controllers\AdminController;

/*
|--------------------------------------------------------------------------
| Web Routes
|--------------------------------------------------------------------------
|
| Here is where you can register web routes for your application. These
| routes are loaded by the RouteServiceProvider and all of them will
| be assigned to the "web" middleware group. Make something great!
|
*/
//Admin Routes
Route::get('/admin',[AdminController::class, 'index'])->name('index');
Route::get('/adminProducts',[AdminController::class, 'products'])->name('products');
Route::post('/AddNewProduct',[AdminController::class, 'AddNewProduct'])->name('AddNewProduct');
Route::post('/updateProduct',[AdminController::class, 'updateProduct'])->name('updateProduct');
Route::get('/deleteProduct/{id}',[AdminController::class, 'deleteProduct'])->name('deleteProduct');
Route::get('/adminProfile',[AdminController::class, 'profile']);
Route::get('/ourOrders',[AdminController::class, 'ourOrders']);
Route::get('/changeOrderStatus/{status}/{id}',[AdminController::class, 'changeOrderStatus']);

//Customer Routes
Route::get('/',[MainController::class, 'index'])->name('index');
Route::get('/checkout',[MainController::class, 'checkout'])->name('checkout');
Route::get('/cart',[MainController::class, 'cart'])->name('cart');
Route::get('/single/{id}',[MainController::class, 'singleProduct'])->name('singleProduct');
Route::get('/shop',[MainController::class, 'shop'])->name('shop');
Route::get('/register',[MainController::class, 'register'])->name('register');
Route::get('/logout',[MainController::class, 'logout'])->name('logout');
Route::get('/login',[MainController::class, 'login'])->name('login');
Route::post('/loginUser',[MainController::class, 'loginUser'])->name('loginUser');
Route::post('/registerUser',[MainController::class, 'registerUser'])->name('registerUser');
Route::post('/addToCart',[MainController::class, 'addToCart'])->name('addToCart');
Route::get('/deleteCartItem/{id}',[MainController::class, 'deleteCartItem'])->name('deleteCartItem');
Route::post('/updateCart',[MainController::class, 'updateCart'])->name('updateCart');
Route::get('/checkout',[MainController::class, 'checkout'])->name('checkout');
Route::get('/profile',[MainController::class, 'profile'])->name('profile');
Route::post('/updateUser',[MainController::class, 'updateUser'])->name('updateUser');
Route::get('/myOrders',[MainController::class, 'myOrders'])->name('myOrders');
```

Fig 6.1 Route Screenshot for Fashion World

- **We have the controller for the user**

```php
<?php

namespace App\Http\Controllers;

use App\Models\Cart;
use App\Models\Order;
use App\Models\OrderItem;
use App\Models\Product;
use App\Models\User;
use Illuminate\Http\Request;
use Illuminate\Support\Facades\DB;
use Illuminate\Validation\Rules\Can;

class MainController extends Controller
{
    //
    public function index()
    {
        $allProducts=Product::all();
        $newArrival= Product::where('type','new-arrivals')->get();
        $bestsell = Product::where('type','sale')->get();

        return view('index', compact('allProducts','newArrival','bestsell'));
    }


    public function cart()
    {
        $cartItems = DB::table('products')
            ->join('carts', 'carts.productId', '=', 'products.id')
            ->select('products.title','products.quantity as pQuantity', 'products.picture', 'products.price', 'carts.*')
            ->where('carts.customerId', session()->get('id'))
            ->get();

        return view('cart', compact('cartItems'));
    }
    public function singleProduct($id)
    {
        $product=Product::find($id);
        return view('singleProduct',compact('product'));
    }
    public function deleteCartItem($id)
    {
        $item=Cart::find($id);
        $item->delete();
        return redirect()->back()->with('success','1 Item has been deleted from cart');
    }
    public function deleteCartItem($id)
    {
        $item=Cart::find($id);
        $item->delete();
        return redirect()->back()->with('success','1 Item has been deleted from cart');
    }
    public function shop()
    {
        return view('shop');
    }
    public function profile()
    {   if(session()->has('id'))
        {
        $user=User::find(session()->get('id'));
        return view('profile',compact('user'));
        }
        return view('login');
    }
    public function myOrders()
    {   if(session()->has('id'))
        {
        $orders=Order::where('customerId',session()->get('id'))->get();
        $items=DB::table('products',)->
        join('order_items','order_items.productId','products.Id')
        ->select('products.title','products.picture','order_items.*')->get();
        return view('orders',compact('orders','items'));
        }
        return redirect('login');
    }
    public function register()
    {
        return view('register');
    }
    public function login()
    {
        return view('login');
    }
```

Fig 6.2 User Controller for Fashion World

```php
    public function logout()
    {
                session()->forget('id');
                session()->forget('type');
                return redirect('/login');
     }
    public function loginUser(Request $data)
    {
        $user=User::where('email',$data->input('email'))->where('password',$data->input('password'))->first();
        if($user)
        {
                session()->put('id',$user->id);
                session()->put('type',$user->type);
                if($user->type=='Customer')
                {
                    return redirect('/');
                }

        else if($user->type=='Admin')
        {
           return redirect('/admin');
        }
        else
        {
            return redirect('login')->with('error', 'failed');
        }
    }
    }
    public function registerUser(Request $data)
{
    $newUser = new User();
    $newUser->fullname = $data->input('fullname');
    $newUser->email = $data->input('email');
    $newUser->password = $data->input('password');
    $newUser->picture=$data->file('file')->getClientOriginalName();
    $data->file('file')->move('uploads/profiles/',$newUser->picture);
    $newUser->type = "Customer";
    if ($newUser->save()) {
        return redirect('login')->with('success', 'Congratulations! Registration successful.');
    }

    // Handle registration failure (optional)
    return redirect()->back()->with('error', 'Registration failed. Please try again.');
}
  public function updateUser(Request $data)
  {
     $user = User::find(session()->get('id'));
     $user->fullname = $data->input('fullname');
     $user->password = $data->input('password');
     if($data->file('file')!=null)
     {
     $user->picture=$data->file('file')->getClientOriginalName();
     $data->file('file')->move('uploads/profiles/',$user->picture);
     }
     if ($user->save()) {
         return redirect()->back()->with('success', 'Congratulations!Your account has been updated');
     }

     // Handle registration failure (optional)
     return redirect()->back()->with('error', 'Registration failed. Please try again.');
  }

  public function addToCart(Request $data)
  {
    if(session()->has('id'))
    {
     $item=new Cart();
     $item->quantity=$data->input('quantity');
     $item->productId=$data->input('id');
     $item->customerId=session()->get('id');
     $item->save();
     return redirect()->back()->with('success', 'Congratulations! item added into cart.');

    }
    else{
     return redirect('login')->with('error', 'info! pleae log into system.');
    }
  }
```

Fig 6.2 User Controller for Fashion World

```php
public function updateCart(Request $data)
{
   if(session()->has('id'))
   {
    $item=Cart::find($data->input('id'));
    $item->quantity=$data->input('quantity');
    $item->save();
    return redirect()->back()->with('success', 'Items Updated');

   }
   else{
    return redirect('login')->with('error', 'info! pleae log into system.');
   }
}
public function checkout(Request $data)
{
   if(session()->has('id'))
   {
    $order= new Order();

    $order->status="Pending";
    $order->customerId=session()->get('id');
    $order->bill=$data->input('bill');
    $order->address=$data->input('address');
    $order->fullname=$data->input('fullname');
    $order->phone=$data->input('phone');
    if($order->save())
    {
        $carts= Cart::where('customerId',session()->get('id'))->get();
        foreach($carts as $item)
        {
            $product=Product::find($item->productId);
            $orderItem = New OrderItem();
            $orderItem->productId = $item->productId;
            $orderItem->quantity=$item->quantity;
            $orderItem->productId=$item->productId;
            $orderItem->price=$product->price;
            $orderItem->orderId=$order->id;
            $orderItem->save();
            $item->delete();

        }
    }
    return redirect()->back()->with('success', 'Your order has been placed succesfully');

   }
   else{
    return redirect('login')->with('error', 'info! pleae log into system.');
   }
```

Fig 6.2 User Controller for Fashion World

- **We have the controller for the admin**

```php
<?php

namespace App\Http\Controllers;

use App\Models\Cart;
use App\Models\Order;
use App\Models\OrderItem;
use App\Models\Product;
use App\Models\User;
use Illuminate\Support\Facades\DB;

use Illuminate\Http\Request;

class AdminController extends Controller
{
    public function index()
    {
        if (session()->get('type') == 'Admin') {
            return view('Dashboard.index');
        }
        return redirect()->back();
    }
    public function profile()
    {
        if (session()->get('type') == 'Admin') {
            $user=User::find(session()->get('id'));
            return view('Dashboard.profile', compact('user'));
        }
        return redirect()->back();
    }
    public function ourOrders()
    {
        if (session()->get('type') == 'Admin') {
            $orderItems=DB::table('order_items')
            ->join('products','order_items.productId','products.id')
            ->select('products.title','products.picture','order_items.*')
            ->get();
            $orders=DB::table('users')
            ->join('orders','orders.customerId','users.id')
            ->select('orders.*','users.fullname','users.email')
            ->get();
            return view('Dashboard.orders', compact('orders','orderItems'));
        }
        return redirect()->back();
    }
    public function changeOrderStatus($status,$id)
    {
        if (session()->get('type') == 'Admin') {
            $order=Order::find($id);
            $order->status=$status;
            $order->save();
            return redirect()->back()->with('success','Congratulation! Status Updated');
        }
        return redirect()->back();
    }

    public function products()
    {
        if (session()->get('type') == 'Admin') {
            $products = Product::all();
            return view('Dashboard.products', compact('products'));
        }
        return redirect()->back();
    }
    public function deleteProduct($id)
    {
        if (session()->get('type') == 'Admin') {
            $product = Product::find($id);
            $product->delete();
            return redirect()->back()->with('success', 'Congratulation!, Product deleted');
        }
        return redirect()->back();
    }

    public function AddNewProduct(Request $data)
    {
        if (session()->get('type') == 'Admin') {
            $product = new Product();
            $product->title = $data->input('title');
            $product->price = $data->input('price');
            $product->type = $data->input('type');
            $product->category = $data->input('category');
            $product->quantity = $data->input('quantity');
            $product->description = $data->input('description');
            $product->picture = $data->file('file')->getClientOriginalName();
            $data->file('file')->move('uploads/products/', $product->picture);
            $product->save();
            return redirect()->back()->with('success', 'Congratulation!, New Product Listed Succesfully');
        }
        return redirect()->back();
    }
```

Fig 6.3 Admin Controller for Fashion World

```php
    public function updateProduct(Request $data)
    {
        if (session()->get('type') == 'Admin') {
            $product = Product::find($data->input('id'));
            $product->title = $data->input('title');
            $product->price = $data->input('price');
            $product->type = $data->input('type');
            $product->category = $data->input('category');
            $product->quantity = $data->input('quantity');
            $product->description = $data->input('description');
            if ($data->file('file') != null) {
                $product->picture = $data->file('file')->getClientOriginalName();
                $data->file('file')->move('uploads/products/', $product->picture);
            }
            $product->save();
            return redirect()->back()->with('success', 'Congratulation!, Product Updated');
        }
        return redirect()->back();
    }
}
```

Fig 6.3 Admin Controller for Fashion World

System Functionality Result:

- The "Fashion World" eCommerce system was successfully conceived, developed, and implemented, establishing a robust digital platform for online fashion retail.
- The system efficiently managed various critical functions, including product catalog management, order processing, and tracking, ensuring smooth and seamless operations.
- By automating manual processes and minimizing human intervention, the system effectively improved efficiency and reduced operational costs, enhancing overall functionality.

Impact on Business Operations:

- The fashion eCommerce venture's business operations underwent a radical change with the introduction of the "Fashion World" platform.
- It streamlined previously manual processes, resulting in significant time and cost savings, optimizing resource allocation for sustainable growth.
- The platform's user-centric design and features led to improved customer engagement, satisfaction, and loyalty, translating into increased customer retention and long-term business viability.

Analysis of Challenges Faced:

- Throughout the project's lifecycle, various challenges were encountered and skillfully addressed to ensure the success of the "Fashion World" eCommerce platform.
- Agile development methodologies were employed to adapt to evolving requirements and seamlessly integrate user feedback, ensuring a customer-centric approach.
- Paramount attention was paid to data security and system reliability, addressing critical concerns to guarantee a secure and dependable shopping environment for users.

Future Recommendations:

- Building on the results and analysis, the "Fashion World" eCommerce platform offers ample opportunities for future enhancements and expansion.
- To further improve user experiences, thought should be given to adding features like loyalty programs, sophisticated reporting and analytics, and smooth connection with a range of online payment channels.
- Ongoing user feedback monitoring and staying attuned to market trends will serve as essential drivers for identifying and implementing continuous improvements, ensuring

the "Fashion World" platform remains at the forefront of the dynamic fashion eCommerce industry.

Chapter 7 - Project as Engineering Problem Analysis

To secure the long-term sustainability and ongoing growth of the "Fashion World" eCommerce project, strategic plans have been meticulously devised. Initially, the project aims to engage with recent graduates in fashion and target partnerships with prominent fashion organizations and companies that may seek to leverage the platform's capabilities for private-label applications. The intention is to enhance the platform's features and offer it to multiple clients within the fashion industry. By broadening the client base and generating substantial revenue streams, the project is poised to attain sustainable success.

Sustainability within the context of the "Fashion World" eCommerce project is delineated into three core dimensions:

7.1 Sustainability of the Project/Work

The primary objective is to foster a vibrant and engaged user community. This entails encouraging existing users to refer the platform to others, effectively driving organic growth in the customer base. The project envisions a network effect where satisfied users become brand advocates, expanding the reach and impact of "Fashion World."

7.2 Social and Environmental Effects and Analysis

The prudent management of financial resources is essential for long-term viability. This encompasses diligently overseeing development costs, including expenses related to license fees, database storage, and ongoing maintenance. By maintaining a healthy balance between revenue and expenditure, the project aims to ensure sustained profitability.

7.3 Addressing Ethics and Ethical Issues

Beyond the initial launch, the project outlines plan for organizational continuity. This may involve the retention of the existing project team, the extension of the team's capabilities, or the introduction of new talent. Moreover, the project anticipates the need for regular updates and feature enhancements to cater to evolving user demands and expand the company's portfolio of offerings. Organizational resilience and adaptability are fundamental for enduring success in the dynamic landscape of fashion eCommerce.

Chapter 8 - Lesson Learned

I finished my internship as a Programmer at Appnap, which provided me with valuable learning opportunities. When I accepted the internship at Appnap, I took on the role of a developer and began an enriching journey of knowledge acquisition. Our "Fashion World" project aimed to create a website for Appnap, an endeavor that introduced me to the world of Laravel. Collaborating with the organizational team was an entirely new experience for me, and while there were few challenges during this time, the learning opportunities were plentiful. Here are some key takeaways from my internship:

- **Skill Enhancement:** My primary focus throughout my internship was on honing my existing skills and learning new ones. I recognized the critical importance of acquiring a diverse skill set that corresponded to my career goals. I spent a significant amount of time mastering tasks that were relevant to my professional goals while also honing existing skills. Because of my commitment to continuous improvement, I was able to advance significantly as a professional during my internship.

- **Professional Communication:** I recognized the significance of professional communication in work. Adapting to the work environment was challenging at first, but I quickly realized the need of establishing excellent communication skills. I understood the importance of keeping a composed and businesslike manner when speaking on the phone, attending in-person meetings, or composing emails. Communication needs to be different between friends and family and my employer, supervisor, and clients. The necessity of professional and clear communication in the workplace was highlighted by this incident.

- **Networking:** Internships are wonderful opportunities to develop one's professional network by engaging with colleagues and forming long-term professional connections. Not only did I make friends at work, but I also developed professional contacts that will be important in my post-graduation career search. Throughout my internship, networking provided me with a key support system and offered up new career opportunities.

- **Goal Setting:** Goal setting emerged as a critical component of my internship experience. I saw the need of setting specific goals for myself at the start of my internship. I engaged in talks with my supervisor to match our expectations in order to acquire a full grasp of what was expected of me. Furthermore, I deliberately made personal goals for myself, concentrating on the knowledge and abilities I wanted to acquire throughout my internship.
- **Time Management:** I honed my time management skills, which was a struggle for someone who was fresh to the working world. I realized the value of remaining organized by making work lists and ranking them according to their relevance and urgency. I efficiently planned my time by identifying and tackling the most important activities first, assuring project completion on schedule. Using this strategy, I was able to stay focused, fulfill deadlines, and maintain productivity during my internship.

As an intern, maintaining excitement was crucial. It was critical to approach the internship with excitement and a willingness to learn. Taking advantage of opportunities to learn new skills, pursuing extra responsibility, and demonstrating a genuine want to learn and ask questions all made a significant impact in my internship experience.

8.1 Problems Faced During this Period

Adapting to the new environment was not difficult from the start because I had the assistance and direction of seniors from my old university. Furthermore, the managerial structure of the organization is remarkable, with everyone willing to help and work as a single team to complete duties.

8.2 Solution of those Problems

As a new developer, there was a steep learning curve to keep up with my more experienced coworkers. This entailed learning how to manage complex projects, guaranteeing customer satisfaction, and delivering frequent reports to office management on the status of my job.

Chapter 9 - Future Work & Conclusion

9.1 Future Works

The Fashion World eCommerce platform is still being developed, with plans for future expansions and additions. Among the anticipated future advancements are:

- Enhanced Category Interface: The category interface has been substantially improved, offering a wide range of categories with in-depth descriptions for each. Users will have a comprehensive overview of all the available services and product possibilities thanks to this.

- Sub-category Enhancements: Additional functionality will be included into the sub-category interface. For example, a section on the interface's left side will allow customers to readily find discounted goods and verify their availability. This tool enables customers to make educated decisions and take advantage of unique offers.

- Exciting New Features: In upcoming updates, the development team is committed to adding fascinating new features. With greater convenience and utility, these improvements will raise the quality of the user experience overall.

Fashion World eCommerce is committed to staying at the forefront of the industry and reacting to the changing preferences and needs of its user base by constantly improving and expanding the platform's functionality. The main priorities will be to enhance usability, provide additional services and categories, and give a seamless and effective digital platform for all demands pertaining to purchasing and maintaining homes.

9.2 Conclusion

The internship at Appnap was a fantastic learning experience that involves designing an application to help retail owners. This project provided me with education and hands-on experience with Laravel, a web development framework. The technology I worked on was intended to address the time-related issues that eCommerce consumers confront.

During my internship, I was involved in the development process and received insight into the employment market dynamics. I learnt how to efficiently manage a wide range of software development needs and how to use the best ways to generate durable solutions. This internship sharpened my problem-solving abilities, equipping me to overcome any challenges that may arise in my future work as a web developer.

I am appreciative of the chance to work at Appnap and the insights I was able to get throughout my internship. I think the program I contributed to has the potential to develop into a fantastic client solution with additional enhancements and upgrades. I gained a realistic perspective of what it takes to be a web developer from this experience, and I was also ready for the responsibilities and expectations that go along with it. I'm eager to continue my journey and use the insights and information I gained from my internship to support the creation of innovative software solutions in the future.

Bibliography

Adiba Haque, an enthusiastic intern at Appnap Technologies Limited, is now studying Computer Science & Engineering at Independent University Bangladesh. She was born on February 2, 2000, in Dhaka, Bangladesh, and has shown a strong devotion to both education and community work. Adiba is on pace to complete her BSc in Computer Science & Engineering at Independent University in Bangladesh, having previously attended Viqarunnisa Noon School & College for secondary and upper secondary education. In addition to her academic endeavors, she recently published a research article on Meat Freshness Classification Using Machine Learning and AI. Her career goals rely upon creating AI-based solutions through research.

Adiba worked extensively on the Laravel Framework throughout her internship at Appnap Technologies Limited, eventually producing an eCommerce project as a capstone of her stint. Her ambitions extend to the realm of data science, where she hopes to advance her career and make important contributions. Adiba is recognized for her daring attitude and likes traveling as well as purchasing necessities for her family. Her spare time is spent on things that help her grow her skills, such as problem solving, learning new frameworks or languages, taking on new projects, and completing research on pending research articles. She has always believed in the power of hard work and determination, principles that have helped her overcome several hurdles and achieve brilliance.

Looking ahead, Adiba is committed to pushing the frontiers of technology and sees a future in which technology is used to benefit society. Her ambitions include obtaining a Ph.D. and furthering her profession. Adiba Haque's transformation from a computing fan to a promising figure in the IT sector exemplifies the transforming power of enthusiasm, inventiveness, and persistent devotion. Her contributions to the realm of technology, as well as her commitment to good change, continue to inspire and alter the world of technology.

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