



E-COMMERCE WEB APPLICATION FOR JAFFNA NEW FASHION

CCU3603 - Individual Project 2

Final Report

**Bachelor of Information Technology
(Honours) Degree**

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Final Year - Individual Project 2

Declaration

Module: CCU3603

Deadline: 28th December 2022

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Acknowledgement

In preparation of individual project for 4th year, I had to take the help and guidance of some respected persons, who deserve my deepest gratitude. First of all, I would like to show my gratitude to Mr. Balakumaran, chairperson of Jaffna New Fashion (Pvt) Ltd who gave me approval to provide technical solutions for exist problem in the company.

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Abstract

E-Commerce web application for Jaffna New Fashion (Pvt) Ltd is the individual project which focus Shopping System for the day-to-day operation. Their current processes are manual and mostly based on paperwork, which is inefficient and time consuming. So, there should be a proper mechanism to manage their day-to-day activities. Technology has a solution in terms of shopping system. The Shopping System can address this issue and increase the efficiency and the effectiveness of this process.

The ultimate expectation of the project is provided technical solution for the exists manual record keep methodology's difficulties. Based on this entire project has been categorized into modules as Customer Management, Offer Calculation , Shopping System, Cart Management.

First module consists of the overall introduction regarding project and the Jaffna New Fashion, then completed tasks have been categorized as requirement gathering, diagrams, UI, implementation, test case table. In comparison to the other methodologies and their benefits Rational Unified Process (RUP) was identified as the most suitable, flexible, and advantageous methodology for the development.

The system was developed using Javascript and Python programming language with Visual code IDE. MY SQL was used as the database tool for designing the database. Wonder share Edraw Max was used to draw the diagrams. Additionally, Adobe Xd also used for the designing.

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List of Acronyms

1. UI- User Interface
2. DBMS- Database Management System
3. RUP-Rational Unified Process Modeling
4. DB- Database
5. Pvt Ltd - Private Limited.
6. HRMS-Human Resource Management System
7. ER-Entity Relationship
8. SDLC-Software Development Life Cycle
9. UML-Unified Modeling Language
10. ID-Identity
11. NIC-National Identity Card
12. PC-Personal Computer
13. TC-Test Case
14. API – Application Programming Interface
15. SMTP -Simple Mail Transfer Protocol
16. ODBC -Open Database Connectivity
17. CRM – Customer Relationship Management
18. OTP – One Time Password
19. OOP – Object Oriented Programming
20. SQL – Structured Query Language

Background

In order to establish the validity of conclusions and recommendations proposed in the final report of the Jaffna New Fashion Shopping Web Application Individual Project, it is imperative to demonstrate a comprehensive understanding of the project's domain and related research. This section provides a concise summary of existing literature and research in relevant fields, supported by appropriate references.

The focus of this project lies at the intersection of ecommerce, web application development, and the fashion industry, with a specific emphasis on catering to the unique needs of the Jaffna region. Extensive research has been conducted in these areas, providing valuable insights into consumer behavior, online shopping trends, web development technologies, and cultural influences on fashion preferences.

Key topics covered in the background research include:

1. Ecommerce Trends: An overview of global and regional ecommerce trends, including growth projections, market size, and consumer preferences in online shopping.
2. Web Application Development: Summary of best practices, methodologies, and frameworks in web application development, with a focus on frontend and backend technologies relevant to ecommerce platforms.
3. Fashion Industry Analysis: Examination of trends, consumer preferences, and market dynamics in the fashion industry, particularly within the Jaffna region. This includes insights into traditional clothing styles, cultural influences, and emerging fashion trends.
4. User Experience (UX) Design: Discussion on UX principles, usability considerations, and design strategies for enhancing user engagement and satisfaction in ecommerce web applications.
5. Case Studies and Success Stories: Review of case studies and success stories of ecommerce platforms and fashion brands that have successfully leveraged technology to enhance their online presence and customer experience.

Chapter 1 - Introduction

1.1 Organization

Jaffna New Fashion (Pvt) Ltd is Dress & shoes Shop which is in No, 12, 2nd Cross Street, Jaffna. This shop currently doing most of shopping as manual. Customer buying system & payment system; shop details are some of the procedures that proceed as manual. Due to lack of speed of exist process the owners of the company decided to move computerized shop management system which provides the solution for the exits methodology on secure way. Therefore, Jaffna new fashion shop should consist Online selling System, Cart Online Payment, online buying System. Therefore, this new system developed will definitely increase the productivity by reducing redundant manual work. Further the client can maintain and manage their day-to-day activities in a well-structured, efficient, and effective manner.

1.2 Motivation

Currently 'Jaffna new fashion shop' relies on manual system for its day-to-day operations necessitating a great deal of paperwork. A good quality service to customers and future improvements are not possible with this. The following problems were identified in the existing manual system.

- There's no proper mechanism for manage customer details because the process is conducted as paper-based methodology.
- There's no methodology to get report for shopping details.
- Less reliability due to the manual procedures.

Provide solutions to this exist problem is worth solving. Because computerized system increases the speed of the process than manual documentation as well as it provides reliable service to the shop. Using a system to these day-to-day operations it serves time and reduces cost of the shop. According to the given clarification this shopping system provides worth solution than exist speed of procedure.

This real problem scenario became as motivation to conduct this project. Providing software solution for the real-world problem is ultimate expectation of this project.

1.3 Objectives of the project

The main objective of this system is to provide a proper systematic way to manage, administer and monitor day to day activities and to increase the efficiency and effectiveness of the operations of this shop. Further including.

1. To learn about requirement gathering from real client.
2. To provide efficient, secure system with expected quality as a solution.
3. To deliver working software system according to project development life cycle
4. To manage details of stock, product, customer etc.
5. To increase the productivity of day-to-day procedure.
6. To generate the reports.

1.4 Scope of the project

The scope is the most important thing to bear in mind when deciding on web development. Few important webs are not integrated along with this project, since they are a separate system which will not be directly dealing with shopping System also, by considering the time constraints, the scope of the project was determined. Additional website and their respective details are not included since which may need an additional amount of time to implement and test the system.

The system consists of management of customer, sales and stock details which is daily used for the operation in the shop. And also, the owners of the Jaffna new fashion suggested that not necessary to implement any attendance separate system due to few employees are working there and due to the time period of the academic project.

According to the limitations the scope of the system including.

- Customer Management
- Payment Calculation
- Stock Management including product, supplier, sales report details etc.
- Online cart payment System

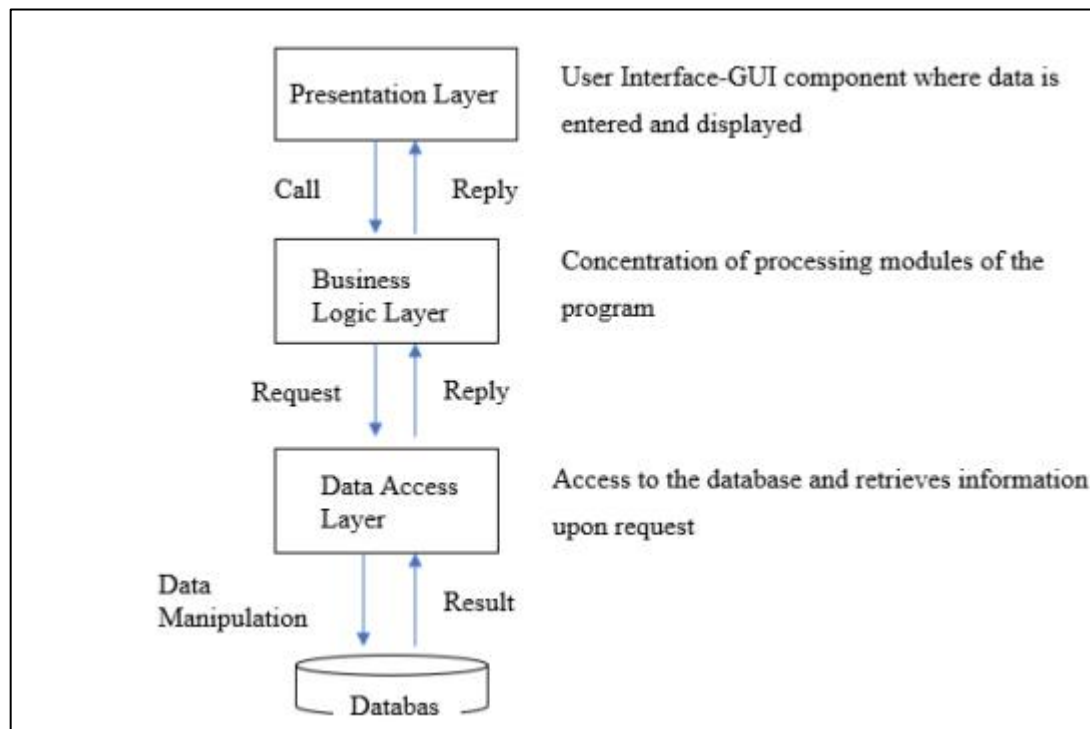
1.5 The Structure of the Dissertation

This Dissertation provides the Introduction, Analysis, Design, Implementation and Evaluation Conclusion stages of this shopping system.

- Analysis- This explains the nature of current system, provides outline of an existing similar system and requirements, and gathered the requirements needed.
- Design- This explains the selected solution description and justification relevant design diagrams, and user interfaces of the system.
- Implementation- This explains the hardware and software requirements, tools and techniques used for the development, code features and reused existing codes of the system.
- Evaluation- This chapter explains how test plan and test cases are prepared and how the system is evaluated on internal and cliental environments.
- Conclusion- This explains the future work to enhance the system and lesson learnt from the overall project.

1.6 Project Framework

The project architecture is client server architecture. Client sends the request operations to logic server. Server to receive and process those requests and send to database server. Database servers receive service requests and manipulate the database and then return results for logic server. Business logic server receives the results from database server and return it to the client.



Chapter 2 - Literature review

A literature review is an essential part of the project. It involves the systematic identification, analysis, and interpretation of relevant scholarly sources related to Shopping system. The goal of a literature review is to provide a comprehensive understanding of the current state of knowledge in the field and identify gaps or areas where further research is needed.

A literature review typically includes a synthesis and analysis of relevant literature such as peer-reviewed journal articles, books, conference proceedings, and other scholarly sources. It also involves critical evaluation of the quality and relevance of the sources, which helps to establish the credibility of the project. It helps to situate the project within the broader context of the field, demonstrate the knowledge of the existing literature, and provide a foundation for the project design and methodology.

2.1 Domain

2.1.1 Studies, approaches, and fact

“Organizations depend on Information Systems in order to stay competitive. Productivity, which is crucial to staying competitive, can be increased through better Information Systems.” A management system for a shop typically refers to a set of processes and tools that are used to manage and optimize the operations of the shop. This can include various aspects of the business, such as shopping management, sales tracking, customer management, and customer service.

shopping management is a key function of a management system within the organization. It is a pillar of logistics and supply chain management in the system of material management. Warehouse inventories may be required to meet customer or humanitarian needs, depending on the organizational goals. shopping management is essential to the efficiency of operations and the effectiveness of an organization.

This study examines shopping management theories and practices in light of people's ever-increasing needs.

Demand is a critical variable in the shopping control system, and its characteristics affect shopping treatment. Important demand characteristics include its level of certainty, which could be deterministic (i.e., known with certainty) or stochastic/Bayesian (i.e., known but uncertain), and its structural dependency (i.e., independent, or dependent).

The deterministic independent and dependent natures of demand are examined in this review along with their relative effects on shopping control in business operations. Supply chain management, deterministic demand model, independent shopping demand, and dependent shopping demand are some of the keywords associated with shopping management.

Since the primary role of shopping management is to maintain a desired stock level of defined products or items, the role of shopping in operations management cannot be overemphasized. History has shown that organizations that have neglected or failed to consider the importance of shopping management have lived to regret it. According to Tentative and Phruksaphanrat, shopping management helps to improve customer service and to cope with demand uncertainty. Demand uncertainty is a potential challenge that results in high shopping levels and high carrying costs, which can lead to higher prices and low customer satisfaction, and thus a less profitable business.

When studies about the employee management to find the approach and what factors have been used to provide technical solutions can be explained as follows.; A customer management system is a software application used by businesses to manage their customer data and streamline various HR processes. This type of system can include a range of features, such as customer management, time and attendance tracking, benefits administration, performance management.

To provide efficient service to the customers the easiest way is using Sales management system. It depends on the organizational scope, financial requirements, and the resource capabilities. For small scale business it is professional way to use general system.

The DBMS is a powerful set of tools, enabling users to operate easily with data into a database as: Inserting, Updating, Deleting and Retrieving data. It prevents unauthorized access to the database and maintains the consistency of the stored data. The DBMS also restores the data in case of hardware or software failure and reduces the loss of data in this way.

The shop management existing procedure approaches with the standard flow in the industry.

1. Exploring the available development environments and techniques- There is a lot of programming environments available to be used for such kind of elaborations. The point is to choose such an environment that we will be able to operate with in a convenient and easy way. This is optional and individual process, that depends on the developer's experience as well.
2. Database Analyzing- It concerns all of the demands, put upon the database content and its functionality. The database should be designed and implemented in a way that the user would expect it to be.
3. Database design and Implementation- This step is tightly related with the previous one as it is completely determined by the requirements, analyzed and discussed in step2.
4. Program's Structure- Analyzing The application program as an interface between the users and the database should be an accurate "reflection" of the database on the screen; hence a well analyzed and defined structure is needed.
5. Bringing all the stuff together the next step that should be taken is connecting the program with the database and performing the necessary functionality upon all of the controls.
6. Tests- To ensure that everything works properly and as it has been expected, test performance has to be done upon the system's functionality.

2.2.2 Similar system studies

Ishara Textile

Product Variety: A dressing shop typically offers a variety of clothing items such as dresses, shirts, pants, skirts, suits, and accessories like scarves, belts, and jewelry.

Physical Store: A dressing shop may have a physical storefront where customers can visit to browse and try on clothes before making a purchase. The store may be located in a shopping mall,

street-front location, or within a larger department store.

Personalized Service: Many dressing shops offer personalized styling advice and assistance from knowledgeable sales staff to help customers find the perfect outfit for any occasion.

Fitting Rooms: Fitting rooms are essential in a dressing shop, providing customers with a private space to try on clothes and assess how they fit and look.

Customization Services: Some dressing shops may offer customization services such as tailoring or alterations to ensure a perfect fit for customers.

Payment Options: Customers should have multiple payment options available, including cash, credit/debit cards, and mobile payment methods.

Return Policy: A clear and customer-friendly return policy is important to instill confidence in shoppers and provide recourse in case they're not satisfied with their purchase.

Visual Merchandising: The layout and display of clothing items play a crucial role in attracting customers and encouraging sales. Effective visual merchandising can help create an inviting and aesthetically pleasing shopping environment.

Inventory Management: Efficient inventory management systems are necessary to track stock levels, reorder merchandise, and ensure that popular items are always available to customers.

Marketing and Promotion: Dressing shops may engage in various marketing and promotional activities to attract customers, including advertising campaigns, discounts, loyalty programs, and social media marketing.

Kumaran textiles

Product Range: Kumaran Textiles offers a wide range of textile products, including sarees, dress materials, fabrics for men's and women's clothing, traditional Indian wear, and more.

Quality: The store is known for offering high-quality textiles, often sourced directly from

manufacturers or wholesalers. They may carry both traditional and contemporary designs to cater to a diverse customer base.

Variety: Kumaran Textiles typically stocks textiles in various materials, such as cotton, silk, chiffon, georgette, and more. They may also offer a range of prints, patterns, and embellishments to suit different tastes and occasions.

Affordability: While maintaining quality, Kumaran Textiles often aims to provide textiles at competitive prices, making them accessible to a wide range of customers.

Customer Service: The store may prioritize customer satisfaction by offering personalized assistance, helping customers find the right fabric or attire for their needs. They may also provide services like fabric cutting and stitching guidance.

Online Presence: In recent years, Kumaran Textiles may have expanded its presence to online platforms, allowing customers to browse and purchase textiles from the comfort of their homes. An online presence enables them to reach customers beyond their physical store locations.

Cultural Significance: Given its presence in Tamil Nadu and other parts of India, Kumaran Textiles may play a significant role in cultural events and festivals, offering special collections and promotions during festive seasons.

Legacy: Kumaran Textiles may have a longstanding reputation in the textile industry, with a history spanning several decades. This legacy often contributes to its credibility and trustworthiness among customers.

Nolimit Textiles

Product Range: Nolimit offers a diverse range of clothing items, including casual wear, formal wear, activewear, footwear, accessories, and more.

Affordability: Nolimit is known for offering trendy and fashionable clothing at affordable prices, making it accessible to a broad customer base.

Quality: While the prices are competitive, Nolimit typically maintains a reasonable level of quality

in its products, ensuring customer satisfaction.

Store Locations: Nolimit operates a network of retail stores across Sri Lanka, with locations in major cities and towns. These stores often feature spacious interiors and organized displays to enhance the shopping experience.

Online Presence: In recent years, Nolimit has expanded its presence to online platforms, allowing customers to shop conveniently from their website or mobile app.

Promotions and Discounts: No limit frequently offers promotions, discounts, and special offers to attract customers and encourage sales. This may include seasonal sales, clearance events, loyalty programs, and more.

Customer Service: The brand may prioritize customer satisfaction by providing friendly and helpful service, easy returns and exchanges, and other post-purchase support.

Community Engagement: No limit may engage in community initiatives, corporate social responsibility programs, and sponsorships to contribute positively to society and build goodwill.

2.1.3 Comparison table

Aspect	Jaffna new fashion	Existing Dressing Shop
Location	Established location, possibly with regular clientele.	Newly opened in Jaffna, potentially in a prime or emerging area.
Brand Recognition	Well-known among locals, possibly with a loyal customer base.	New and may require time to build brand recognition.
Product Range	Offers a variety of traditional and contemporary clothing items.	Likely to focus on trendy and modern fashion pieces.
Pricing	Prices may vary depending on the quality and exclusivity of items.	Prices may be competitive to attract customers and establish the brand.

Store Ambience	Established interior design and layout, possibly reflecting the brand's image.	May have a fresh and modern interior design to appeal to younger customers.
Customer Service	Experienced staff providing personalized assistance and advice.	Likely to emphasize friendly and attentive customer service to attract and retain customers.
Marketing and Promotion	Relies on word-of-mouth, local advertising, and possibly social media presence.	May invest in marketing campaigns, promotions, and social media marketing to create awareness.
Inventory Management	Likely to have established inventory management systems and processes.	May face challenges in managing inventory effectively during the initial stages.
Competitive Advantage	Established reputation and loyal customer base.	Opportunity to introduce unique fashion trends and styles to the local market.
Community Engagement	Established reputation and loyal customer base.	Opportunity to introduce unique fashion trends and styles to the local market.
Environmental Impact	Packaging and shipping may contribute to environmental impact.	Lower environmental impact due to less packaging and transportation.

2.1.1. Algorithms

Algorithms written in php and java script or any other language are most commonly written in a step-by-step manner that clearly defines the instructions a program needs to run. However, there is no defined standard as to how should write algorithm, there are basic shared code constructs between languages that we often use to create an algorithm, such as loops and control flow.

Algorithms are written to solve problems and overcome challenges in development, so confirming that a problem is well defined is important to writing a solution. Oftentimes, there may be multiple solutions to a given problem and many algorithms may be implemented at once as a way of helping the program find the best solution available.

Popular some algorithms are;

- Searching
- Sorting
- Graph Algorithms
- Tree Traversal

Searching Algorithms

The searching algorithms are used to search or find one or more than one element from a dataset. These types of algorithms are used to find elements from a specific data structure. Searching Algorithms are designed to check for an element or retrieve an element from any data structure where it is stored. Based on the type of search operation, these algorithms are generally classified into two categories including linear search and interval search.

Linear searching techniques are the simplest technique. In this technique, the items are searched one by one. This procedure is also applicable for unsorted data set. Linear search is also known as sequential search. It is named as linear because its time complexity is of the order of n $O(n)$.

Linear Search (Array A, Value x, Length n)START

Step 1: Set i to 0

Step 2: if i > n, then go to step 7

Step 3: if A[i] = x, then go to step 6

Step 4: Set i to i + 1

Step 5: Go to Step 2

Step 6: Return index (i)

Step 7: Print 'Not Found'

STOP [11]

When the list is sorted, we can use the binary search technique to find items on the list. In this procedure, the entire list is divided into two sub-lists. If the item is found in the middle position, it returns the location, otherwise jumps to either left or right sub-list and do the same process again until finding the item or exceed the range. There are two types of binary search: recursive and iterative method.

Sorting Algorithms

- Searching: Searching for an item on a list works much faster if the list is sorted
- Distribution: Analyzing the frequency distribution of items on a list is very fast if the list is sorted. For example, finding the element that appears most or least often is relatively straightforward with a sorted list.
- Selection: Sorted data makes it simpler to choose things from a list based on how they relate to the other items. For instance, it is much simpler to determine the median value of the list or the kth-largest or smallest value when the values are arranged in ascending or descending order.
- Duplicate values: When a list is sorted, it is very easy to find similar values on the list.

2.1.2 Research gap.

There are many textiles shop administration software options at the market, in terms of currently used standard systems. However, it's conceivable that some of these systems won't work for Jaffna new fashion(Pvt)Ltd'. 's particular requirements. Managing a hardware shop can be a challenging task, and implementing a software system to aid in this task can bring its own set of challenges.

Some of the challenges that may be faced when implementing a shopping system software include:

- **Data Entry Accuracy:** Entering data into the system can be challenging and time-consuming, and the accuracy of the data entered can be critical to the success of the system. It is essential to train selling members to ensure that they are entering data correctly, and to have a system in place for verifying the accuracy of the data.
- **Inventory Management:** Textile shop have a large number of items in stock, and keeping track of inventory can be a significant challenge. A software system can aid in inventory management, but it requires a lot of effort to keep the system up-to-date with the current inventory levels.
- **workers Training:** workers may require training on how to use the software system, and this can take time away from other tasks. Training should be comprehensive, and ongoing support should be available to ensure that employees can use the system effectively.
- **Integration with Existing Systems:** If the Textile shop already has existing systems in place, such as a point-of-sale system, integrating the textile shop management system software with these systems can be a challenge. The new system should be designed to work with existing systems seamlessly.
- **Security and Privacy:** A Textile shop management system software may contain sensitive information about customers, suppliers, and workers, and it is essential to ensure that this information is kept secure and private. The system should have robust security features to prevent unauthorized access to sensitive data.

- **Cost:** Implementing a Textile shop system software can be expensive, and the textile shop may need to allocate a significant budget for this purpose. Additionally, ongoing maintenance and support costs may also need to be considered.

Implementing a textile shop system software can be a significant undertaking, and it is essential to plan carefully and address these challenges effectively to ensure the success of the system. This Shopping System for Jaffna new fashion implemented based on their requirements. Since it is small scalable business and limited number of functionalities are supposed to use with cost effective. Keep track of the product, suppliers, sales details within a system would be more efficient to them. Based on that simple UI- based system is required to implement. In order to provide secure access have been given separate login credentials for related departments.

2.2 Technical

2.2.1 Tools and technologies (API, libraries)

IDE

Vs code is an IDE (Integrated Development Environment) that helps integrate, debug, and compile your code, which is also how you define an IDE. Visual studio is developed by Microsoft and comes with many handy features (that comes later in this blog), many developers prefer this IDE around the world, with almost 33% of the total developers using this, other popular IDEs are Visual studio (14%), Sublime Text (6%), Atom (3%) and more. [12]

Frameworks that can be used with vs code are;

- **jQuery:** This Javascript frontend development framework is used. jQuery places limitations on how the project can be developed.

The advantages of using this tool are.

Integrated Development Environment (IDE) Features: Despite being lightweight, VS Code offers many IDE-like features such as syntax highlighting, code completion, linting, debugging, and Git integration, which streamline the development workflow.

Built-in Terminal: VS Code includes an integrated terminal that allows developers to run command-line tools and scripts directly within the editor, eliminating the need to switch between different applications.

Customization: VS Code can be customized extensively to suit individual preferences and workflow requirements. Users can install themes, adjust keyboard shortcuts, configure settings, and install extensions to tailor the editor to their liking.

Performance: VS Code is known for its fast startup time and low memory footprint, even when working with large codebases or multiple open files simultaneously.

Libraries

A library is a previously put together collection of codes that can be used repeatedly, cutting down on time. It is comparable to a physical library that houses reusable resources, as the name implies. On the basis of the fact that every library has a root source, php founded a number of open-source libraries.

- **OS**

- The OS module in PHP is a part of the standard library of the programming language.
- The functions OS module provides allows to operate on underlying Operating System tasks, irrespective of it being a Windows Platform, Mac or Linux.
- There are different modules are used in this library to make the application more interactive.

Framework

There are numerous frameworks for Javascript, The same code runs on Windows, macOS, and Linux because it is cross-platform.

Database

MY SQL Server Management is an advanced development environment that enables us to configure, manage and administrate SQL database engines. SSMS is very popular and widely used by the database developers and administrators because of the following advantages:

- Cost-free
- Advanced user experience
- Various add-in options
- Easy installation

Popular phpAdmin components are.

Database Management: phpMyAdmin allows users to manage MySQL databases, including creating, modifying, and dropping databases. Users can also browse the structure of databases to view tables, fields, indexes, and other database objects.

Table Operations: Users can perform operations on database tables, such as creating, altering, and dropping tables. phpMyAdmin provides a visual interface for designing table structures, defining primary keys, setting auto-increment fields, and managing table relationships.

Data Manipulation: phpMyAdmin enables users to manipulate data within database tables. Users can insert, update, delete, and search for records using SQL queries or a visual interface. They can also import data from external files or export data in various formats.

SQL Query Execution: phpMyAdmin includes a SQL query editor that allows users to execute custom SQL queries against the database. Users can write and execute SELECT, INSERT, UPDATE, DELETE, and other SQL statements to perform advanced database operations.

User Management: phpMyAdmin provides tools for managing MySQL user accounts and privileges. Users with appropriate permissions can create, modify, and delete user accounts, as well as grant or revoke privileges for accessing databases and performing specific operations.

Server Status Monitoring: phpMyAdmin displays information about the MySQL server, including server version, uptime, and system variables. Users can also view server processes, monitor server status, and analyze server logs for troubleshooting purposes.

Database Export and Import: phpMyAdmin allows users to export database structures and data in various formats, such as SQL, CSV, XML, and JSON. Users can also import database backups or data files into the MySQL database using the import feature.

Configuration Options: phpMyAdmin offers a wide range of configuration options to customize the behavior and appearance of the application. Users can configure settings related to authentication, security, interface language, display options, and more.

Navigation Panel: phpMyAdmin includes a navigation panel that provides quick access to databases, tables, and other database objects. Users can easily navigate between different sections of the application using the navigation panel.

Chapter 3 Analysis

System analysis is one of the main phases in the software development life cycle. System analysts will help to get an overall image of the system and will be able to produce a high-level description of the system through this phase. Main objectives of this phase are what functionalities system should provide, required performance of the system. Before analyzing the system, first the requirements should be gathered by using the fact-finding techniques, such as interviews, observations, sample documentations etc.

3.1. Analysis of the current system.

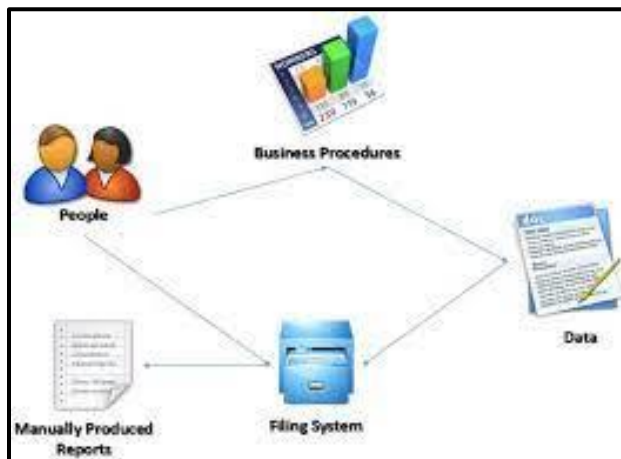
Shopping system for Jaffna new fashion (Pvt) Ltd is the individual project which focus shopping System for the day-to-day operation. Their current processes are manual and mostly based on paperwork, which is inefficient and time consuming.

In the current system workers keep list of workers details in a manual file but that consists of only workers name, joined date, home address, contact no, basic salary only. They included those details within a table. if an worker resigns from the shop simply, they draw red line on workers' name line. For the worker's salary calculation also, they maintain a book where only workers name, salary, date included when they give salary workers has to sign Infront of his name. every month this process is continuously happens. If they want to check previous details only proof is that particular book. When consider about the stock management the supplier details and product details they have only supplier names and number of stocks they provided. They don't have a system to monitor available stock. When a customer purchase items after that they provide a receipt. For that they have assign an employee who has to write product name and amount in that bill and calculate using a calculator. Likewise manual system is ongoing currently.

According to the manual system it consists of many difficulties.

- Security – It doesn't provide secure record keeping. Because anyone can go through the physical files and get sensitive details. If any issues occur such as theft, fire entire records will be damaged and no any records will be protected. Therefore, high data protection threat is in this situation.
- Accessibility- since these are manually maintaining records anyone can go through the files. Manual records cannot be protected by passwords or any other security mechanism. Although it has stored on safe place it isn't guarantee that data is protected.
- Maintainability- manual files cannot maintain standard level. As the example, if an workers resigns from the shop the workers marks a red line on that worker's name. therefore, it seems mess. And also, it requires many files one after another.
- Redundancy- it supposed to use worker's details again and again. As the example in the worker details each an workers records available and also in salary details again write the worker's name each month so high data redundancy in current system.
- Report generation- if needs to provide a report separate report should have to write manually. Because all the records are in paper files.

Likewise, many difficulties are happening in current system. In order to avoid these drawbacks and to increase the efficiency, productivity security has proposed computerized management system where all the data store in a system and provide secure access to gain all the benefits.



3.2Requirement

In software engineering, a requirement refers to a statement that describes a desired functionality or behavior of a software system.

3.2.1 User/ Client requirement

The materials or information which is required from the Client in order for the Company to provide the Services, as set out in the Order Form, or as subsequently becomes necessary from time to time in the course of providing the Services. It describes that client expectations or the expected solutions for the existing problem. In this shop manual file system has many difficulties. To provide technical solution some of required client's expectations are.

- Provides computerizing management system.
- Admin user should be able to monitor customer details, add customer, update, or delete customer, generate reports.
- Based on each customer's performance salary will be calculated and receipt can be shared via email. payment list of customers should be able to generate based on that should have to provide reports.
- The stock details consist of customers information, product and sales information.
- customer can provide payment receipt when customer purchase items.
- The admin should have access for each module and have to monitor the process.
- The system should provide secure login for each process.

3.2.2 System requirements

System requirements are the configuration that a system must have in order for a hardware or software application to run smoothly and efficiently. Failure to meet these requirements can result in installation problems or performance problems.

System requirements consists of functional requirements, non-functional requirements, software and hardware specifications.

3.2.2.1 Functional Requirements

Manage Order – Customer’s Panel

The system lists out all the orders under the account section. Each order contains its own details. These details include product name, quantity, size, amount, and current status. By default, the order’s status is set to unpaid, unless he/she completes their own payment. Here, the customer has to verify the payment for finalizing the orders. For this, the user has to provide the invoice number, banking transaction code, amount, and much more. As soon as the user proceeds through this step, the system marks the order as paid status. Additionally, the user can view and manage all their Wishlist under the Wishlist section. Besides, the user can view bank accounts, edit profiles, passwords, and remove their personal account.

Admin Panel

On the other hand, an admin has full control over the system. An admin has the right to manage the proper flow of the system. He/she can manage the number of categories by entering their names, photos, and selecting certain features. After the management of categories, now the admin has to manage manufacturers. While referring to a number of categories, it means product category and a shopping category. As mentioned earlier, the

process for this section is the same as well. The admin has to enter the manufacturer name, photo, and choose an option whether to show it as a top manufacturer or not. And now, after setting up all these fields, the administrator can add product details too.

Product and Bundles Management

For adding product details, an admin has to enter the product's name, URL, select manufacturer, category, product category, description, price, photo, keyword, and label. Under the description section, there are three sections. These are product descriptions, product features, and videos. And in terms of adding photos, the system allows inserting up to three product photos. In addition to it, an admin can add and manage bundle products. For this, the procedures are the same as above. After setting up products and bundles, the system calculates the total number of each product sold with their publish dates too. Not only this, he/she can assign products to bundles relation by entering title and selecting a product with a bundle.

Coupon Management and Stores

In terms of this whole e-commerce website, a coupon code plays an important role for the customers around in order to provide them some discounted price. Just like that, this project contains coupon features for the customers. An admin has the right to manage each and every coupon. For inserting a coupon, an admin has to enter coupon name, coupon code, select product, price, and limit. The best thing out here is that the system lets us know about the number of people using the coupons. Also, the user can manage stores by providing various details. It includes store name, image, description, and URL. From this, the customers can check their store branches around them.

Orders, Customers, Payments and More

An E-Commerce website project is incomplete without the proper details of Orders, Customers, and Payments. Likewise, the admin can oversee all the orders performed by the customers around. It includes all the order details such as product name, image, quantity, size, price, date, and order status. The main responsibility of customers is to manage their order status. Meaning, the payment must be done in order to mark it as completed under the admin side. The admin can delete order records anytime. Similarly, the admin can view customer's records with their details and payments throughout the website with their exact amount and payment method. Besides, the admin can view total earnings and view the number of pending and completed orders.

3.2.2.2 Non-Functional Requirements

“In systems engineering and requirements engineering, a non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions.”

Requirements	Description
Usability	Refers how easy to use system to customers. Easily determine what is feature and what it can do. Easy navigation, flexible search options, eye catching interfaces and color patterns are the main key techniques where usability requirement is achieved.
Security	To protect sensitive data (customers details, salary, payment, passwords) security system needs database storage
Accuracy	Lack of accuracy in data causes major problem in the system. Accuracy of the data should be ensured in order to apply validation techniques for login

	validation, tracking and database integrity.
Speed	It determines how fast responds to commands. Speed also involves assessing system's ability to manage an increasing workload as user use different applications at the same time.
Respond	Refers how fast respond to certain user's action under certain workload. This explains how much a certain user must wait before the target operation happens. Get maximum 2 seconds to navigate each page and displays information.
Reliability	Should Provide reliable service via system. It means entire functions should work properly.

3.2.2.3 Software Requirements

Requirements	Description
Operating System	Edition -Windows 10 Pro operating system is used for developing the system Type- 64-bit operating system Version-20H2
Database	MYSQL PHPAdmin provides tools to configure, manage and administer instances of My SQL, it brings together a range of graphical and visual design tools and rich script editors to simplify working with MYSQL.
IDE	Vs code -dedicated Javascript IDE provides wide range of essential tools for JavaScript development. The system is developed using this IDE

3.2.2.4 Hardware Requirements

Requirements	Description
Processor	Intel(R) Core (TM) i5-2450M CPU @ 2.50GHz 2.50 GHz is required to develop.
RAM	Minimum 8.00GB capacity RAM is suitable to store entire data
Device	Any types of devices (Desktop, Laptop) can be used. Dell, Hp,

	Samsung, etc. (Any manufacturing devices are suitable to the successful implementation)
Router	4G-LTE wireless network router for laptop, network cable is needed for PC (Any manufacturing router is allowed)

3.2.3 Existing systems

There are a number of open source and proprietary software available in the market for this purpose. A few of them are listed below.

Ishara Textile

Product Variety: A dressing shop typically offers a variety of clothing items such as dresses, shirts, pants, skirts, suits, and accessories like scarves, belts, and jewelry.

Physical Store: A dressing shop may have a physical storefront where customers can visit to browse and try on clothes before making a purchase. The store may be located in a shopping mall, street-front location, or within a larger department store.

Personalized Service: Many dressing shops offer personalized styling advice and assistance from knowledgeable sales staff to help customers find the perfect outfit for any occasion.

Fitting Rooms: Fitting rooms are essential in a dressing shop, providing customers with a private space to try on clothes and assess how they fit and look.

Customization Services: Some dressing shops may offer customization services such as tailoring or alterations to ensure a perfect fit for customers.

Payment Options: Customers should have multiple payment options available, including cash, credit/debit cards, and mobile payment methods.

Return Policy: A clear and customer-friendly return policy is important to instill confidence in shoppers and provide recourse in case they're not satisfied with their purchase.

Visual Merchandising: The layout and display of clothing items play a crucial role in attracting customers and encouraging sales. Effective visual merchandising can help create an inviting and

aesthetically pleasing shopping environment.

Inventory Management: Efficient inventory management systems are necessary to track stock levels, reorder merchandise, and ensure that popular items are always available to customers.

Marketing and Promotion: Dressing shops may engage in various marketing and promotional activities to attract customers, including advertising campaigns, discounts, loyalty programs, and social media marketing.

Kumaran textiles

Product Range: Kumaran Textiles offers a wide range of textile products, including sarees, dress materials, fabrics for men's and women's clothing, traditional Indian wear, and more.

Quality: The store is known for offering high-quality textiles, often sourced directly from manufacturers or wholesalers. They may carry both traditional and contemporary designs to cater to a diverse customer base.

Variety: Kumaran Textiles typically stocks textiles in various materials, such as cotton, silk, chiffon, georgette, and more. They may also offer a range of prints, patterns, and embellishments to suit different tastes and occasions.

Affordability: While maintaining quality, Kumaran Textiles often aims to provide textiles at competitive prices, making them accessible to a wide range of customers.

Customer Service: The store may prioritize customer satisfaction by offering personalized assistance, helping customers find the right fabric or attire for their needs. They may also provide services like fabric cutting and stitching guidance.

Online Presence: In recent years, Kumaran Textiles may have expanded its presence to online platforms, allowing customers to browse and purchase textiles from the comfort of their homes. An online presence enables them to reach customers beyond their physical store locations.

Cultural Significance: Given its presence in Tamil Nadu and other parts of India, Kumaran Textiles may play a significant role in cultural events and festivals, offering special collections and promotions during festive seasons.

Legacy: Kumaran Textiles may have a longstanding reputation in the textile industry, with a history spanning several decades. This legacy often contributes to its credibility and trustworthiness among customers.

Nolimit Textiles

Product Range: Nolimit offers a diverse range of clothing items, including casual wear, formal wear, activewear, footwear, accessories, and more.

Affordability: Nolimit is known for offering trendy and fashionable clothing at affordable prices, making it accessible to a broad customer base.

Quality: While the prices are competitive, Nolimit typically maintains a reasonable level of quality in its products, ensuring customer satisfaction.

Store Locations: Nolimit operates a network of retail stores across Sri Lanka, with locations in major cities and towns. These stores often feature spacious interiors and organized displays to enhance the shopping experience.

Online Presence: In recent years, Nolimit has expanded its presence to online platforms, allowing customers to shop conveniently from their website or mobile app.

Promotions and Discounts: No limit frequently offers promotions, discounts, and special offers to attract customers and encourage sales. This may include seasonal sales, clearance events, loyalty programs, and more.

Customer Service: The brand may prioritize customer satisfaction by providing friendly and helpful service, easy returns and exchanges, and other post-purchase support.

Community Engagement: No limit may engage in community initiatives, corporate social responsibility programs, and sponsorships to contribute positively to society and build goodwill.

3.3 Feasibility study

A feasibility study is an assessment that determines the likelihood of a proposed project being successful, such as a new product line or technical system. The study analyzes the project's relevant factors, such as technical, economic, and legal considerations, to assess whether the project is worth an investment. The study can also identify potential issues and problems that could arise from pursuing the project.

Feasibility studies also help companies with new business development, including determining how it will operate, potential obstacles, competition, market analysis and the amount and source of financing needed to grow the business.

3.3.1 Time feasibility

A time feasibility study is a type of feasibility study that concentrates on figuring out how long it will take to complete a specific activity. The goal of this study is to determine whether or not the project can be finished in the desired amount of time. According to this project it was started from 2022.07.31 to 2023.03.19. Two semesters have been allocated for this academic project. At the first stage allocated for analyzing phase. Half of the project implemented including customer management, payment management, user interfaces were completed by November 2023. The remaining implementations, database connectivity and finalizations are allocated at last phase until April 2024(all attached in time plan). According to time planning this project is capable enough to complete the project as estimated.

3.3.2 Cost feasibility.

Cost feasibility is the evaluation of a project's or idea's ability to be carried out within the constraints of the allocated budget or financial means. It entails a thorough analysis of all of the project's costs, including those for materials, labor, equipment, and other expenditures.

In this project no any financial resources were used therefore no any cost consuming.

3.3.3 Scope feasibility

The Project Scope pertains to the work necessary to deliver a product. Requirements and deliverables define the project scope, and it is critical that the stakeholder is in agreement with the information discussed in the proposed plan.

The system consists of management of customers, sales and stock details which is daily used for the operation in the shop. And also, the owners of the Jaffna new fashion suggested that not necessary to implement fingerprint or any attendance separate system due to few customers are working there and due to the time period of the academic project (Two Semesters- 09 months)

According to the limitations the scope of the system including;

- customer Management
- payment Calculation
- Stock Management including product, supplier, sales report details etc.
- Payment System

This provides the capability of provide efficient, secure system with expected quality, managing the stock details, product, customer etc., increasing the productivity of day-to-day procedure, generate the reports.

3.3.4 Technical feasibility.

Technical feasibility refers to the assessment of whether a proposed project or solution can be successfully implemented using existing technology, resources, and skills. It involves evaluating the project's requirements, identifying potential constraints, and determining whether the necessary technology, hardware, software, and expertise are available or can be obtained within a reasonable timeframe and budget.

According to this project the technical requirements for implementing the system are windows or any operating systems, normal desktop server and 4G clear network connection and computer resource. When identifying the constraints need to proper maintenance and customer awareness guidance sessions. Because this is very first time that convert into manual into computerized

system therefore need proper consultations while launch the system. This system has been created within 09 months of period time and have implemented as simple as form procedures therefore no need to require technical experts to use the system as soon as launch the system.

According to the above technical review this project is capable enough to implement textile shop management system.

3.3.5 Economic feasibility

Economic feasibility is a term used to describe the ability of a project, venture, or business to be financially viable and profitable. It involves analyzing the costs and benefits associated with a particular endeavor to determine if it makes economic sense to pursue it.

Due to zero costs of implementing Textile Shop Management System and simple technical usage doesn't concern the profit and revenue increasing and manage financial aspects in this system. Due to small scalable business and initial stage of comprised system using company doesn't expect cost consuming applications. Therefore, this simple system is feasible enough to implement including all requirements.

3.4 Methodology and planning artifact

3.4.1 Methodology

In Iterative model, using simple set of software requirements the development process starts and iteratively enhances the evolving versions of the software until reaching the complete system which is implemented and ready to be deployed. According to software development life cycle the methodology which is going to implement the project is Agile Software Development Methodology. Agile SDLC module does divide entire project into sub modules to develop. Each Iteration is included.

1. Planning
2. Analyzing
3. Architectural Design
4. Coding
5. Testing

6. Delivery
7. Feedback

Entire agile methodology step consists following phases.

1. Concept
2. Inception
3. Iteration
4. Release
5. Maintenance
6. Retirement

Rational Unified Process (RUP) has been selected for the proposed system. This is an iterative software development process framework, and it supports objects-oriented development, because of this we selected this. At the initial stage client, does not have a clear idea about system requirements, so it may likely to be changed.

Further system has been divided into modules such as Customer Management, payment Calculation, payment System, Stock Management, Supplier Management etc. Each module has developed incrementally and iteratively. So, RUP is the most appropriate System Development Life Cycle (SDLC) Methodology.

In here adapt their process to the project and customer needs. Demonstrate dummy version of software and gather customer feedback. RUP works closely with client to collect their feedback. It is iterative incremental model. The steps of RUP as follows.

- Inception Phase
- Elaboration Phase
- Construction Phase
- Transition Phase

Identifying the requirements, project planning is the first Inception Phase. After requirement analyzation modeling comes under Elaboration Phase. Revise use case modeling. Based on the designing development is carrying out as Construction Phase. Once develop the system it releases to the client which is called as Transition Phase. Update the documentation based on the customer feedback beta testing will be carrying out. Then update the project continuously will happen.

According to the above clarification the first step planning phase which consider the prioritized project requirement gathering and divide into separate modules. First has to define the requirement and should discuss with client about opportunities, time bound based on collected information should evaluate technical and economic feasibility. Once collect it then has to show all using diagrams and start working on development. To gather requirement there are many techniques to use including use demo framework, questionnaire, interview, discussion etc. Based on that can draw wireframes and can keep continuous interaction with the client while getting feedback.

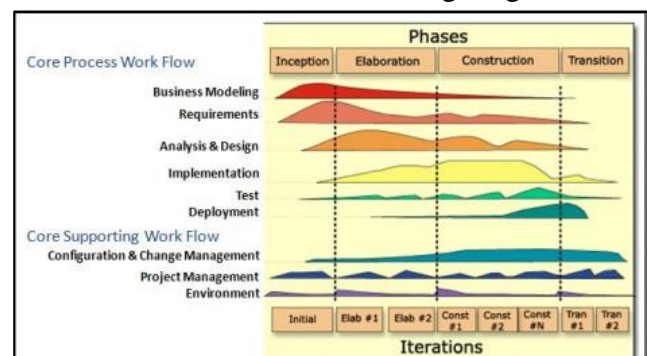
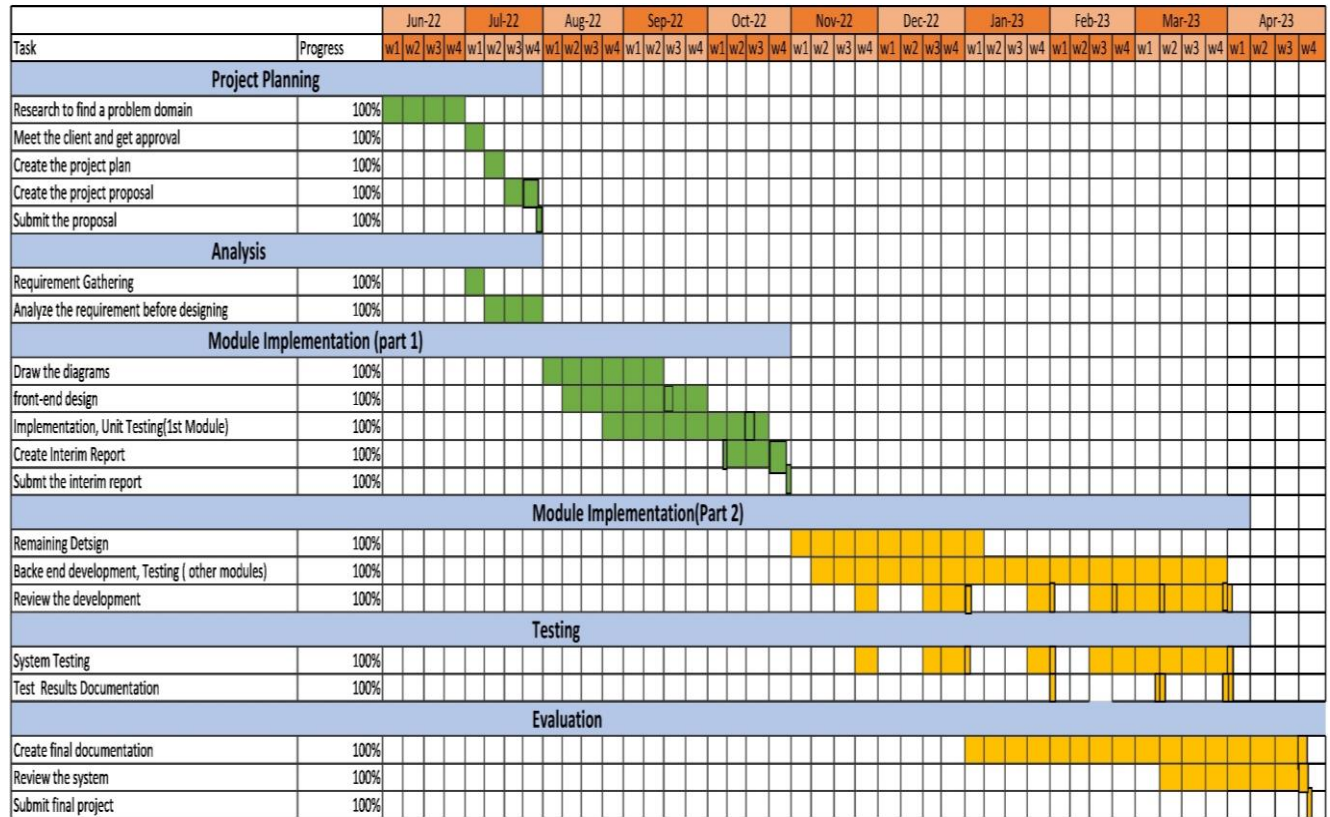


Figure 1- RUP Phases

3.4.2 Planning

Hardware Shop Management System was started from 07th of June 2022 and it's ended up with 27th of April 2023.



Tasks	End of Start	End of Date	progress
Research to find a problem domain	07-Jun-2022	30-Jun-2022	100%
Identify a problem, meet the client and get approval	01-Jul-2022	08-Jul-2022	100%
Create the project plan	09-Jul-2022	15-Jul-2022	100%
Create the project proposal & review	17-Jul-2022	30-Jul-2022	100%
Submit the proposal	31-Jul-2022	31-Jul-2022	100%

Tasks	End of Start	End of Date	Progress
Requirements Gathering	01-July-2022	08-July-2022	100%
Analyze the requirements understand overview of system	09-July-2022	31-July-2022	100%
Draw the diagrams (customer Management, payment System, Cart Management)	01-Aug-2022	14-Sep-2022	100%
front-end designing	08-Aug-2022	30-Sep-2022	100%
Customer Management Implementing	23-Aug-2022	22-Oct-2022	100%
Collect feedback, Create Interim Report	03-Oct-2022	27-Oct-2022	100%
Submit the Interim Report	28-Oct-2022	28-Oct-2022	100%
Stock Management, Product Management, Category, customer Management, Database, Bill Report Designing, Modify Login Design (Completed All Designing)	06-nov-2022	07-Jan-2023	100%
Backend development- connect each module with database, add additional functions, modify previous functions (Completed development)	12-Nov-2022	31-March-2023	100%

Review the development, collect feedback and modify the implementation (Changed the codes and finished the development)	24-Nov-2022 18-Dec-2022 25-Jan-2023 22-Feb-2023	30-Nov-2022 07-Jan-2023 10-Feb-2023 02-April-2023	100%
System Testing (Up to completed developed System)	24-Nov-2022 18-Dec-2022 25-Jan-2023 22-Feb-2023	30-Nov-2022 07-Jan-2023 10-Feb-2023 02-April-2023	100%
Test Results Documentation (Screenshots Profs)	25-Jan-2023 02-Mar-2023 27-Mar-2023	31-Jan-2023 07-Mar-2023 02-April-2023	100%
Review the final system & documentation	05-Mar-2023	26-Apr-2023	100%
Submit final project documentation	27-Apr-2023	27-Apr-2023	100%

This project duration is 09 months period of time. one months were allocated for problem identification and proposal submission. Four months were allocated for interim progress which means completed work up within four months. In the viva panel made suggestions to implement further based on those modification completed the system. Four-month periods were allocated for final implementation and evaluation. Since this is academic project two semesters were allocated for the individual project.

Chapter 4 Design

There are various system design approaches used by designers. Such as structured design, prototyping, Rapid Application Development, and object-oriented design. Object-oriented design is the widely used approach in modern software designing. The work has done in one project can be easily reused and integrated into other applications. It is also easy to write codes, and easy to understand and will contain few errors.

4.1 Alternate solution Evaluation

4.1.1 Standalone

Standalone software refers to a computer program that can run on a computer without requiring any additional software or programs to be installed. This means that the software is self-contained and can perform its functions without any dependencies on other applications or software components.

Standalone software can be installed directly onto a computer's hard drive or other storage device, and can be used without an internet connection or network access. Examples of standalone software include customer Management, Cart System etc.

Standalone software can also refer to software that is designed to be used as a single application or tool, rather than as part of a larger suite or system. In this sense, standalone software can be thought of as a self-contained solution to a specific problem or need, rather than a component of a larger system. By considering these facts I have implemented standalone system in this project

4.1.2 Distributed

Software runs on multiple computers within a network, where each portion of a software stored on a server or cloud and communicate with each and other, when needed. In a distributed software system, different parts of the application are typically hosted on different machines, which communicate with each other over a network. These machines can be located in different geographic locations and can be managed by different organizations. Examples of distributed software systems include cloud-based applications. Developing and managing distributed software systems can be challenging, as it requires a deep understanding of distributed computing concepts and techniques. Developers must be skilled in areas such as network programming, concurrency, distributed algorithms, and fault tolerance. Additionally, testing and debugging distributed software can be difficult, as issues may arise from interactions between different components running on different machines.

4.1.3 Web Based

Web-based software refers to any software application that is accessed and used through a web browser or web-based interface, rather than installed and run directly on a local computer or device. This type of software is hosted on a remote server and can be accessed and used from any device with an internet connection.

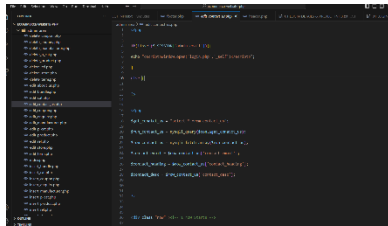
4.1.4 Customized Solution

In this situation, although there are many open-source systems are used based on the requirements I have used standalone system with unique functionalities.

4.1 Object oriented design

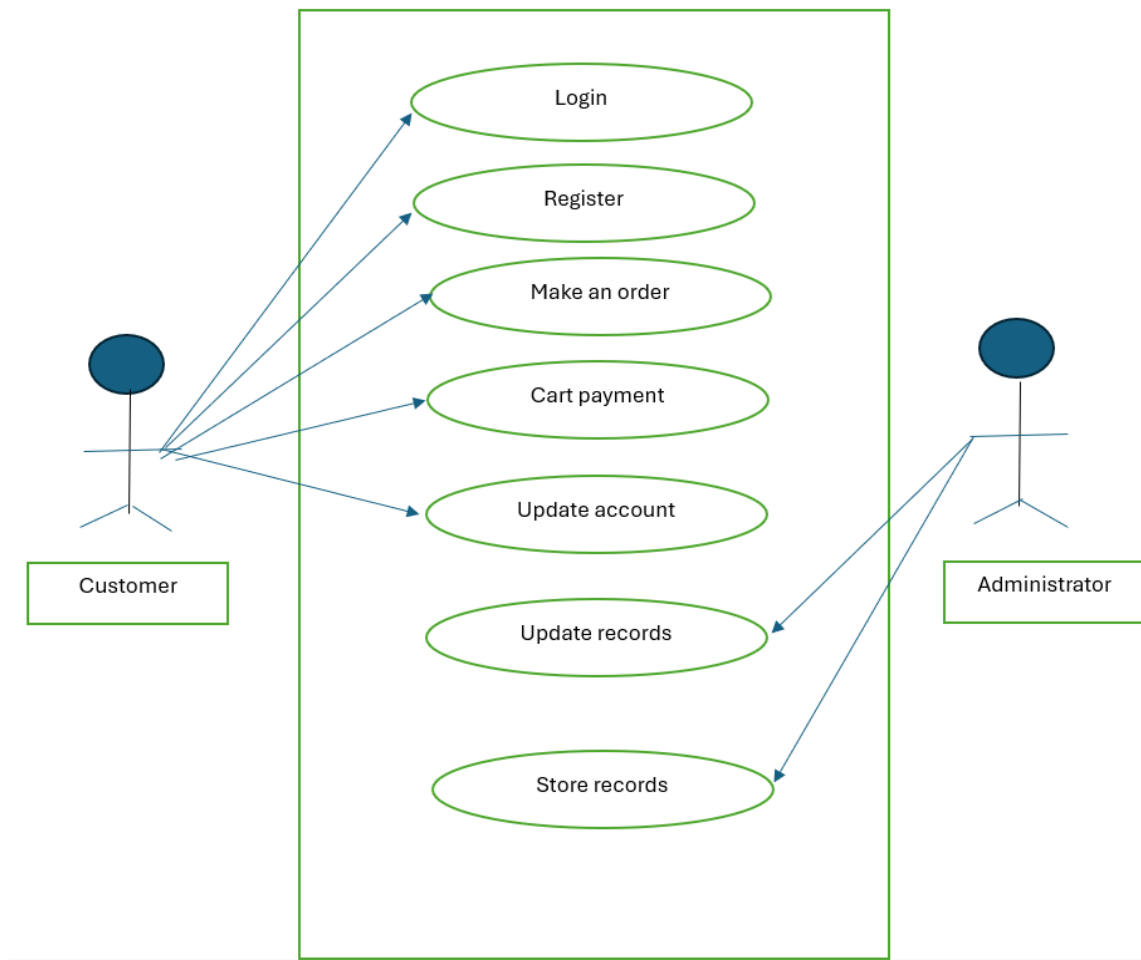
Object-oriented design is concerned with developing an object-oriented model of a software system to implement the identified requirements. The main goal of this design approach is defining objects define objects and establishing relationship between classes by sending and receiving messages.

In this project have uses for classes and objects. As the example customer management consists of cart management, product management, categories, sales report management. In this case each above modules have implemented on individual pages and integrated those objects in main class of inventory management page. This makes code line efficiency and integrity.

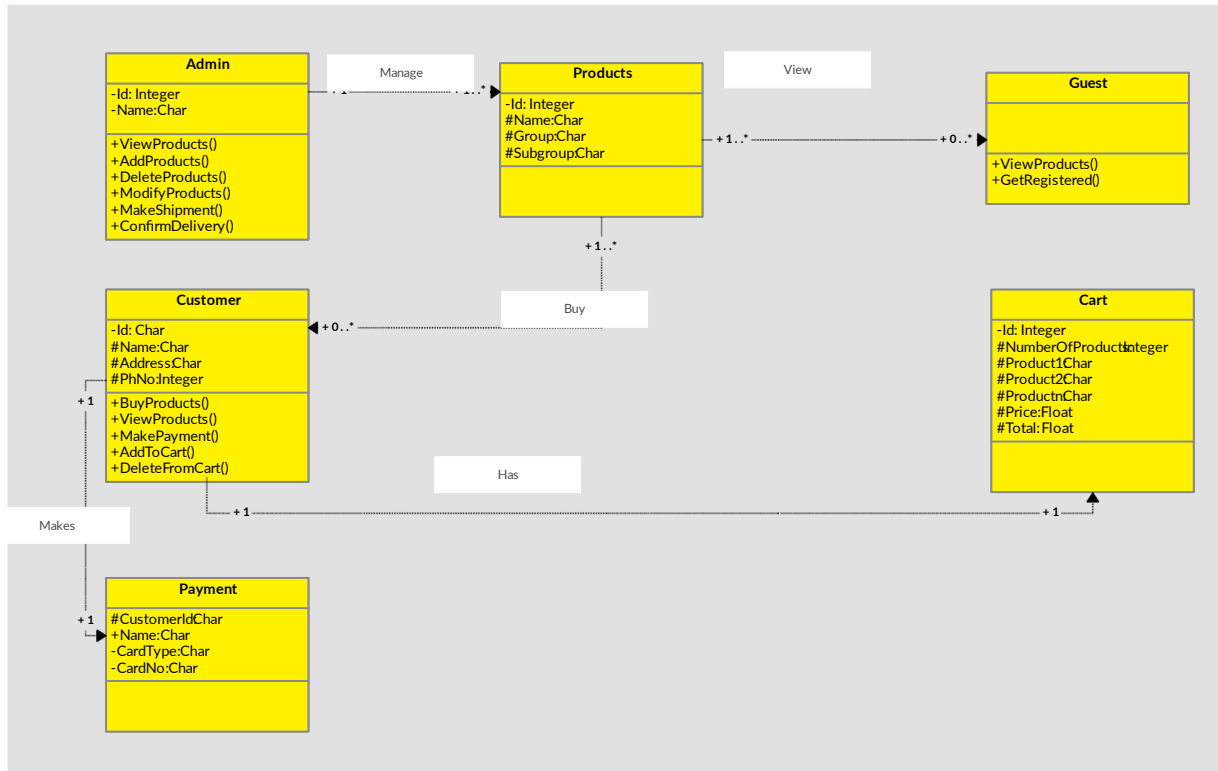


4.1 Diagrams

Use case diagram.



Class diagram

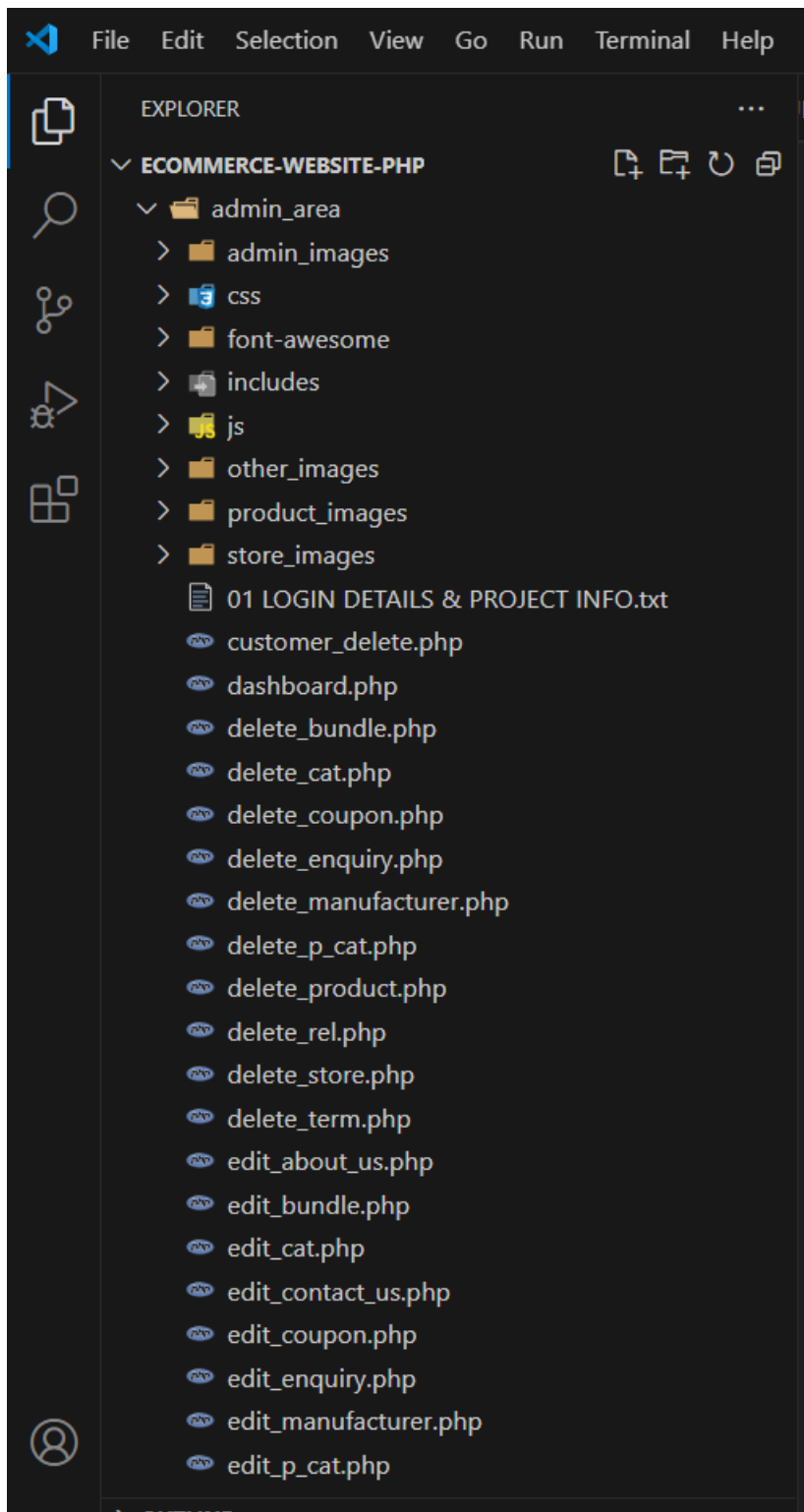


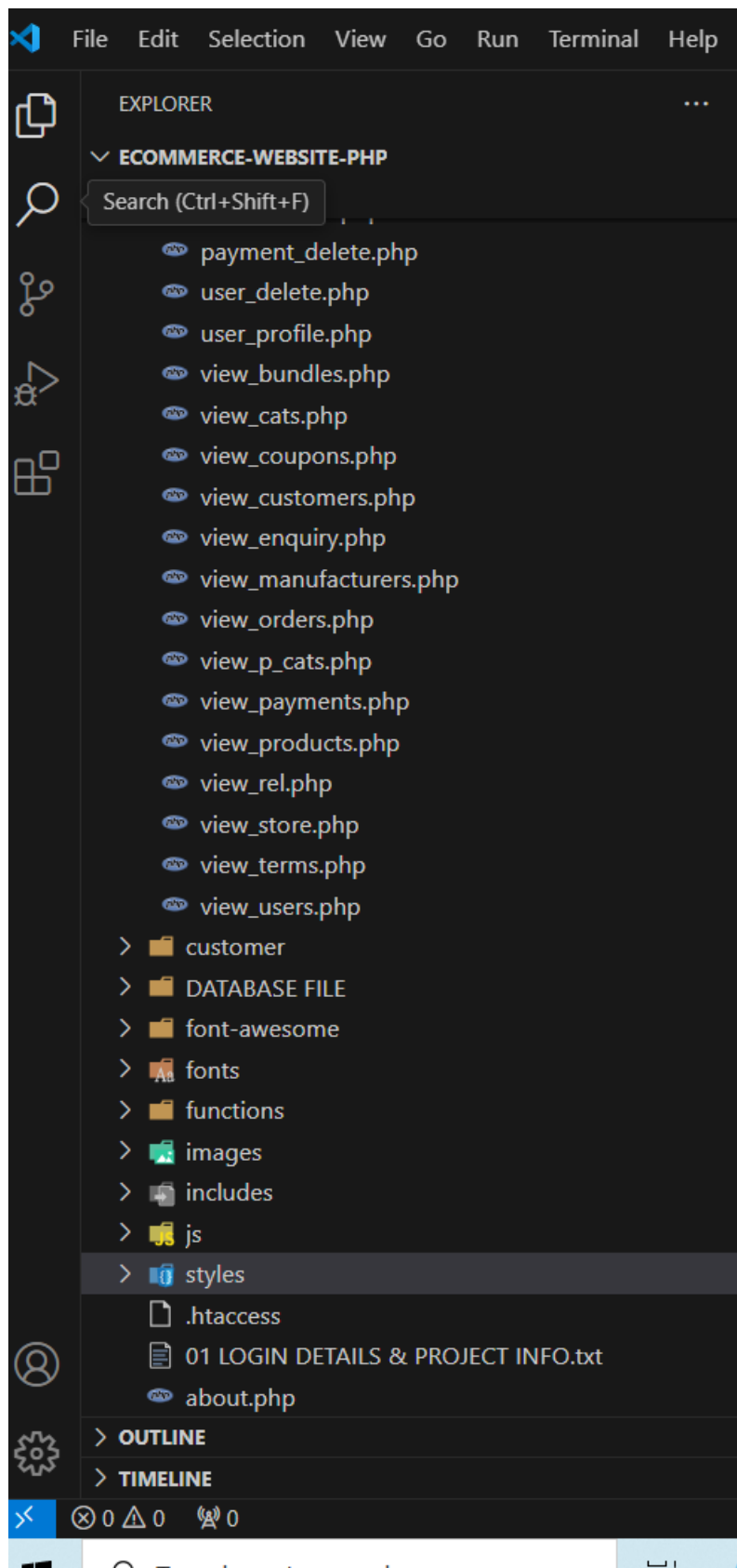
4.2 Module structure

In general, a module is a self-contained unit of functionality that can be easily added, removed, or updated without affecting the rest of the application. A standalone application typically consists of several modules, each responsible for a specific aspect of the application's functionality. All the module store in local server

1. Main module: This is the entry point for the application and contains the code that initializes and starts the application. It may also contain code for handling command-line arguments, setting up the application environment, and other global tasks.
2. User interface module: This module is responsible for displaying the application's user interface and handling user interactions. It may include submodules for different types of user interface components, such as forms, menus, or dialogs.

3. Data access module: This module is responsible for accessing and manipulating data stored by the application. It may include submodules for different types of data storage, such as databases, files, or network services.
4. Business logic module: This module contains the application's core logic and algorithms. It may include submodules for different types of business logic, such as data validation, processing, or analysis.
5. Utility module: This module contains general-purpose utility functions and classes that can be used by other modules. It may include submodules for different types of utility functions, such as string manipulation, date/time processing, or file handling.





4.3 User Interface design

Interaction between user and the system is mainly achieved by interfaces. There by interface of a system plays a major role in human computer interaction. This should be user friendly with proper color combination and well-organized flow between pages. This system has own unique design. When it does the design principles have considered are.

4.3.1 Consistency

The interface should ensure the consistency flow wherever possible. The given pictures show the interface between two pages and its consistency by their unique consistent design.

When click on Product menu it connects with Product details page.

4.3.2 Responsiveness

All the UI have been designed with flexible responsiveness. There are different end user skills since this project is for small scale business not everyone familiar with computerized system. Therefore, each components connected each other correctively. This has focused one of the design principles which is responsiveness. Each page should load correct time.

4.3.3 Simplicity

Simplicity is a design principle that suggests that designs should be as simple as possible, without sacrificing functionality or usability. This means that designers should strive to eliminate unnecessary elements from their designs, and focus on creating a clean, straightforward user experience. In this project I have added simple design with three clicks rule.

Chapter 5 Implementation

Implementation phase is transforming developed design into a workable system. This phase is the major phase, where all the system functionalities are actually coded and tested. When coding the system, comments are used on appropriate places in order to understand and modify the system in future. Codes are written by following standards and best practices, means well-structured and written in a way, it could be reused for future developments.

5.1. Implementation Environment

5.1.1 Hardware Requirements

- ❖ Processor - Intel(R) Core (TM) i5-2450M CPU @ 2.50GHz 2.50 GHz is required to develop.
- ❖ RAM – Minimum 4.00GB / 8.00GB capacity RAM is suitable to store entire data.
- ❖ Device - Any types of devices (Desktop, Laptop) can be used. Dell, Hp, Samsung, etc. (Any manufacturing devices are suitable to the successful implementation).
- ❖ Router - 4G-LTE wireless network router for laptop, network cable is needed for PC (Any manufacturing router is allowed)

5.1.2 Software Requirements

- ❖ Windows 10 Pro – 64bit
- ❖ Vs code
- ❖ MYSQL phpAdmin

5.2. Development Tools

5.2.1 VS code editor

Visual Studio Code (VS Code) is a popular code editor developed by Microsoft, known for its versatility, ease of use, and extensive ecosystem of extensions. Here are some advantages of using VS Code:

Cross-Platform Support: VS Code is available for Windows, macOS, and Linux, making it accessible to developers across different operating systems.

Versatility: VS Code supports a wide range of programming languages, frameworks, and technologies out of the box, including but not limited to JavaScript, Python, Java, C++, and HTML/CSS.

Intuitive User Interface: The user interface of VS Code is clean, modern, and highly customizable. It offers features such as split views, integrated terminal, and a powerful search functionality, enhancing productivity.

Rich Extensions Ecosystem: VS Code has a vast ecosystem of extensions contributed by the community, providing additional functionalities and support for various languages, debugging tools, version control systems, and more.

Integrated Development Environment (IDE) Features: Despite being lightweight, VS Code offers many IDE-like features such as syntax highlighting, code completion, linting, debugging, and Git integration, which streamline the development workflow.

Built-in Terminal: VS Code includes an integrated terminal that allows developers to run command-line tools and scripts directly within the editor, eliminating the need to switch between different applications.

Customization: VS Code can be customized extensively to suit individual preferences and workflow requirements. Users can install themes, adjust keyboard shortcuts, configure settings, and install extensions to tailor the editor to their liking.

Performance: VS Code is known for its fast startup time and low memory footprint, even when working with large codebases or multiple open files simultaneously.

5.2.2 PHPAdmin

phpMyAdmin is a popular web-based tool written in PHP for managing MySQL databases. It provides a graphical user interface (GUI) to perform various database administration tasks. Here are the main components of phpMyAdmin:

Database Management: phpMyAdmin allows users to manage MySQL databases, including creating, modifying, and dropping databases. Users can also browse the structure of databases to view tables, fields, indexes, and other database objects.

Table Operations: Users can perform operations on database tables, such as creating, altering, and dropping tables. phpMyAdmin provides a visual interface for designing table structures, defining primary keys, setting auto-increment fields, and managing table relationships.

Data Manipulation: phpMyAdmin enables users to manipulate data within database tables. Users can insert, update, delete, and search for records using SQL queries or a visual interface. They can also import data from external files or export data in various formats.

SQL Query Execution: phpMyAdmin includes a SQL query editor that allows users to execute custom SQL queries against the database. Users can write and execute SELECT, INSERT, UPDATE, DELETE, and other SQL statements to perform advanced database operations.

User Management: phpMyAdmin provides tools for managing MySQL user accounts and privileges. Users with appropriate permissions can create, modify, and delete user accounts, as well as grant or revoke privileges for accessing databases and performing specific operations.

Server Status Monitoring: phpMyAdmin displays information about the MySQL server, including server version, uptime, and system variables. Users can also view server processes, monitor server status, and analyze server logs for troubleshooting purposes.

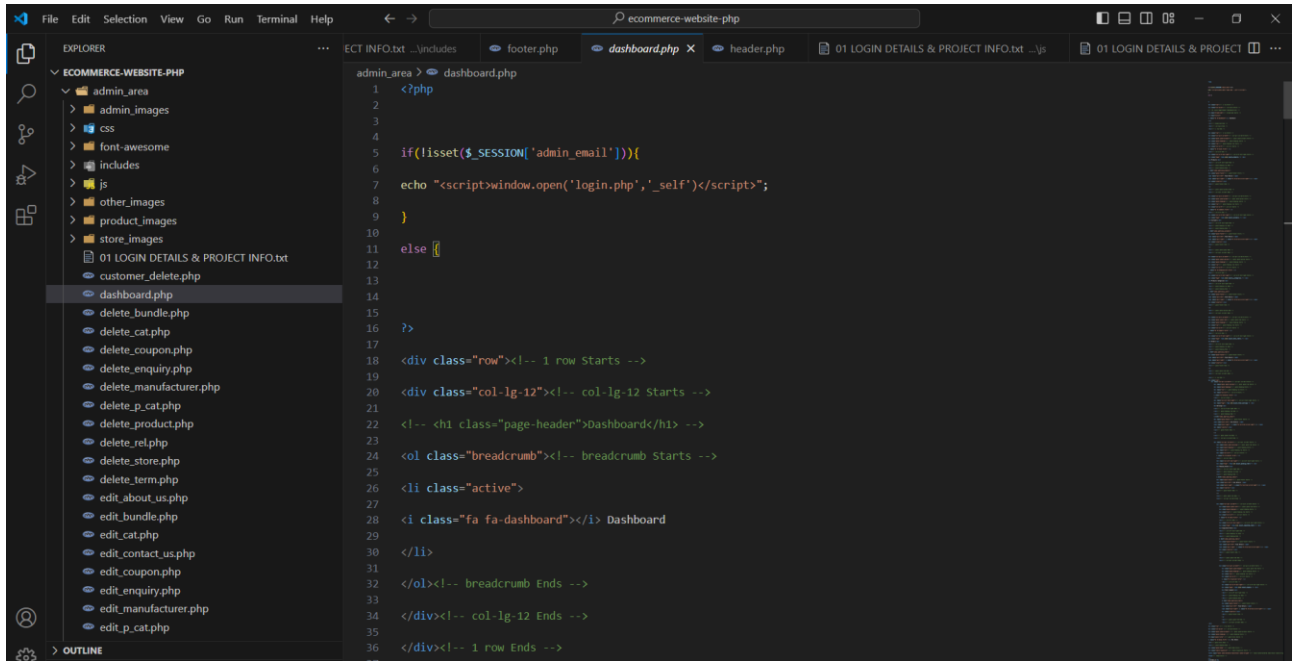
Database Export and Import: phpMyAdmin allows users to export database structures and data in various formats, such as SQL, CSV, XML, and JSON. Users can also import database backups or data files into the MySQL database using the import feature.

Configuration Options: phpMyAdmin offers a wide range of configuration options to customize the behavior and appearance of the application. Users can configure settings related to authentication, security, interface language, display options, and more.

Navigation Panel: phpMyAdmin includes a navigation panel that provides quick access to databases, tables, and other database objects. Users can easily navigate between different sections of the application using the navigation panel.

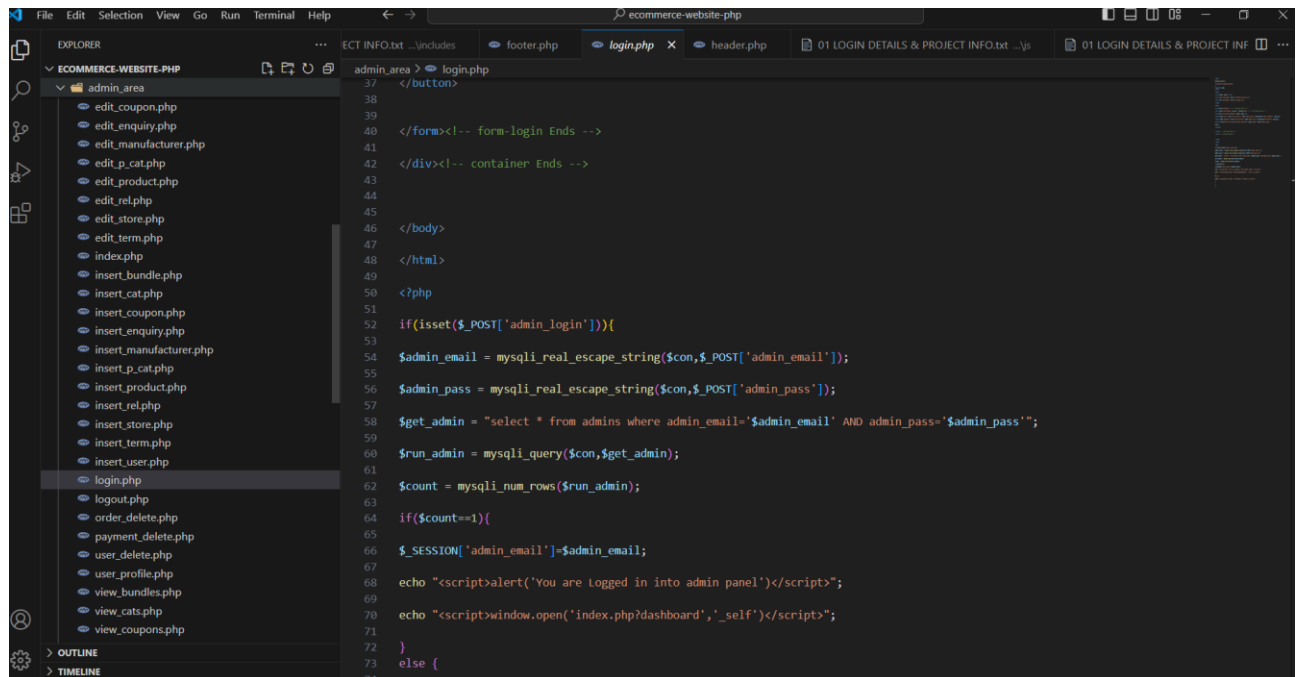
5.3 Major Code segments

Dashboard



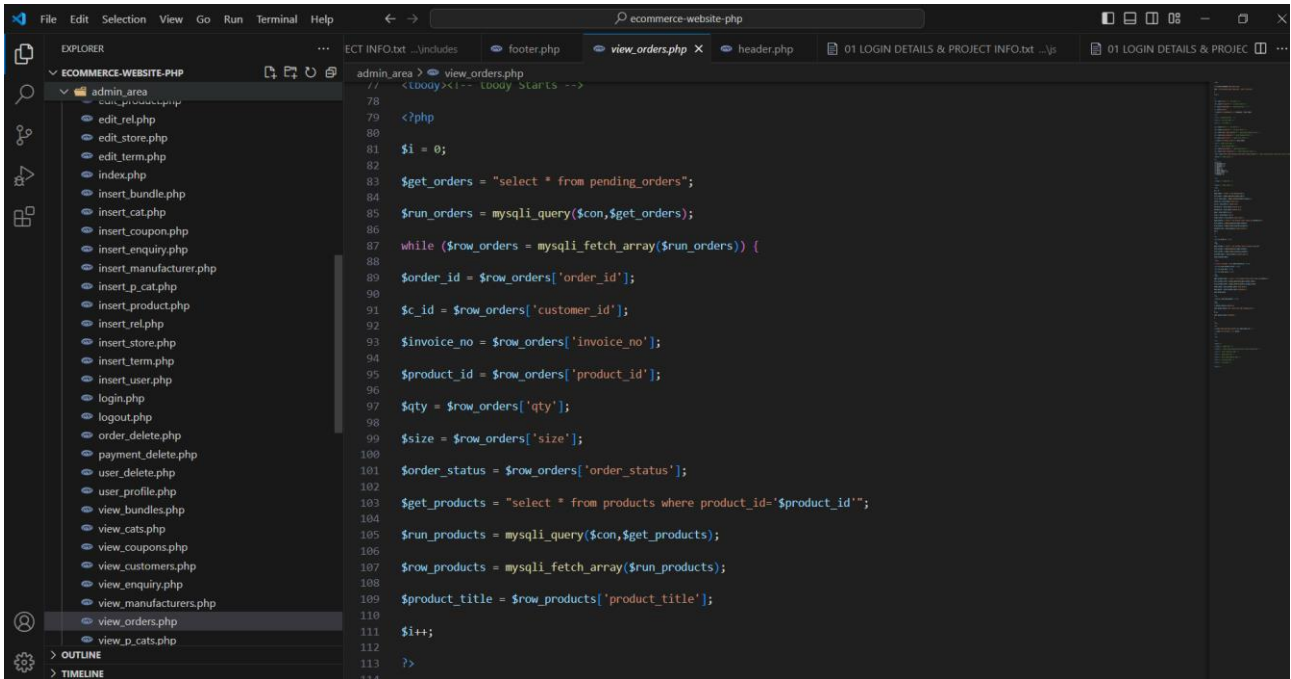
```
admin_area > dashboard.php
1  <?php
2
3
4
5  if(isset($_SESSION['admin_email'])){
6
7      echo "<script>window.open('login.php','_self')</script>";
8
9  }
10
11  else {
12
13
14
15
16  }
17
18  <div class="row"><!-- 1 row Starts -->
19
20  <div class="col-lg-12"><!-- col-lg-12 Starts -->
21
22  <!-- <h1 class="page-header">Dashboard</h1> -->
23
24  <ol class="breadcrumb"><!-- breadcrumb Starts -->
25
26  <li class="active">
27
28  <i class="fa fa-dashboard"></i> Dashboard
29
30  </li>
31
32  </ol><!-- breadcrumb Ends -->
33
34  </div><!-- col-lg-12 Ends -->
35
36  </div><!-- 1 row Ends -->
```

Login



```
admin_area > login.php
37  </button>
38
39
40  </form><!-- form-login Ends -->
41
42  </div><!-- container Ends -->
43
44
45
46  </body>
47
48  </html>
49
50  <?php
51
52  if(isset($_POST['admin_login'])){
53
54      $admin_email = mysqli_real_escape_string($con,$_POST['admin_email']);
55
56      $admin_pass = mysqli_real_escape_string($con,$_POST['admin_pass']);
57
58      $get_admin = "select * from admins where admin_email='$admin_email' AND admin_pass='$admin_pass'";
59
60      $run_admin = mysqli_query($con,$get_admin);
61
62      $count = mysqli_num_rows($run_admin);
63
64      if($count==1){
65
66          $_SESSION['admin_email']=$admin_email;
67
68          echo "<script>alert('You are logged in into admin panel')</script>";
69
70          echo "<script>window.open('index.php/dashboard','_self')</script>";
71
72      }
73      else {
74
```

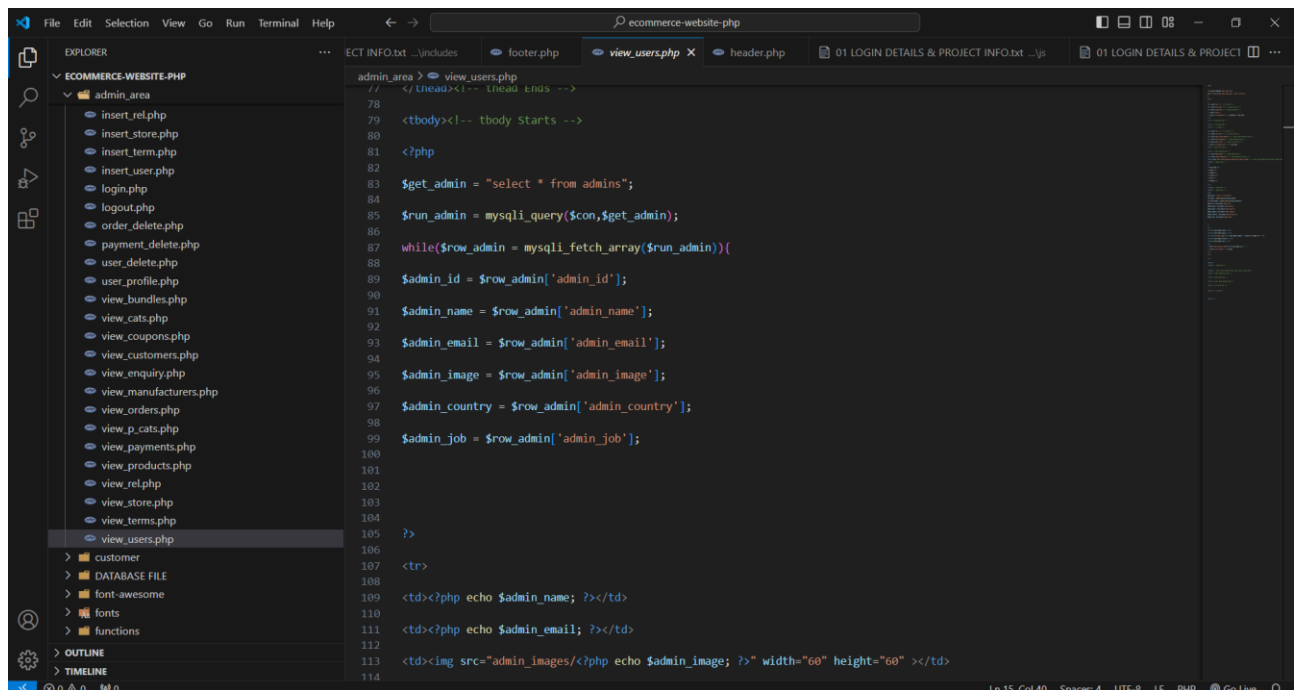
View Order



The screenshot shows a code editor with the file 'view_orders.php' open. The Explorer panel on the left lists various PHP files under the 'admin_area' directory. The main editor area displays the following PHP code:

```
// <!-- body Starts -->
//
<?php
78
79
80
81 $i = 0;
82
83 $get_orders = "select * from pending_orders";
84
85 $run_orders = mysqli_query($con,$get_orders);
86
87 while ($row_orders = mysqli_fetch_array($run_orders)) {
88
89 $order_id = $row_orders['order_id'];
90
91 $c_id = $row_orders['customer_id'];
92
93 $invoice_no = $row_orders['invoice_no'];
94
95 $product_id = $row_orders['product_id'];
96
97 $qty = $row_orders['qty'];
98
99 $size = $row_orders['size'];
100
101 $order_status = $row_orders['order_status'];
102
103 $get_products = "select * from products where product_id='$product_id'";
104
105 $run_products = mysqli_query($con,$get_products);
106
107 $row_products = mysqli_fetch_array($run_products);
108
109 $product_title = $row_products['product_title'];
110
111 $i++;
112
113 ?>
114
```

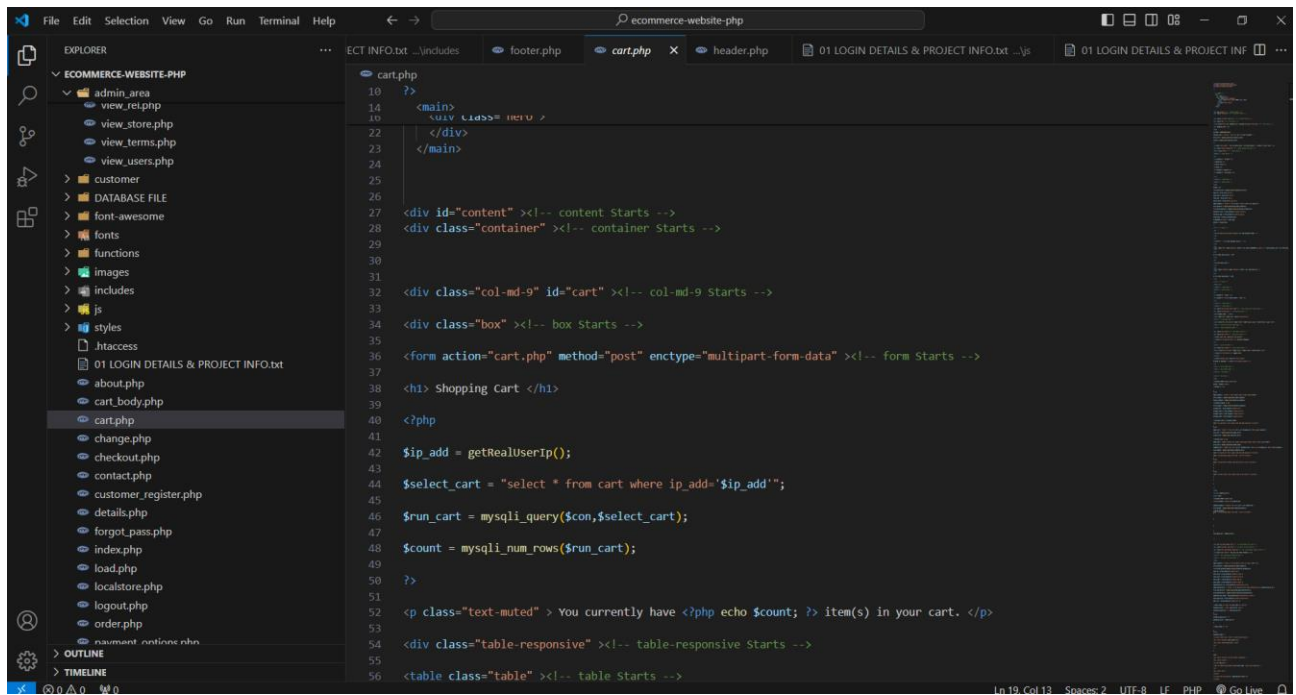
View User



The screenshot shows a code editor with the file 'view_users.php' open. The Explorer panel on the left lists various PHP files under the 'admin_area' directory. The main editor area displays the following PHP code:

```
// <!-- tbody Starts -->
//
<tbody><!-- tbody Starts -->
78
79
80
81 <?php
82
83 $get_admin = "select * from admins";
84
85 $run_admin = mysqli_query($con,$get_admin);
86
87 while($row_admin = mysqli_fetch_array($run_admin)){
88
89 $admin_id = $row_admin['admin_id'];
90
91 $admin_name = $row_admin['admin_name'];
92
93 $admin_email = $row_admin['admin_email'];
94
95 $admin_image = $row_admin['admin_image'];
96
97 $admin_country = $row_admin['admin_country'];
98
99 $admin_job = $row_admin['admin_job'];
100
101
102
103
104
105 ?>
106
107 <tr>
108
109 <td><?php echo $admin_name; ?></td>
110
111 <td><?php echo $admin_email; ?></td>
112
113 <td></td>
114
```


Cart



The screenshot shows a code editor with the following structure:

- EXPLORER:** A sidebar on the left showing the project structure. The 'ecommerce-website-php' folder is expanded, showing subfolders like 'admin_area', 'customer', 'DATABASE FILE', 'font-awesome', 'fonts', 'functions', 'images', 'includes', 'js', 'styles', and 'htaccess'. A file named '01 LOGIN DETAILS & PROJECT INFO.txt' is also visible. The 'cart.php' file is selected in the 'includes' folder.
- EDITOR:** The main area displays the code for 'cart.php'. The code includes HTML structure with Bootstrap classes and PHP logic for handling the shopping cart.

```
10  ?>
11  <!-- container Starts -->
12  <div class="container">
13  <div class="row">
14  <div class="col-md-9">
15  <div class="card">
16  <div class="card-body">
17  <div class="card-title">
18  <h3>Shopping Cart</h3>
19  </div>
20  <div class="card-text">
21  <div class="table">
22  <table>
23  <thead>
24  <tr>
25  <th>Item</th>
26  <th>Quantity</th>
27  <th>Total</th>
28  </tr>
29  </thead>
30  <tbody>
31  <tr>
32  <td>
33  <div class="row">
34  <div class="col">
35  <div class="text">
36  <div class="text">
37  <div class="text">
38  <div class="text">
39  <div class="text">
40  <div class="text">
41  <div class="text">
42  <div class="text">
43  <div class="text">
44  <div class="text">
45  <div class="text">
46  <div class="text">
47  <div class="text">
48  <div class="text">
49  <div class="text">
50  <div class="text">
51  <div class="text">
52  <div class="text">
53  <div class="text">
54  <div class="text">
55  <div class="text">
56  <div class="text">
```

5.4. Reused Components

While developing the system, most of tasks are completed by referring internet and using some reusable components to save time and resources. Few of them are listed below.

- PHP Image Module. – provides a class with the same name which is used to represent a PIL image. The module provides a number of functions to load image from files and to create images.
- OS Module- provides facility to establish the interaction between the user and the operating system. These is used to perform OS based tasks and get information. This OS comes under php standard utility modules.
- Database Module- This method relies on “phpAdmin” library to set up the php MYSQL Integration. The phpAdmin library provides PHP developers with easy access to ODBC (Open Database Connectivity) databases. Therefore, it can implement the method given in this section to set up Php ODBC integrations with any platforms such as MS Access, SQL server .

Chapter 6 Evaluation

Evaluation is a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, project or any other intervention or initiative to assess any aim, realizable concept/proposal, or any alternative, to help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed. The primary purpose of evaluation, in addition to gaining insight into prior or existing initiatives, is to enable reflection and assist in the identification of future change.

6.1 Software Testing

Software testing done throughout the system development. In other words, we can say it is a verification and validation process.

Verification is the process to make sure whether the units or modules or system as a whole work according to the conditions imposed at the start development.

Validation is the process to make sure whether the functionalities of the system satisfy against the requirements at the end of the development. Also, can say, to make sure the system is developed as customer requirements.

6.2 Techniques of Software Testing

6.2.1 Black Box Testing

Black box testing is a testing technique where the internal part (codes) of the system is ignored and only focuses on the output generated by the system against expected result. I have tested only front-end parts whether it is interconnected as expected. In here focus whether relevant validations text is displayed on the screen as needed. It doesn't expect back-end connectivity only result is enough. Some of back-end testing below;

REGISTER AT AVE

Register A New Account

Customer Name
Kubirthan Mayooraan

Customer Email
kubirthan7991@gmail.com

Customer Password
...| Very Weak

Confirm Password

Customer Country

wanted to test when I type on customer password with not strong password fields whether it displays very week message. Yes, it is working as expected.

6.2.2 White Box Testing

White box testing is technique where we consider the internal part (codes) of the system and test the output generated against the codes and expected results. White box testing done through correct path checking, data flow testing, loop testing, output validation. have done each and every method for back-end code testing. For OTP verification when enter email to change password, changed the code and checked that how output was because security validation is highly expected. Likewise, each module is tested.

6.3 Types of Testing

6.3.1 Unit Testing

Unit testing is the testing of an individual unit of a module which has implemented generating output as expected against given input. Each module has tested as soon as complete parallel unit. As the example in customer Management to check whether display the graphical visualization as charts when clicking on the image button. In order to get exact output had to tried many times each code lines by changing simple code unit.

6.3.1 Integration Testing

Integration testing is testing whether the group of integrated modules are functioning properly and works as expected or produce expected output. The purpose of this level of testing is to expose defects in the interaction between these software modules when they are integrated Integration Testing focuses on checking data communication amongst these modules. As the example in customer management dashboard, it should be connected with supplier management, product management and sales management. In order to do that has used OOP concepts and modules have interconnected.

6.3.2 Acceptance Testing

Acceptance testing is testing done by the client in order to make sure he is getting the product meets the requirements and works as the client expected. In this project has collected evaluation feedback.

6.4 Test Plan and Test Cases

Test plan is an important part for developing and also for completed systems. Test plan should have the capacity to test the completed functionalities of the overall system. By having a proper test plan and testing a system can identify errors on the system modules and can correct them earliest as possible. Implemented system was tested using different test cases. System testing started from testing units and at the end completely tested module wise, to make sure whether it can function according to the expectations.

A well pre-planned test case should have the ability to verify the relevant system module

functionality. Normally test case consist of description of test case, expected output and status. System divided into modules to have a clear view and to reduce the complexity of the system. Test cases were written for each module. Following has added the test plan. Test cases have added in appendix section.

Module Name	Function Name	Test Priority
System Log Module	Login attempt	High
	Forgot password	Medium
	Verify message	High
	Reset password	High
customer Management	Customer Name	High
	Customer Email	High
	Customer Password	High
	Confirm Password	Low
	Customer Country	High
	Customer City	Medium
	Customer Contact	High
	Customer Address	High
	Customer Image	Low

Customer account	My Orders	High
	Pay offline	High
	Edit account	Low
	Change Password	Low
	My Wishlist	High

	Delete account	Medium
	Logout	High
	Delete account	Medium
	Update account	High
	Save	Medium
Payment system	Invoice No	High
	Amount Sent	High
	Select Payment Mode	Low
	Transaction/Reference Id	High
	Omni Code	High
Admin panel	dashboard	High
	products	High
	Bundles	High
	Manufactures	High
	Stores	High
	View orders	High
	View Payments	High
	View customers	High

6.1 User Evaluation

User Evaluation is done by client on their working environment, in order to test the system functionalities whether it can satisfy the operational needs of the center. Testing was started by feeding the actual data to the developed system. User evaluation questionnaire was prepared and given to some target internal users and few external users and results has summarized. Internal users were the actual shop client and external users were two persons out of the shop.

First got evaluation from one of the owners of Jaffna new fashion. It has categorized under internal end user type. The response is as below.;

6.1 End user feedback.

<p>Write your name here: *</p> <p>M.S.M. Sinan</p>	<p>Were the functionalities readable? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<p>Is this your first time using such a system? *</p> <p><input type="radio"/> Yes</p> <p><input checked="" type="radio"/> No</p>	
<p>How easy is it to find information on here? *</p> <p><input checked="" type="radio"/> Very Easy</p> <p><input type="radio"/> Easy</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Difficult</p> <p><input type="radio"/> Very Difficult</p>	<p>Were the functions easy to learn? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Cannot exactly say</p>
<p>were you able to do task as you needed? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>	
<p>What about the functionalities implemented the system? *</p> <p><input checked="" type="radio"/> Very Good</p> <p><input type="radio"/> Good</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>	<p>How do you rate overall reaction? *</p> <p><input checked="" type="radio"/> Very Good</p> <p><input type="radio"/> Good</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>

<p>how the interface was ? *</p> <p><input type="radio"/> More interactive</p> <p><input checked="" type="radio"/> Interactive</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>	<p>Is it easy to use the functionalities? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<p>How easy navigate the pages? *</p> <p><input type="radio"/> Very Fast</p> <p><input checked="" type="radio"/> Fast</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>	<p>How do you rate the response time? *</p> <p><input type="radio"/> Very Good</p> <p><input checked="" type="radio"/> Good</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>
	<p>What about color scheme have used? *</p> <p><input type="radio"/> More Interact</p> <p><input checked="" type="radio"/> Interact</p>

According to evaluation the user can adapt to the system without much effort and agreed to that system has come up with requirements that requested.

At the second phase got the evaluation response from novice user which is called as external user. The response user as below.

<p>Write your name here: *</p> <p>Nisla</p>	<p>What about the functionalities implemented the system? *</p> <p><input checked="" type="radio"/> Very Good</p> <p><input type="radio"/> Good</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>
<p>Is this your first time using such a system? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>	<p>how the interface was ? *</p> <p><input type="radio"/> More interactive</p> <p><input type="radio"/> Interactive</p> <p><input checked="" type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>
<p>How easy is it to find information on here? *</p> <p><input type="radio"/> Very Easy</p> <p><input checked="" type="radio"/> Easy</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Difficult</p> <p><input type="radio"/> Very Difficult</p>	<p>How easy navigate the pages? *</p> <p><input type="radio"/> Very Fast</p> <p><input checked="" type="radio"/> Fast</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>
<p>were you able to do task as you needed? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>	

<p>Were the functionalities readable? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>	<p>Is it easy to use the functionalities? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<p>Were the functions easy to learn? *</p> <p><input checked="" type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Cannot exactly say</p>	<p>How do you rate the response time? *</p> <p><input type="radio"/> Very Good</p> <p><input checked="" type="radio"/> Good</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>
	<p>How do you rate overall reaction? *</p> <p><input checked="" type="radio"/> Very Good</p> <p><input type="radio"/> Good</p> <p><input type="radio"/> Average</p> <p><input type="radio"/> Poor</p> <p><input type="radio"/> Very Poor</p>

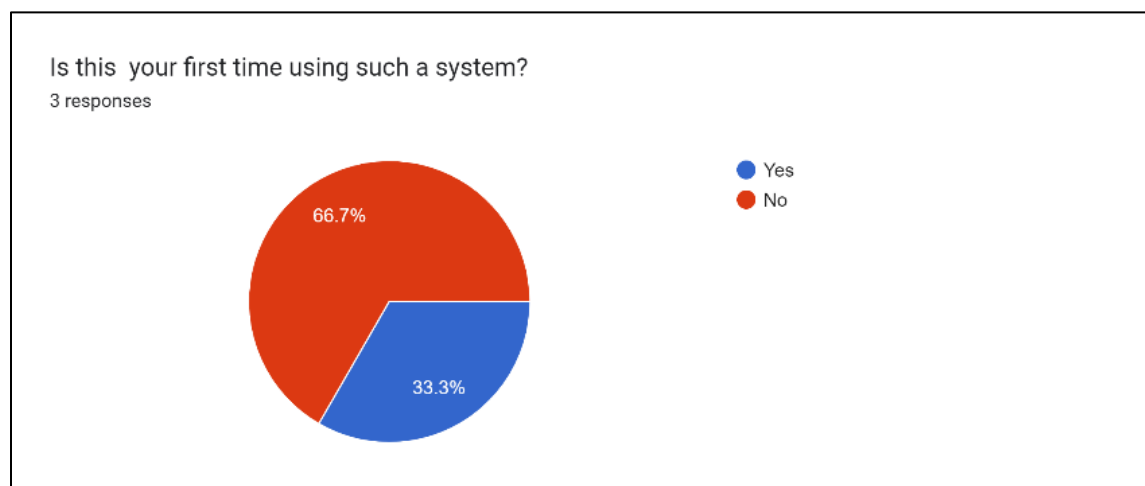
According to the statistics, it's clear that, most of the internal as well as external users can adapt and can continue working with the system, without or less effort.

6.3 End User Feedback

Qualitative and quantitative data from users on their likes, dislikes, impressions, and requests about the system is called as feedback. Collecting and making sense of user feedback is critical for businesses that wish to make improvements based on what their users need. Some of suggestions in the evaluation form are as follows.

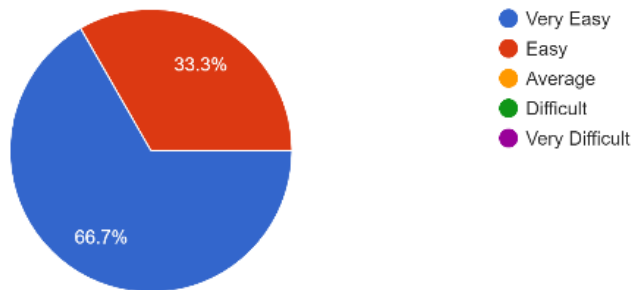
Smart and good work for academic project. can add advance functions for future work. overall good work
Good work.
Since this is self learning module appreciate overall work has done. In future should add advance feature. Overall satisfied up to now

shopping textile. Since this is initial phase of switch from manual system to automate system simple management system requirement has met in the system. Some of summarization of statistical view of end user feedback as follows.



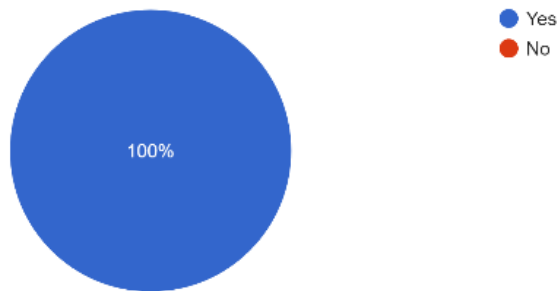
How easy is it to find information on here?

3 responses



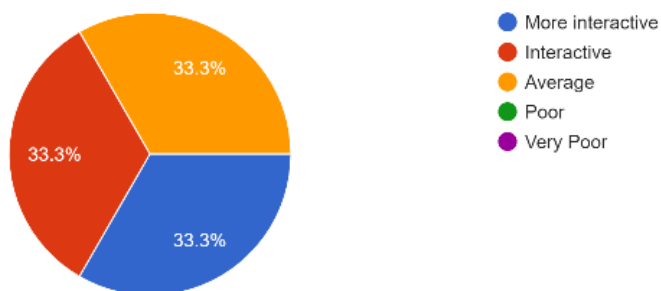
were you able to do task as you needed?

3 responses



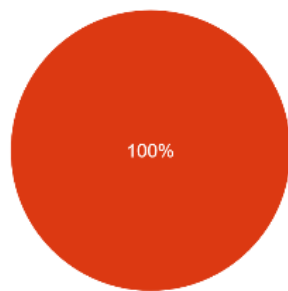
how the interface was ?

3 responses



How easy navigate the pages?

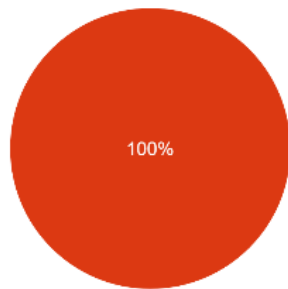
3 responses



- Very Fast
- Fast
- Average
- Poor
- Very Poor

What about color scheme have used?

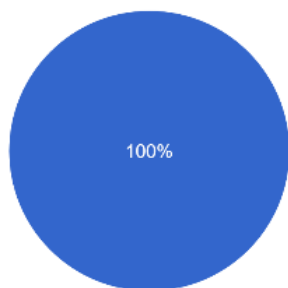
3 responses



- More Interact
- Interact
- Average
- Poor
- Very Poor

What about the functionalities implemented the system?

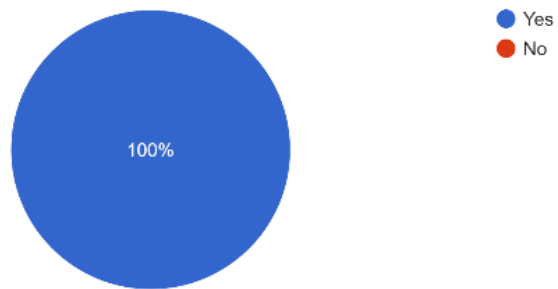
3 responses



- Very Good
- Good
- Average
- Poor
- Very Poor

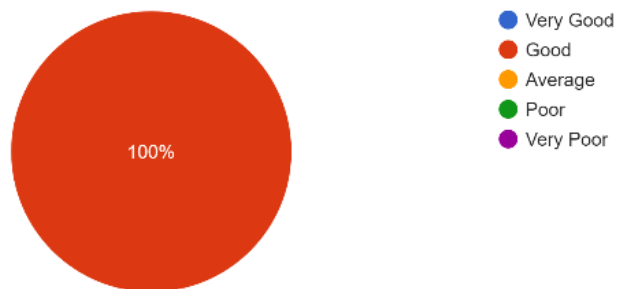
Is it easy to use the functionalities?

3 responses



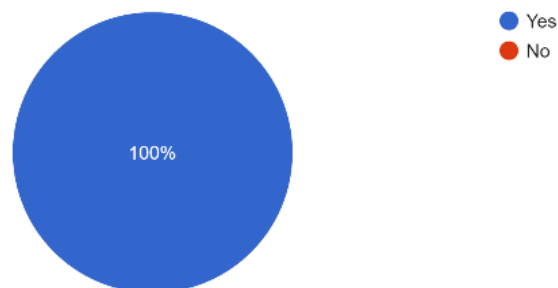
How do you rate the response time?

3 responses



Were the functionalities readable?

3 responses



Chapter 7 Conclusion

7.1 Conclusion

Textile shopping System for Jaffna new fashion (Pvt) Ltd is the individual project which focus Management System for the day-to-day operation. Their current processes are manual and mostly based on paperwork, which is inefficient and time consuming. So, there should be a proper mechanism to manage their day-to-day activities. Technology has a solution in terms of management system. The Textile Shop System can address this issue and increase the efficiency and the effectiveness of this process.

Textile shopping System helps to reduce common human errors, and speed up the normal operations in an efficient and effective ways. All day-to-day activities such as customer management, cart management, sales management have been automated through this system. Required functional and non-functional requirements are identified in the analysis phase and brought towards the implementation stage successfully by completing all agreed modules with client requirements.

7.2 Critical Evaluation

Firstly, a domain analysis was carried out in order to gain insight into the domain in question in Jaffna new fashion (Pvt) Ltd. Then feasibility study was carried out in order to test whether developing such system will be helpful than going for commercial or open-source solution. It was found that developing this custom system will be very useful and needed for the Jaffna new fashion due to small scalable business and cost through feasibility study.

Then a requirement gathering was a huge challenge and much effort was made to collect accurate and appropriate requirements and requirement analysis supported the accuracy. Although there are commonly used techniques like interviewing, questionnaire, observing the working environment are used commonly in this project was used interviewing as a discussion session as a google meet with Mr. Bala Kumaran (The owner of Jaffna new fashion Pvt Ltd) to collect, understand, validate and finalize the client requirements.

ER diagram, use case diagram, database design, class diagram and other appropriate diagrams and initial sketches of user interfaces were developed to understand and design the system.

Php programming language was chosen developing the system which is most familiar, have lots of supported technical details and huge community to support and also its flexibility compared to other languages. Object Oriented methodology, RUP modelling also used as best practices. SQL php admin was used for database designing with appropriate queries in order to make this development more realistic. Different pre-defined packages used in this system.

Testing was the final work in order to test, whether the system produces what we have expected. For testing the test cases are developed and tested parallel when implementing the system in order to avoid unexpected errors and results, which may lead to extra work.

7.3 Limitations

Due to academic project this system has some limitations. This shopping system has focused almost every function related management wise. In here not consists individual customer profile. Because this is a Textile shop, they wanted to manage only managerial task and they have few workers therefore having individual account is additional cost to maintain. This system has not integrated google map for locations. Because if integrate google map API have make payment for it.

7.4 Future Work

Proposed system had time constraints. Therefore, the functionalities of the system were developed in accordance with agreed client requirements. A few suggestions for future enhancement of the system are follows.

- Add Google map location when Add home address, company address it should display in the map as well.
- Develop innovative attendance management.
- When reduce the quantity of product automatically place order to supplier via the system.

7.5 Lesson Learnt

It was a great experience for me to practically apply the theories and lessons learned into a working computerized system, on this degree program. It helped me a lot on how to deal with real customers and how to coordinate and collaborate with them in order to make the system a success. An also;

- Proper planning should be there in order to manage the project and to reduce the risk of project failure.
- Searching for solutions to problems, helped a lot to learn and improve programming language.
- Finding and fixing errors on time is much important while developing, since a minor error which was postponed will lead unexpected major errors and propagate where it will take hours to debug it. Nearly took 1 week to complete automate email sending code correctly.
- Also, I have learned to write and present reports in an organized and standard way to interested parties who wish to rea.

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3. "Consumer Behavior in Online Shopping: A Literature Review" by Wang, Y. et al. (Journal of Electronic Commerce Research, 2016)

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1. "E-commerce 2025: Future E-commerce Trends and Challenges" by Johnson, M. (Springer, 2021)
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3. "The Psychology of Online Shopping and E-commerce" by Smith, A. (Routledge, 2017)

Industry Reports:

1. "Global E-commerce Market Report 2023" by Market Research Future
2. "State of Online Retail Performance Report" by Dynatrace
3. "E-commerce Trends and Insights Report" by Shopify

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1. "The Rise of Mobile Shopping: Trends and Statistics" by Statista
2. "E-commerce Trends to Watch in [Year]" by eMarketer

3. "Impact of COVID-19 on Online Shopping Behavior" by Nielsen

Appendices

Appendix A - SYSTEM DOCUMENTATION

System documentation serves as the technical specifications for the IS and how the objectives of the IS are accomplished.

Requirements	Description
Processor	Intel(R) Core (TM) i5-2450M CPU @ 2.50GHz 2.50 GHz is required to develop.
RAM	Minimum 8.00GB capacity RAM is suitable to store entire data
Device	Any types of devices (Desktop, Laptop) can be used. Dell, Hp, Samsung, etc. (Any manufacturing devices are suitable to the successful implementation)
Router	4G-LTE wireless network router for laptop, network cable is needed for PC (Any manufacturing router is allowed)
Storage	VS code Application Space

Appendix B - USER DOCUMENTATION

Home Page

The initial phase when open the application which is home page. It consists of company name as header and with the Jaffna new fashion which connects to the login page.

Login Page

Login page consists of username, password entry fields, login and then forgot password button. If username and password are correct connect to respective page or else, it displays the error message.

Login Page – Forgot Password

If forgot password through the system, it is allowed to change the password. To do that have to verify email.

After providing email and click on next button through the system send verification code and should verify in pop up message box. If it is correct only the user directs to change password page.

Manage Order – Customer’s Panel

The system lists out all the orders under the account section. Each order contains its own details. These details include product name, quantity, size, amount, and current status. By default, the order’s status is set to unpaid, unless he/she completes their own payment. Here, the customer has to verify the payment for finalizing the orders. For this, the user has to provide the invoice number, banking transaction code, amount, and much more. As soon as the user proceeds through this step, the system marks the order as paid status. Additionally, the user can view and manage all their wishlist under the Wishlist section. Besides, the user can view bank accounts, edit profiles, passwords, and remove their personal account.

Admin Panel

On the other hand, an admin has full control over the system. An admin has the right to manage the proper flow of the system. He/she can manage the number of categories by entering their names, photos, and selecting certain features. After the management of categories, now the admin has to manage manufacturers. While referring to a number of categories, it means product category and a shopping category. As mentioned earlier, the process for this section is the same as well. The admin has to enter the manufacturer name, photo, and choose an option whether to show it as a top manufacturer or not. And now, after setting up all these fields, the administrator can add product details too.

Product and Bundles Management

For adding product details, an admin has to enter the product’s name, URL, select manufacturer, category, product category, description, price, photo, keyword, and label. Under the description section, there are three sections. These are product descriptions, product features, and videos. And in terms of adding photos, the system allows inserting up to three product photos. In addition to it, an admin can add and manage bundle products. For this, the procedures are the same as above. After

setting up products and bundles, the system calculates the total number of each product sold with their publish dates too. Not only this, he/she can assign products to bundles relation by entering title and selecting a product with a bundle.

Coupon Management and Stores

In terms of this whole e-commerce website, a coupon code plays an important role for the customers around in order to provide them some discounted price. Just like that, this project contains coupon features for the customers. An admin has the right to manage each and every coupon. For inserting a coupon, an admin has to enter coupon name, coupon code, select product, price, and limit. The best thing out here is that the system lets us know about the number of people using the coupons. Also, the user can manage stores by providing various details. It includes store name, image, description, and URL. From this, the customers can check their store branches around them.

Orders, Customers, Payments and More

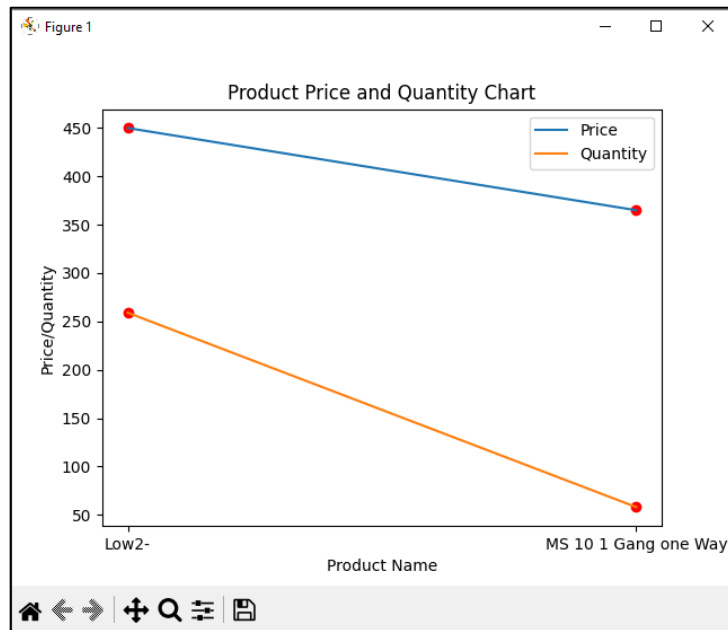
An E-Commerce website project is incomplete without the proper details of Orders, Customers, and Payments. Likewise, the admin can oversee all the orders performed by the customers around. It includes all the order details such as product name, image, quantity, size, price, date, and order status. The main responsibility of customers is to manage their order status. Meaning, the payment must be done in order to mark it as completed under the admin side. The admin can delete order records anytime. Similarly, the admin can view customer's records with their details and payments throughout the website with their exact amount and payment method. Besides, the admin can view total earnings and view the number of pending and completed orders.

Appendix C - MANAGEMENT REPORTS

Management reports are produced based on available records of each management. These reports are the most important part of the system, which summarizes the entire system data into meaningful and useful information, which can be mainly used for decision making regarding the progress and improvement of the shop. The admin is assigned to manage each report.

Product Management

To get management decisions based on product quantity and price using graphical representations are more important. It displays product availability through the system.



Appendix D - TEST RESULTS

Test Name: Login Authentication

Tested by- Kubirthan.

Test_id	Test Scenario	Test Case	Pre-Condition	Test Data	Expected Result	Actual Result	Status
TC_101	Verify Login	Enter valid username & password		Username-Nusla Password-nusla900	Direct to employee view page.	Direct to the Billing System Page.	Pass
TC_102		Enter valid username & invalid password		Username-Nusla Password-nusla800	Display error message. Not allow to connect next page	Receive error message	Pass
TC_103		Enter invalid username & valid password		Username-Nisl Password-nusla900	Display error message. Not allow to connect next page	Receive error message	Pass

TC_104		Enter invalid username & password		Username-Nisl Password-nusla100	Display error message. Not allow to connect next page	Receive error message	Pass
TC_105		Blank entry fields & click login button		Username, Password- keep blank	Display error message. Not allow to connect next page	Receive error message 'please enter both username and password '	Pass

Appendix E – CODE LISTING

Admin view

```
<?php

if(!isset($_SESSION['admin_email'])){

echo "<script>window.open('login.php','_self')</script>";

}

else {

?>

<div class="row"><!-- 1 row Starts -->

<div class="col-lg-12"><!-- col-lg-12 Starts -->

<!-- <h1 class="page-header">Dashboard</h1> -->

<ol class="breadcrumb"><!-- breadcrumb Starts -->

<li class="active">

<i class="fa fa-dashboard"></i> Dashboard

</li>
```

```

</ol><!-- breadcrumb Ends -->

</div><!-- col-lg-12 Ends -->

</div><!-- 1 row Ends -->

<div class="row"><!-- 2 row Starts -->

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

<div class="panel panel-primary"><!-- panel panel-primary Starts -->

<div class="panel-heading"><!-- panel-heading Starts -->

<div class="row"><!-- panel-heading row Starts -->

<div class="col-xs-3"><!-- col-xs-3 Starts -->

<i class="fa fa-tasks fa-5x"> </i>

</div><!-- col-xs-3 Ends -->

<div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts -->

<div class="huge"> <?php echo $count_products; ?> </div>

<div>Products</div>

</div><!-- col-xs-9 text-right Ends -->

</div><!-- panel-heading row Ends -->

</div><!-- panel-heading Ends -->

<a href="index.php?view_products">

<div class="panel-footer"><!-- panel-footer Starts -->

<span class="pull-left"> View Details </span>

<span class="pull-right"> <i class="fa fa-arrow-circle-right"></i> </span>

<div class="clearfix"></div>

</div><!-- panel-footer Ends -->

```

```

</a>

</div><!-- panel panel-primary Ends -->

</div><!-- col-lg-3 col-md-6 Ends -->

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

<div class="panel panel-green"><!-- panel panel-green Starts -->

<div class="panel-heading"><!-- panel-heading Starts -->

<div class="row"><!-- panel-heading row Starts -->

<div class="col-xs-3"><!-- col-xs-3 Starts -->

<i class="fa fa-comments fa-5x"> </i>

</div><!-- col-xs-3 Ends -->

<div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts -->

<div class="huge"> <?php echo $count_customers; ?> </div>

<div>Customers</div>

</div><!-- col-xs-9 text-right Ends -->

</div><!-- panel-heading row Ends -->

</div><!-- panel-heading Ends -->

<a href="index.php?view_customers">

<div class="panel-footer"><!-- panel-footer Starts -->

<span class="pull-left"> View Details </span>

<span class="pull-right"> <i class="fa fa-arrow-circle-right"></i> </span>

<div class="clearfix"></div>

</div><!-- panel-footer Ends -->

</a>

```

```

</div><!-- panel panel-green Ends -->

</div><!-- col-lg-3 col-md-6 Ends -->

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

<div class="panel panel-yellow"><!-- panel panel-yellow Starts -->

<div class="panel-heading"><!-- panel-heading Starts -->

<div class="row"><!-- panel-heading row Starts -->

<div class="col-xs-3"><!-- col-xs-3 Starts -->

<i class="fa fa-shopping-cart fa-5x"> </i>

</div><!-- col-xs-3 Ends -->

<div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts -->

<div class="huge"> <?php echo $count_p_categories; ?> </div>

<div>Products Categories</div>

</div><!-- col-xs-9 text-right Ends -->

</div><!-- panel-heading row Ends -->

</div><!-- panel-heading Ends -->

<a href="index.php?view_p_cats">

<div class="panel-footer"><!-- panel-footer Starts -->

<span class="pull-left"> View Details </span>

<span class="pull-right"> <i class="fa fa-arrow-circle-right"></i> </span>

<div class="clearfix"></div>

</div><!-- panel-footer Ends -->

</a>

</div><!-- panel panel-yellow Ends -->

```

```

</div><!-- col-lg-3 col-md-6 Ends -->

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

<div class="panel panel-red"><!-- panel panel-red Starts -->

<div class="panel-heading"><!-- panel-heading Starts -->

<div class="row"><!-- panel-heading row Starts -->

<div class="col-xs-3"><!-- col-xs-3 Starts -->

<i class="fa fa-support fa-5x"> </i>

</div><!-- col-xs-3 Ends -->

<div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts -->

<div class="huge"> <?php echo $count_total_orders; ?> </div>

<div>Orders</div>

</div><!-- col-xs-9 text-right Ends -->

</div><!-- panel-heading row Ends -->

</div><!-- panel-heading Ends -->

<a href="index.php?view_orders">

<div class="panel-footer"><!-- panel-footer Starts -->

<span class="pull-left"> View Details </span>

<span class="pull-right"> <i class="fa fa-arrow-circle-right"></i> </span>

<div class="clearfix"></div>

</div><!-- panel-footer Ends -->

</a>

</div><!-- panel panel-red Ends -->

</div><!-- col-lg-3 col-md-6 Ends -->

```

```

</div><!-- 2 row Ends -->

<div class="row">
    <div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

        <div class="panel panel-success"><!-- panel panel-red Starts -->

            <div class="panel-heading"><!-- panel-heading Starts -->

                <div class="row"><!-- panel-heading row Starts -->

                    <div class="col-xs-3"><!-- col-xs-3 Starts -->

                        <i class="fa fa-dollar fa-5x"> </i>

                    </div><!-- col-xs-3 Ends -->

                    <div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts -->

                        <div class="huge"> <?php echo $count_total_earnings ?> </div>

                        <div>Earnings</div>

                    </div><!-- col-xs-9 text-right Ends -->

                </div><!-- panel-heading row Ends -->

            </div><!-- panel-heading Ends -->

            <a href="index.php?view_orders">

                <div class="panel-footer"><!-- panel-footer Starts -->

                    <span class="pull-left"> View Details </span>

                    <span class="pull-right"> <i class="fa fa-arrow-circle-right"></i> </span>

                <div class="clearfix"></div>

            </div><!-- panel-footer Ends -->

        </a>

    </div><!-- panel panel-red Ends -->

```

```

</div><!-- col-lg-3 col-md-6 Ends -->

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

    <div class="panel panel-warning"><!-- panel panel-red Starts -->

        <div class="panel-heading"><!-- panel-heading Starts -->

            <div class="row"><!-- panel-heading row Starts -->

                <div class="col-xs-3"><!-- col-xs-3 Starts -->

                    <i class="fa fa-spinner fa-5x"> </i>

                </div><!-- col-xs-3 Ends -->

                <div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts -->

                    <div class="huge"> <?php echo $count_pending_orders ?> </div>

                    <div>Pending Orders</div>

                </div><!-- col-xs-9 text-right Ends -->

            </div><!-- panel-heading row Ends -->

        </div><!-- panel-heading Ends -->

        <a href="index.php?view_orders">

            <div class="panel-footer"><!-- panel-footer Starts -->

                <span class="pull-left"> View Details </span>

                <span class="pull-right"> <i class="fa fa-arrow-circle-right"></i>

            </span>

            <div class="clearfix"></div>

        </div><!-- panel-footer Ends -->

    </a>

</div><!-- panel panel-red Ends -->

</div><!-- col-lg-3 col-md-6 Ends -->

```

```

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

    <div class="panel panel-info"><!-- panel panel-red Starts -->

        <div class="panel-heading"><!-- panel-heading Starts -->

            <div class="row"><!-- panel-heading row Starts -->

                <div class="col-xs-3"><!-- col-xs-3 Starts -->

                    <i class="fa fa-check fa-5x"> </i>

                </div><!-- col-xs-3 Ends -->

                <div class="col-xs-9 text-right"><!-- col-xs-9 text-right Starts --
>

                    <div class="huge"> <?php echo $count_completed_orders ?> </div>

                    <div>Completed Orders</div>

                </div><!-- col-xs-9 text-right Ends -->

            </div><!-- panel-heading row Ends -->

        </div><!-- panel-heading Ends -->

        <a href="index.php?view_orders">

            <div class="panel-footer"><!-- panel-footer Starts -->

                <span class="pull-left"> View Details </span>

                <span class="pull-right"> <i class="fa fa-arrow-circle-right"></i>

</span>

                <div class="clearfix"></div>

            </div><!-- panel-footer Ends -->

        </a>

    </div><!-- panel panel-red Ends -->

```



```

</div><!-- col-lg-3 col-md-6 Ends -->

<div class="col-lg-3 col-md-6"><!-- col-lg-3 col-md-6 Starts -->

    <div class="panel panel-danger"><!-- panel panel-red Starts -->

        <div class="panel-heading"><!-- panel-heading Starts -->

            <div class="row"><!-- panel-heading row Starts -->

                <div class="col-xs-3"><!-- col-xs-3 Starts -->

                    <i class="fa fa-percent fa-5x"> </i>

                </div><!-- col-xs-3 Ends -->

                <div class="col-xs-9 text-right"><!-- col-xs-9 text-right
Starts -->

                    <div class="huge"> <?php echo $count_coupons; ?> </div>

                    <div>Total Coupons</div>

                </div><!-- col-xs-9 text-right Ends -->

            </div><!-- panel-heading row Ends -->

        </div><!-- panel-heading Ends -->

        <a href="index.php?view_orders">

            <div class="panel-footer"><!-- panel-footer Starts -->

                <span class="pull-left"> View Details </span>

                <span class="pull-right"> <i class="fa fa-arrow-circle-
right"></i> </span>

            <div class="clearfix"></div>

        </div><!-- panel-footer Ends -->

    </a>

</div><!-- panel panel-red Ends -->

```

```

        </div><!-- col-lg-3 col-md-6 Ends -->
</div>

<div class="row" ><!-- 3 row Starts -->

<div class="col-lg-12" ><!-- col-lg-8 Starts -->

<div class="panel panel-primary" ><!-- panel panel-primary Starts -->

<div class="panel-heading" ><!-- panel-heading Starts -->

<h3 class="panel-title" ><!-- panel-title Starts -->

<i class="fa fa-money fa-fw" ></i> New Orders

</h3><!-- panel-title Ends -->

</div><!-- panel-heading Ends -->

<div class="panel-body" ><!-- panel-body Starts -->

<div class="table-responsive" ><!-- table-responsive Starts -->

<table class="table table-bordered table-hover table-striped" ><!-- table table-
bordered table-hover table-striped Starts -->

<thead><!-- thead Starts -->

<tr>
<th>Order #</th>
<th>Customer</th>
<th>Invoice No</th>
<th>Product ID</th>
<th>Qty</th>
<th>Size</th>
<th>Status</th>

</tr>

</thead><!-- thead Ends -->

<tbody><!-- tbody Starts -->

<?php

```

```

$i = 0;

$get_order = "select * from pending_orders order by 1 DESC LIMIT 0,5";
$run_order = mysqli_query($con,$get_order);

while($row_order=mysqli_fetch_array($run_order)){

$order_id = $row_order['order_id'];

$c_id = $row_order['customer_id'];

$invoice_no = $row_order['invoice_no'];

$product_id = $row_order['product_id'];

$qty = $row_order['qty'];

$size = $row_order['size'];

$order_status = $row_order['order_status'];

$i++;

?>

<tr>

<td><?php echo $i; ?></td>

<td>
<?php

$get_customer = "select * from customers where customer_id='$c_id'";
$run_customer = mysqli_query($con,$get_customer);
$row_customer = mysqli_fetch_array($run_customer);
$customer_email = $row_customer['customer_email'];
echo $customer_email;
?>
</td>

<td><?php echo $invoice_no; ?></td>
<td><?php echo $product_id; ?></td>
<td><?php echo $qty; ?></td>
<td><?php echo $size; ?></td>
<td>

```

```

<?php
if($order_status=='pending'){

echo $order_status='pending';

}
else {

echo $order_status='Complete';

}

?>
</td>

</tr>

<?php } ?>

</tbody><!-- tbody Ends -->

</table><!-- table table-bordered table-hover table-striped Ends -->

</div><!-- table-responsive Ends -->

<div class="text-right" ><!-- text-right Starts -->

<a href="index.php?view_orders" >

View All Orders <i class="fa fa-arrow-circle-right" ></i>

</a>

</div><!-- text-right Ends -->

</div><!-- panel-body Ends -->

</div><!-- panel panel-primary Ends -->

</div><!-- col-lg-8 Ends -->

<div class="col-md-4"><!-- col-md-4 Starts -->

<div class="panel"><!-- panel Starts -->

```

```

</div><!-- panel Ends -->

</div><!-- col-md-4 Ends -->

</div><!-- 3 row Ends -->

<?php } ?>

```

Customer delete

```

<?php

if(!isset($_SESSION['admin_email'])){

echo "<script>window.open('login.php','_self')</script>";

}

else {

?>

<?php

if(isset($_GET['customer_delete'])){

$delete_id = $_GET['customer_delete'];

$delete_customer = "delete from customers where customer_id='$delete_id'";

$run_delete = mysqli_query($con,$delete_customer);

if($run_delete){

echo "<script>alert('Customer Has Been Deleted')</script>";

echo "<script>window.open('index.php?view_customers','_self')</script>";

```

```
}  
  
}  
  
?>  
  
<?php } ?>
```

Login

```
<?php  
  
session_start();  
  
include("includes/db.php");  
  
?>  
<!DOCTYPE HTML>  
<html>  
  
<head>  
  
<title>Admin Login</title>  
  
<link rel="stylesheet" href="css/bootstrap.min.css" >  
  
<link rel="stylesheet" href="css/login.css" >  
  
</head>  
  
<body>  
  
<div class="container" ><!-- container Starts -->  
  
<form class="form-login" action="" method="post" ><!-- form-login Starts -->  
  
<h2 class="form-login-heading" >Admin Login</h2>  
  
<input type="text" class="form-control" name="admin_email" placeholder="Email  
Address" required >  
  
<input type="password" class="form-control" name="admin_pass"  
placeholder="Password" required >
```

```

<button class="btn btn-lg btn-primary btn-block" type="submit" name="admin_login" >
Log in
</button>

</form><!-- form-login Ends -->

</div><!-- container Ends -->

</body>

</html>

<?php

if(isset($_POST['admin_login'])){

$admin_email = mysqli_real_escape_string($con,$_POST['admin_email']);

$admin_pass = mysqli_real_escape_string($con,$_POST['admin_pass']);

$get_admin = "select * from admins where admin_email='$admin_email' AND
admin_pass='$admin_pass'";

$run_admin = mysqli_query($con,$get_admin);

$count = mysqli_num_rows($run_admin);

if($count==1){

$_SESSION['admin_email']=$admin_email;

echo "<script>alert('You are Logged in into admin panel')</script>";

echo "<script>window.open('index.php?dashboard','_self')</script>";

}
else {

echo "<script>alert('Email or Password is Wrong')</script>";

}
}

```

```
}  
?>
```

Payment

```
<?php  
  
if(!isset($_SESSION['admin_email'])){  
    echo "<script>window.open('login.php','_self')</script>";  
}  
else {  
    ?>  
  
    <?php  
  
    if(isset($_GET['payment_delete'])){  
        $delete_id = $_GET['payment_delete'];  
        $delete_payment = "delete from payments where payment_id='$delete_id'";  
  
        $run_delete = mysqli_query($con,$delete_payment);  
  
        if($run_delete){  
            echo "<script>alert('Payment Has Been Deleted')</script>";  
            echo "<script>window.open('index.php?view_payments','_self')</script>";  
        }  
    }  
}
```



```
?>
```

```
<?php } ?>
```

Cart

```
<?php
```

```
session_start();
```

```
include("includes/db.php");
```

```
include("includes/header.php");
```

```
include("functions/functions.php");
```

```
include("includes/main.php");
```

```
?>
```

```
<!-- MAIN -->
```

```
<main>
```

```
<!-- HERO -->
```

```
<div class="nero">
```

```
<div class="nero__heading">
```

```
<span class="nero__bold">SHOP</span> Cart
```

```
</div>
```

```
<p class="nero__text">
```

```
</p>
```

```
</div>
```

```
</main>
```

```
<div id="content" ><!-- content Starts -->
```

```
<div class="container" ><!-- container Starts -->
```

```
<div class="col-md-9" id="cart" ><!-- col-md-9 Starts -->
```

```
<div class="box" ><!-- box Starts -->
```

```

<form action="cart.php" method="post" enctype="multipart-form-data" ><!-- form
Starts -->

<h1> Shopping Cart </h1>

<?php

$ip_add = getRealUserIp();

$select_cart = "select * from cart where ip_add='$ip_add'";

$run_cart = mysqli_query($con,$select_cart);

$count = mysqli_num_rows($run_cart);

?>

<p class="text-muted" > You currently have <?php echo $count; ?> item(s) in your
cart. </p>

<div class="table-responsive" ><!-- table-responsive Starts -->

<table class="table" ><!-- table Starts -->

<thead><!-- thead Starts -->

<tr>

<th colspan="2" >Product</th>

<th>Quantity</th>

<th>Unit Price</th>

<th>Size</th>

<th colspan="1">Delete</th>

<th colspan="2"> Sub Total </th>

</tr>

</thead><!-- thead Ends -->

<tbody><!-- tbody Starts -->

```

```

<?php

$total = 0;

while($row_cart = mysqli_fetch_array($run_cart)){

    $pro_id = $row_cart['p_id'];

    $pro_size = $row_cart['size'];

    $pro_qty = $row_cart['qty'];

    $only_price = $row_cart['p_price'];

    $get_products = "select * from products where product_id='$pro_id'";

    $run_products = mysqli_query($con,$get_products);

    while($row_products = mysqli_fetch_array($run_products)){

        $product_title = $row_products['product_title'];

        $product_img1 = $row_products['product_img1'];

        $sub_total = $only_price*$pro_qty;

        $_SESSION['pro_qty'] = $pro_qty;

        $total += $sub_total;

    ?>

    <tr><!-- tr Starts -->

    <td>

    </td>

    <td>

    <a href="#" > <?php echo $product_title; ?> </a>

    </td>

    <td>

```

```

<input type="text" name="quantity" value="<?php echo $_SESSION['pro_qty']; ?>"
data-product_id="<?php echo $pro_id; ?>" class="quantity form-control">
</td>

<td>

$<?php echo $only_price; ?>.00

</td>

<td>

<?php echo $pro_size; ?>

</td>

<td>
<input type="checkbox" name="remove[]" value="<?php echo $pro_id; ?>">
</td>

<td>

$<?php echo $sub_total; ?>.00

</td>

</tr><!-- tr Ends -->

<?php } } ?>

</tbody><!-- tbody Ends -->

<tfoot><!-- tfoot Starts -->

<tr>

<th colspan="5"> Total </th>

<th colspan="2"> $<?php echo $total; ?>.00 </th>

</tr>

</tfoot><!-- tfoot Ends -->

</table><!-- table Ends -->

<div class="form-inline pull-right"><!-- form-inline pull-right Starts -->

```

```

<div class="form-group"><!-- form-group Starts -->

<label>Coupon Code : </label>

<input type="text" name="code" class="form-control">

</div><!-- form-group Ends -->

<input class="btn btn-primary" type="submit" name="apply_coupon" value="Apply
Coupon Code" >

</div><!-- form-inline pull-right Ends -->

</div><!-- table-responsive Ends -->

<div class="box-footer"><!-- box-footer Starts -->

<div class="pull-left"><!-- pull-left Starts -->

<a href="index.php" class="btn btn-default">

<i class="fa fa-chevron-left"></i> Continue Shopping

</a>

</div><!-- pull-left Ends -->

<div class="pull-right"><!-- pull-right Starts -->

<button class="btn btn-info" type="submit" name="update" value="Update Cart">

<i class="fa fa-refresh"></i> Update Cart

</button>

<a href="checkout.php" class="btn btn-success">

Proceed to Checkout <i class="fa fa-chevron-right"></i>

</a>

</div><!-- pull-right Ends -->

</div><!-- box-footer Ends -->

```

```

</form><!-- form Ends -->

</div><!-- box Ends -->

<?php

if(isset($_POST['apply_coupon'])) {

$code = $_POST['code'];

if($code == "") {

}
else {

$get_coupons = "select * from coupons where coupon_code='$code'";

$run_coupons = mysqli_query($con,$get_coupons);

$check_coupons = mysqli_num_rows($run_coupons);

if($check_coupons == 1){

$row_coupons = mysqli_fetch_array($run_coupons);

$coupon_pro = $row_coupons['product_id'];

$coupon_price = $row_coupons['coupon_price'];

$coupon_limit = $row_coupons['coupon_limit'];

$coupon_used = $row_coupons['coupon_used'];

if($coupon_limit == $coupon_used){

echo "<script>alert('Your Coupon Code Has Been Expired')</script>";

}
else {

$get_cart = "select * from cart where p_id='$coupon_pro' AND ip_add='$ip_add'";

$run_cart = mysqli_query($con,$get_cart);

```

```

$check_cart = mysqli_num_rows($run_cart);

if($check_cart == 1){

$update_coupon = "update coupons set coupon_used=coupon_used+1 where
coupon_code='$code'";

$run_used = mysqli_query($con,$update_coupon);

$update_cart = "update cart set p_price='$coupon_price' where p_id='$coupon_pro'
AND ip_add='$ip_add'";

$run_update = mysqli_query($con,$update_cart);

echo "<script>alert('Your Coupon Code Has Been Applied')</script>";

echo "<script>window.open('cart.php','_self')</script>";

}
else{

echo "<script>alert('Product Does Not Exist In Cart')</script>";

}

}

}

else{

echo "<script> alert('Your Coupon Code Is Not Valid') </script>";

}

}

}

?>

<?php

function update_cart(){

```

```

global $con;

if(isset($_POST['update'])){

foreach($_POST['remove'] as $remove_id){

$delete_product = "delete from cart where p_id='$remove_id'";

$run_delete = mysqli_query($con,$delete_product);

if($run_delete){
echo "<script>window.open('cart.php','_self')</script>";
}

}

}

}

}

echo @$up_cart = update_cart();

?>

<div id="row same-height-row"><!-- row same-height-row Starts -->

<div class="col-md-3 col-sm-6"><!-- col-md-3 col-sm-6 Starts -->

<div class="box same-height headline"><!-- box same-height headline Starts -->

<h3 class="text-center"> You may like these Products </h3>

</div><!-- box same-height headline Ends -->

</div><!-- col-md-3 col-sm-6 Ends -->

```



```

<?php

$get_products = "select * from products order by rand() LIMIT 0,3";

$run_products = mysqli_query($con,$get_products);

while($row_products=mysqli_fetch_array($run_products)){

    $pro_id = $row_products['product_id'];

    $pro_title = $row_products['product_title'];

    $pro_price = $row_products['product_price'];

    $pro_img1 = $row_products['product_img1'];

    $pro_label = $row_products['product_label'];

    $manufacturer_id = $row_products['manufacturer_id'];

    $get_manufacturer = "select * from manufacturers where
manufacturer_id='$manufacturer_id'";

    $run_manufacturer = mysqli_query($db,$get_manufacturer);

    $row_manufacturer = mysqli_fetch_array($run_manufacturer);

    $manufacturer_name = $row_manufacturer['manufacturer_title'];

    $pro_psp_price = $row_products['product_psp_price'];

    $pro_url = $row_products['product_url'];

    if($pro_label == "Sale" or $pro_label == "Gift"){

        $product_price = "<del> $$pro_price </del>";

        $product_psp_price = "| $$pro_psp_price";

    }
    else{

        $product_psp_price = "";

        $product_price = "$$pro_price";
    }
}

```

```

}

if($pro_label == ""){

}
else{

$product_label = "

<a class='label sale' href='#' style='color:black;'>

<div class='thelabel'>$pro_label</div>

<div class='label-background'> </div>

</a>

";

}

echo "

<div class='col-md-3 col-sm-6 center-responsive' >

<div class='product' >

<a href='$pro_url' >

<img src='admin_area/product_images/$pro_img1' class='img-responsive' >

</a>

<div class='text' >

<center>

<p class='btn btn-warning'> $manufacturer_name </p>

</center>

<hr>

<h3><a href='$pro_url' >$pro_title</a></h3>

```

```

<p class='price' > $product_price $product_psp_price </p>

<p class='buttons' >

<a href='$pro_url' class='btn btn-default' >View Details</a>

<a href='$pro_url' class='btn btn-danger'>

<i class='fa fa-shopping-cart'></i> Add To Cart

</a>

</p>

</div>

$product_label

</div>

</div>

";

}

?>

</div><!-- row same-height-row Ends -->

</div><!-- col-md-9 Ends -->

<div class="col-md-3"><!-- col-md-3 Starts -->

<div class="box" id="order-summary"><!-- box Starts -->

<div class="box-header"><!-- box-header Starts -->

<h3>Order Summary</h3>

```

```

</div><!-- box-header Ends -->

<p class="text-muted">
Shipping and additional costs are calculated based on the values you have entered.
</p>

<div class="table-responsive"><!-- table-responsive Starts -->

<table class="table"><!-- table Starts -->

<tbody><!-- tbody Starts -->

<tr>

<td> Order Subtotal </td>

<th> $<?php echo $total; ?>.00 </th>

</tr>

<tr>

<td> Shipping and handling </td>

<th>$0.00</th>

</tr>

<tr>

<td>Tax</td>

<th>$0.00</th>

</tr>

<tr class="total">

<td>Total</td>

<th>$<?php echo $total; ?>.00</th>

</tr>

</tbody><!-- tbody Ends -->

```

```

</table><!-- table Ends -->

</div><!-- table-responsive Ends -->

</div><!-- box Ends -->

</div><!-- col-md-3 Ends -->

</div><!-- container Ends -->
</div><!-- content Ends -->

<?php

include("includes/footer.php");

?>

<script src="js/jquery.min.js"> </script>

<script src="js/bootstrap.min.js"></script>

<script>

$(document).ready(function(data){

$(document).on('keyup', '.quantity', function(){

var id = $(this).data("product_id");

var quantity = $(this).val();

if(quantity != ''){

$.ajax({

url:"change.php",

method:"POST",

data:{id:id, quantity:quantity},

success:function(data){

$("body").load('cart_body.php');

```

```

}

});

}

});

});

</script>

</body>
</html>

```

Shop

```

<?php

session_start();

include("includes/db.php");
include("includes/header.php");
include("functions/functions.php");
include("includes/main.php");

?>

<!-- MAIN -->
<main>
    <!-- HERO -->
    <div class="nero">
        <div class="nero__heading">
            <span class="nero__bold">shop</span> AT AVE
        </div>
        <p class="nero__text">
        </p>
    </div>

```

```

    </div>
</main>

<div id="content" ><!-- content Starts -->
<div class="container" ><!-- container Starts -->

<div class="col-md-12" ><!-- col-md-12 Starts -->

</div><!-- col-md-12 Ends -->

<div class="col-md-3"><!-- col-md-3 Starts -->

<?php include("includes/sidebar.php"); ?>

</div><!-- col-md-3 Ends -->

<div class="col-md-9" ><!-- col-md-9 Starts --->

<?php getProducts(); ?>

</div><!-- row Ends -->

<center><!-- center Starts -->

<ul class="pagination" ><!-- pagination Starts -->

<?php getPaginator(); ?>

</ul><!-- pagination Ends -->

</center><!-- center Ends -->

</div><!-- col-md-9 Ends --->

</div><!-- wait Ends -->

</div><!-- container Ends -->
</div><!-- content Ends -->

```

```

<?php

include("includes/footer.php");

?>

<script src="js/jquery.min.js"> </script>

<script src="js/bootstrap.min.js"></script>

<script>

$(document).ready(function(){

/// Hide And Show Code Starts ///

$('.nav-toggle').click(function(){

$(".panel-collapse,.collapse-data").slideToggle(700,function(){

if($(this).css('display')=='none'){

$(".hide-show").html('Show');

}

else{

$(".hide-show").html('Hide');

}

});

});

/// Hide And Show Code Ends ///

/// Search Filters code Starts ///

$(function(){

$.fn.extend({

filterTable: function(){

return this.each(function(){

```



```

$(this).on('keyup', function(){

var $this = $(this),

search = $this.val().toLowerCase(),

target = $this.attr('data-filters'),

handle = $(target),

rows = handle.find('li a');

if(search == '') {

rows.show();

} else {

rows.each(function(){

var $this = $(this);

$this.text().toLowerCase().indexOf(search) === -1 ? $this.hide() : $this.show();

});

}

});

});

});

});

});

});

});

});

$('[data-action="filter"][id="dev-table-filter"]').filterTable();

});

/// Search Filters code Ends ///

});

</script>

```

```

<script>

$(document).ready(function(){

    // getProducts Function Code Starts

    function getProducts(){

        // Manufacturers Code Starts

        var sPath = '';

var aInputs = $('li').find('.get_manufacturer');
var aKeys = Array();
var aValues = Array();

iKey = 0;

$.each(aInputs,function(key,oInput){

    if(oInput.checked){

aKeys[iKey] = oInput.value

    };

    iKey++;

});

if(aKeys.length>0){

var sPath = '';

for(var i = 0; i < aKeys.length; i++){

sPath = sPath + 'man[]=' + aKeys[i]+'&';

}

}

}

```

```

// Manufacturers Code ENDS

// Products Categories Code Starts

var aInputs = Array();

var aInputs = $('li').find('.get_p_cat');

var aKeys = Array();

var aValues = Array();

iKey = 0;

$.each(aInputs,function(key,oInput){

if(oInput.checked){

aKeys[iKey] = oInput.value

};

iKey++;

});

if(aKeys.length>0){

for(var i = 0; i < aKeys.length; i++){

sPath = sPath + 'p_cat[]=' + aKeys[i]+'&';

}

}

// Products Categories Code ENDS

    // Categories Code Starts

var aInputs = Array();

var aInputs = $('li').find('.get_cat');

var aKeys  = Array();

var aValues = Array();

```

```

iKey = 0;

$.each(aInputs,function(key,oInput){

    if(oInput.checked){

        aKeys[iKey] = oInput.value

    };

    iKey++;

});

if(aKeys.length>0){

    for(var i = 0; i < aKeys.length; i++){

        sPath = sPath + 'cat[]=' + aKeys[i]+'&';

    }

}

// Categories Code ENDS

// Loader Code Starts

$('#wait').html('');

// Loader Code ENDS

// ajax Code Starts

$.ajax({

url:"load.php",

method:"POST",

data: sPath+'sAction=getProducts',

success:function(data){

    $('#Products').html('');

```

```

    $('#Products').html(data);

    $("#wait").empty();

}

});

    $.ajax({
url:"load.php",
method:"POST",
data: sPath+'sAction=getPaginator',
success:function(data){
$('#.pagination').html('');
$('#.pagination').html(data);
}

    });

// ajax Code Ends

}

// getProducts Function Code Ends

$('.get_manufacturer').click(function(){

getProducts();

});

    $('.get_p_cat').click(function(){

getProducts();

});

    $('.get_cat').click(function(){

getProducts();

});

});

```

```
</script>

</body>

</html>
```

Checkout

```
<?php

session_start();

include("includes/db.php");
include("includes/header.php");
include("functions/functions.php");
include("includes/main.php");

?>

<!-- MAIN -->
<main>
    <!-- HERO -->
    <div class="nero">
        <div class="nero__heading">
            <span class="nero__bold">Checkout</span>
        </div>
        <p class="nero__text">
        </p>
    </div>
</main>

<div id="content" ><!-- content Starts -->
<div class="container" ><!-- container Starts -->

<div class="col-md-12" ><!-- col-md-12 Starts -->

<?php

if(!isset($_SESSION['customer_email'])){
```

```

include("customer/customer_login.php");

}else{

include("payment_options.php");

}

?>

</div><!-- col-md-12 Ends -->

</div><!-- container Ends -->
</div><!-- content Ends -->

<?php

include("includes/footer.php");

?>

<script src="js/jquery.min.js"> </script>

<script src="js/bootstrap.min.js"></script>

</body>
</html>

```

Order

```

<?php

include("includes/db.php");
include("includes/header.php");
include("functions/functions.php");

```

```

?>

<?php

if(isset($_GET['c_id'])){

$customer_id = $_GET['c_id'];

}

$ip_add = getRealUserIp();

$status = "pending";

$invoice_no = mt_rand();

$select_cart = "select * from cart where ip_add='$ip_add'";

$run_cart = mysqli_query($con,$select_cart);

while($row_cart = mysqli_fetch_array($run_cart)){

$pro_id = $row_cart['p_id'];

$pro_size = $row_cart['size'];

$pro_qty = $row_cart['qty'];

$sub_total = $row_cart['p_price']*$pro_qty;

$insert_customer_order = "insert into customer_orders
(customer_id,due_amount,invoice_no,qty,size,order_date,order_status) values
('$customer_id','$sub_total','$invoice_no','$pro_qty','$pro_size',NOW(),'$status')"
;

$run_customer_order = mysqli_query($con,$insert_customer_order);

$insert_pending_order = "insert into pending_orders
(customer_id,invoice_no,product_id,qty,size,order_status) values
('$customer_id','$invoice_no','$pro_id','$pro_qty','$pro_size','$status)";

$run_pending_order = mysqli_query($con,$insert_pending_order);

$delete_cart = "delete from cart where ip_add='$ip_add'";

```



```

$run_delete = mysqli_query($con,$delete_cart);

echo "<script>alert('Your order has been submitted,Thanks ')</script>";

echo "<script>window.open('customer/my_account.php?my_orders','_self')</script>";

}

?>

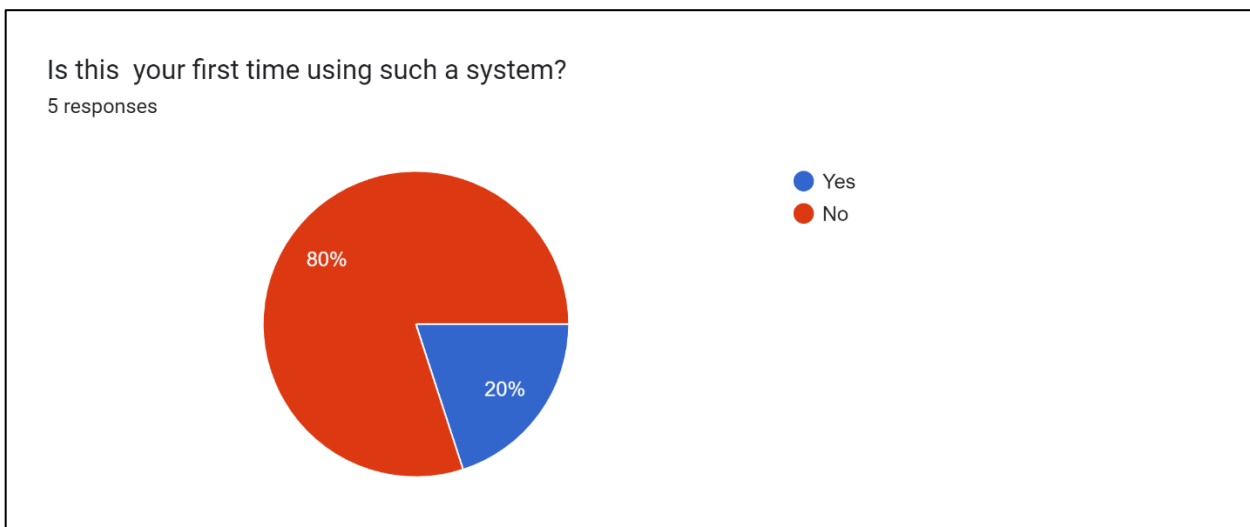
```

Appendix F – SYSTEM EVALUATION FORM

Write your name here:

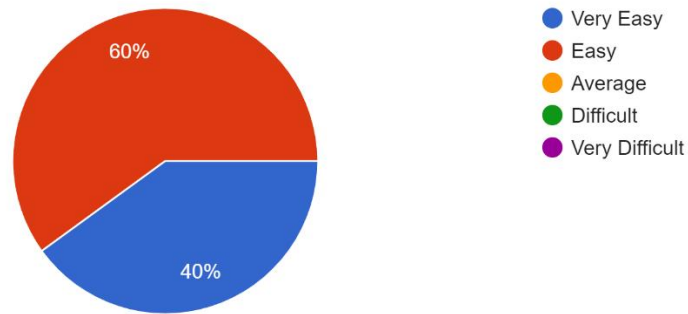
5 responses

M.S.M. Sinan
Nisla
Sinan-HR Dep- New Silver Line Traders
Prasansani
Naveen



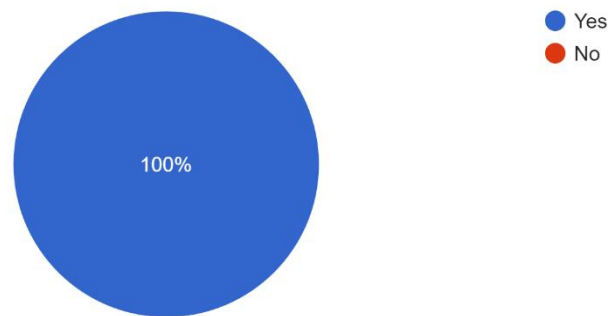
How easy is it to find information on here?

5 responses



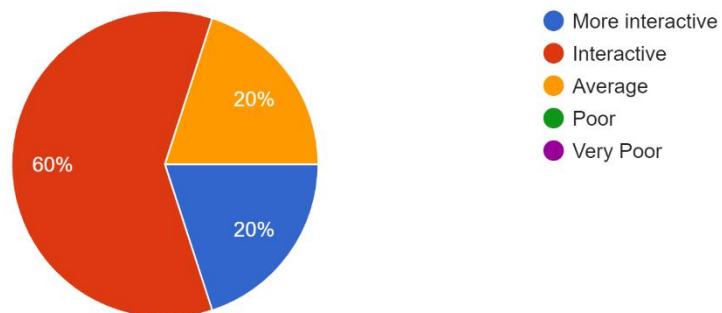
were you able to do task as you needed?

5 responses



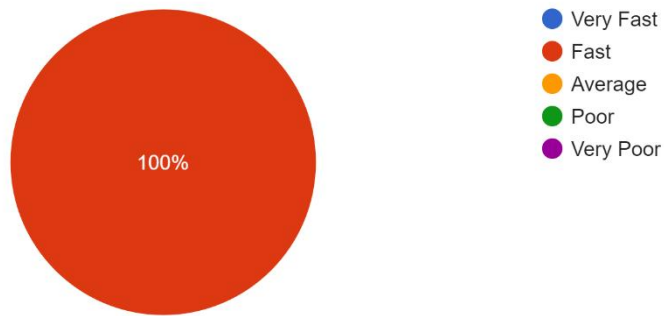
how the interface was ?

5 responses



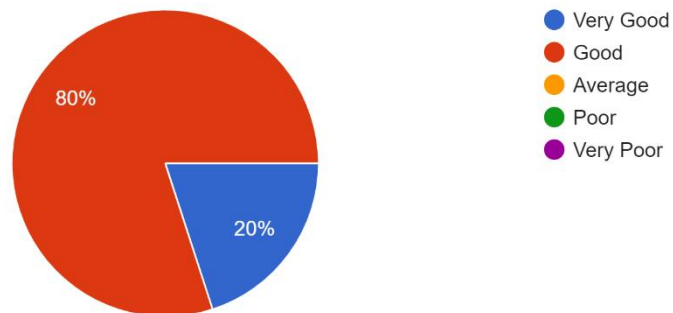
How easy navigate the pages?

5 responses



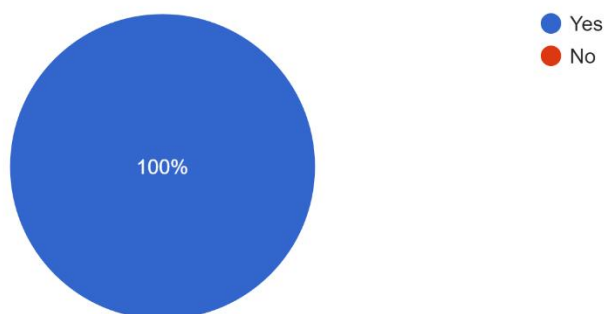
How do you rate the response time?

5 responses



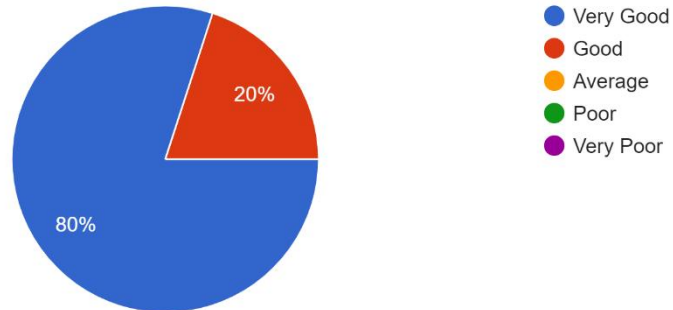
Were the functionalities readable?

5 responses



How do you rate overall reaction?

5 responses



Were the functions easy to learn?

5 responses



Do you like to add any comments?

5 responses

Smart and good work for academic project. can add advance functions for future work. overall good work

Good work.

Since this is self learning module appreciate overall work has done. In future should add advance feature. Overall satisfied up to now

I think its overall good. But its good to add some more functions in future development.

Overall process is perfect!!!

GLOSSARY

DBMS- Stands for Database Management System

IDE- Stands for Integrated Development Environment helps to integrate, debug and compile the code.

RUP – Stands for Rational Unified Process. Iterative Software Development Methodology.
Developed by Rational Software Co-operation.