Tribhuvan University

Faculty of Humanities and Social Science

T-SHIRT SHOPPING SYSTEM

A PROJECT REPORT

Submitted to

Tribhuvan University

Vedas College

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

Submitted by

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Feb, 2025

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Vedas College

SUPERVISOR'S RECOMMENDATION

I hereby recommend that this project prepared under my supervision by Sujal Chhetri Karki, Rojan Khadka entitled "**T-SHIRT SHOPPING SYSTEM"** in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the final evaluation.

_____

Mr. Harendra Raj Bista

Project Supervisor

Department Of Computer Application

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LETTER OF APPROVAL

This is to certify that this project prepared by Sujal Chhetri Karki, Rojan Khadka entitled "**T-shirt Shopping System**" in partial fulfillment of the requirements for the degree of Bachelor in Computer Applications has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

_____ Harendra Raj Bista Supervisor Vedas College, Lalitpur	_____ Harendra Raj Bista Program Coordinator-BCA Vedas College, Lalitpur
_____ Internal Examiner	_____ External Examiner

ACKNOWLEDGEMENT

In this accomplishment, we would like to express our special gratitude to all our teachers and most importantly our supervisor Mr. Harendra Raj Bista, without his guidance and feedback it wouldn't have been possible to work on this project. We also extend our thanks to Vedas College for their support and encouragement throughout this endeavor.

In addition, we extend our sincere thanks to our friends, seniors and guardians for their direct/indirect contribution in this project and helping us to bring this project in existence. We will be always looking forward to hearing the comments. Suggestions for further improvement will be highly solicited

Sincerely,
Sujal Chhetri Karki
Rojan Khadka

ABSTRACT

Introducing the T-Shirt Shopping System, a dynamic and adaptable solution for effortless and enjoyable t-shirt shopping. This user-centric website ensures users find their perfect t-shirt with ease, featuring an advanced search and filtering system that allows browsing by properties of clothes. With a seamless blend of online convenience and intuitive functionality, the system continuously evolves to cater to diverse user needs, providing an optimized shopping experience from selection to checkout. Developed using the agile methodology, the project embraces an iterative and collaborative approach, ensuring flexibility and responsiveness to user feedback at every stage. By continuously refining features through regular testing and user involvement, the T-Shirt Shopping System maintains its focus on delivering a high-performance, secure, and user-friendly platform. With an emphasis on user convenience and a wide range of customization options, the T-Shirt Shopping System empowers users to explore the latest trends, create personalized designs, and make informed purchase decisions. Whether searching for a single statement tee or bulk ordering for an event, the website provides real-time updates on inventory and delivery schedules to keep users informed and satisfied. In conclusion, the T-Shirt Shopping System is an ever-evolving solution for t-shirt enthusiasts, offering a seamless, personalized, and enjoyable shopping experience. Its agile development approach ensures the system stays aligned with user needs, delivering high-quality designs and continuously improving the shopping journey.

Keywords: **T-Shirt Shopping System, effortless shopping experience, user-centric, advanced filtering system, Quality based platform.**

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ABBREVIATIONS

DFD	A data flow diagram
PK	Primary Key
FK	Foreign Key
GUI	Graphical User Interface
HTML	Hyper Text Markup Language
E-R	Entity Relationship
ID	Identification
JS	Java Script
LED	Light-emitting diode
UI	User Interface
UX	User Experience

CHAPTER 1: INTRODUCTION

1.1 Introduction

Introducing the T-Shirt Shopping System: Revolutionizing Online Apparel Shopping In today's fast-paced digital world, finding the perfect t-shirt that matches your style, size, and preferences can often feel overwhelming. Recognizing this common challenge, we present the T-Shirt Shopping System sophisticated yet user-friendly solution designed to revolutionize how you shop for t-shirts.

At its core, our system serves as a virtual companion dedicated to ensuring a seamless and enjoyable shopping experience. The primary feature revolves around a highly intuitive search and recommendation engine tailored to individual preferences.

With a seamless blend of online and offline functionality, the T-Shirt Shopping System caters to diverse user needs. While internet access is required for browsing and ordering t-shirts, users can explore previously saved preferences and recommendations offline, ensuring that their shopping experience remains uninterrupted even in low-connectivity environments.

Additionally, we've engineered the T-Shirt Shopping System to include advanced filtering options for clothing types, empowering users to find the perfect match effortlessly.

Developed using the agile methodology, the project embraces a flexible and iterative approach, ensuring continuous collaboration, frequent feedback, and adaptability at every stage. From gathering requirements to design, implementation, testing, and deployment, each phase is broken into manageable sprints, allowing for regular reassessment and refinement based on user feedback and evolving needs.

In conclusion, the T-Shirt Shopping System represents a significant advancement in online shopping technology. By combining intuitive design, advanced search features, and a user-friendly interface, our platform makes shopping for t-shirts a delightful and stress-free experience.

1.2 Problem statement

Despite the central role clothing plays in expressing individuality and fulfilling daily needs, individuals often face challenges in finding the perfect apparel that aligns with their style, size, and budget. These difficulties can result in suboptimal shopping experiences, wasted time, and dissatisfaction with purchases. Factors contributing to these challenges include an overwhelming variety of options, lack of tailored recommendations, and limited access to intuitive shopping platforms. Existing e-commerce solutions may lack user-friendly interfaces, fail to provide personalized suggestions, or depend on constant internet connectivity, limiting their accessibility and appeal. Thus, there is a pressing need for a sophisticated yet user-friendly T-Shirt Shopping System that addresses these challenges by offering personalized recommendations, seamless online and advanced search features. This system should empower users to discover and purchase the perfect t-shirts effortlessly, enhancing their shopping experience and satisfaction while promoting accessibility and inclusivity.

1.3 Objective

The goal of the project is to design and implement a unique and reliable T-Shirt Shopping System. To achieve this goal, the following objectives are set for the project:

- To provide users to browse t-shirts based on size, color, design, and price.
- To offer options for personalized t-shirt designs to enhance the shopping experience.

1.4 Scope and Limitation

Scope: The scope of the T-Shirt Shopping System project includes developing a user-friendly online platform for browsing and purchasing. The platform aims to enhance user satisfaction by providing easy navigation, tailored recommendations, and a smooth checkout process, ultimately making t-shirt shopping efficient and enjoyable for all users.

Limitations: Limitations of the T-Shirt Shopping System project include potential device compatibility issues, varying user preferences in t-shirt designs and sizes, and the inability to guarantee fit or comfort without trying on the product. There may also be challenges with shipping delays, especially during high-demand periods, and ensuring consistent user experience across different internet speeds or devices.

1.5 Report organization

Report Organization for the T-shirt Shopping System project:

Chapter 1: Introduction This chapter introduces the T-Shirt Shopping System, highlighting the need for an improved online shopping experience. It covers the challenges of current platforms and outlines the project's objectives, scope, and limitations.

Chapter 2: Existing System Analysis This section reviews current T-shirt shopping platforms, identifying gaps in personalization, search functionality, and customer experience that the T-Shirt Shopping System aims to address.

Chapter 3: System Analysis and Design This chapter discusses the design and feasibility of the T-Shirt Shopping System, including database design, user interface, and process flow to ensure a seamless shopping experience.

Chapter 4: Tools and Implementation This chapter discusses the design and feasibility of the T-Shirt Shopping System, including database design, user interface, and process flow to ensure a seamless shopping experience.

Chapter 5: Conclusion and Recommendations. The final chapter summarizes the project's achievements and suggests future improvements, such as enhanced personalization and user feedback integration.

CHAPTER 2: BACKGROUND STUDY AND LITERATURE REVIEW

2.1 Background Study

A T-shirt shopping system is an essential tool for those seeking a seamless and enjoyable online shopping experience [1]. It includes features designed to simplify browsing, selecting, and purchasing t-shirts while catering to diverse user preferences [2]. Central to its functionality is the ability to filter products by size, color, design, and price, along with offering personalized recommendations based on user behavior [3]. To develop a robust background study for a T-shirt shopping system, it's crucial to explore several key aspects [4]. First, understanding the target audience is essential, including demographic and psychographic traits like age, fashion preferences, and shopping habits [5]. This helps tailor the system's features to meet user needs effectively [6]. Reviewing current literature on e-commerce trends provides insights into common challenges faced by online apparel shoppers, such as difficulty finding the right size or style and slow website navigation [7]. Analyzing existing platforms reveals opportunities for improvement and differentiation, helping identify features that can set the system apart [8]. Gathering direct feedback from users through surveys and interviews uncovers pain points and preferences related to product selection, customization options, and payment processes [9]. Consulting industry professionals, such as fashion designers and e-commerce specialists, offers valuable insights into market expectations and trends [10]. Understanding legal and ethical considerations, such as data privacy and secure payment processing, ensures compliance with regulations and protects user information [11]. Assessing the technological feasibility of integrating features like real-time inventory updates, secure transactions, and user-friendly interfaces is crucial [12]. Incorporating behavioral science principles can enhance user engagement, encouraging frequent visits and repeat purchases [13]. Finally, conducting a market analysis helps identify competitors and devise a competitive strategy to differentiate the system in the marketplace [14]. By considering these factors, the background study establishes a solid foundation for developing a T-shirt shopping system that offers a seamless, enjoyable experience for users while addressing the challenges of online apparel shopping [15].

2.2 Literature Review

Many e-commerce platforms have developed innovative solutions to enhance the online shopping experience. For instance, T-Shirt Hub [1] is an online store that offers personalized t-shirt designs for customers. It operates on web and mobile platforms, providing user-friendly interfaces for customizing t-shirt designs and setting alerts for restocks or limited-time offers. [2] Some platforms integrate augmented reality (AR) or virtual fitting room technologies to ensure customers get the right fit and style. [3] A design recognition system has been proposed to help users visualize how designs will look on different t-shirt types, utilizing techniques like pattern recognition, color matching, and dynamic resizing. [4] Patel S introduced Shirt Reminder Pro, a free tool allowing users to set up to 15 design reminders. [5] Zhang et al developed TeeTrends, a mobile app that prevents mismatches in design or size selection by using customer preference data and recommendation algorithms. [6] This method boasts over 97% accuracy in predicting user preferences and helps users make informed purchase decisions. However, there are several gaps in existing shopping platforms. For example, many do not offer category-specific filtering, lack optional reminders, and miss appointment scheduling for custom design consultations. Some platforms have fixed design templates that limit user creativity. Automated suggestions may recommend designs without fully considering user preferences, leading to dissatisfaction. Additionally, certain platforms require specialized apps or hardware to access advanced features. A redesigned t-shirt shopping platform addressing these issues could significantly improve user satisfaction by offering free, intuitive, and customizable features for shoppers of all demographics.

CHAPTER 3 SYSTEM ANALYSIS AND DESIGN

3.1. System Analysis

System Analysis is a process of collecting and interpreting facts, identifying the problem, and decomposing a system into its components. It is conducted to study the system or its parts so that we can identify its objectives. It is a problem-solving technique that improves the system and ensures that all components work efficiently to accomplish their purpose.

3.1.1. Requirement Analysis

Requirement analysis is an early stage in program design, involving the study of existing systems, data collection, and identification of hardware and software needs. After conducting a thorough requirement analysis, we develop the system based on the collected requirements to ensure functionality.

i. Functional Requirements

- The administration should be able to input and update product information on the website.
- Users should be able to browse and purchase T-shirts as per their preferences.
- Users should be able to register and login.
- Users can filter out the products.
- Update pricing and offer discounts or promotions.
- Receive bill after approve from admin.
- Save the customer records.

Use case

Use Case Diagram is a diagrammatic representation that helps the user to represent the interaction of user with the system. The use case diagram consists of use cases and actors and shows the interaction between them.

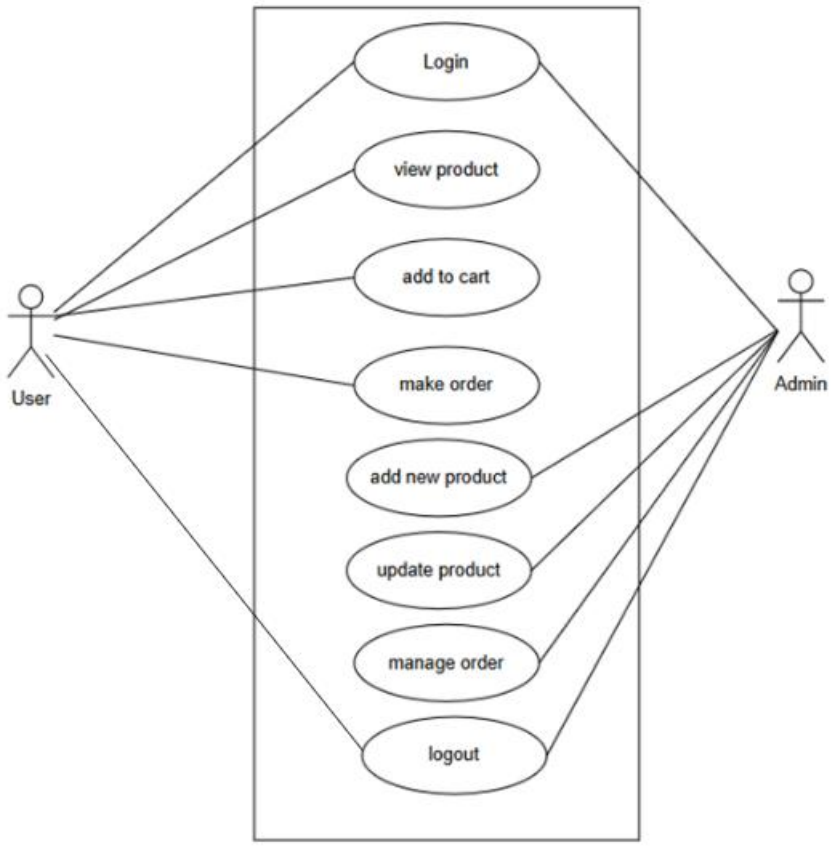


Figure 3.1: Use Case of T-shirt Shopping System

- Manage User Account: This allows users to register for an account, login, and edit their profile information.
- Manages T-shirt name, quantity: This functionality allows users to enter details about their interest on time they need to take it.
- Product Management (Administration Panel): Manage products: This allows administrators to input, update, and delete product information such as t-shirt name, description, price, size, color, and stock availability.
- User Browsing and Purchase: View product details: Product pages display images, descriptions, price, and fixed size.

ii. Non-functional Requirement

- Availability: The website should have 99.9% uptime to ensure constant availability for users.
- Security: User data should be encrypted, and transactions must be protected with SSL certificates.
- Usability: The interface should be intuitive and easy to navigate for users of all age groups.
- Performance: The website should load within 3 seconds to enhance user experience.
- Scalability: The system should handle increased traffic and product listings without performance degradation.
- Compatibility: The website should function smoothly across all major browsers and devices.

3.1.2 Feasibility Analysis

Feasibility study is an evaluation and analysis of a project or system that somebody has proposed. The following feasibilities are studied before building the website:

3.1.2.1Technical feasibility

The website will be built using PHP and existing technologies, software, and hardware. Therefore, there will not be any technological issues.

3.1.2.2. Economic Feasibility

The website will be free for all and will not require any extra software or hardware. Thus, the cost of the internet connection will be the only recurring cost.

3.1.2.3. Operational Feasibility

The website will feature a sleek, user-friendly interface designed to make browsing seamless and intuitive. With smooth navigation, clear layouts, and responsive design, users will find it easy to explore and engage with content, enhancing their overall experience.

3.1.2.4. Schedule feasibility

The schedule feasibility of the T-Shirt Ordering System project involves evaluating the likelihood of completing the development process within the set timeframe. This assessment considers factors such as resource availability, the complexity of system features, and potential challenges that may arise during the project timeline

- **Gantt Chart**

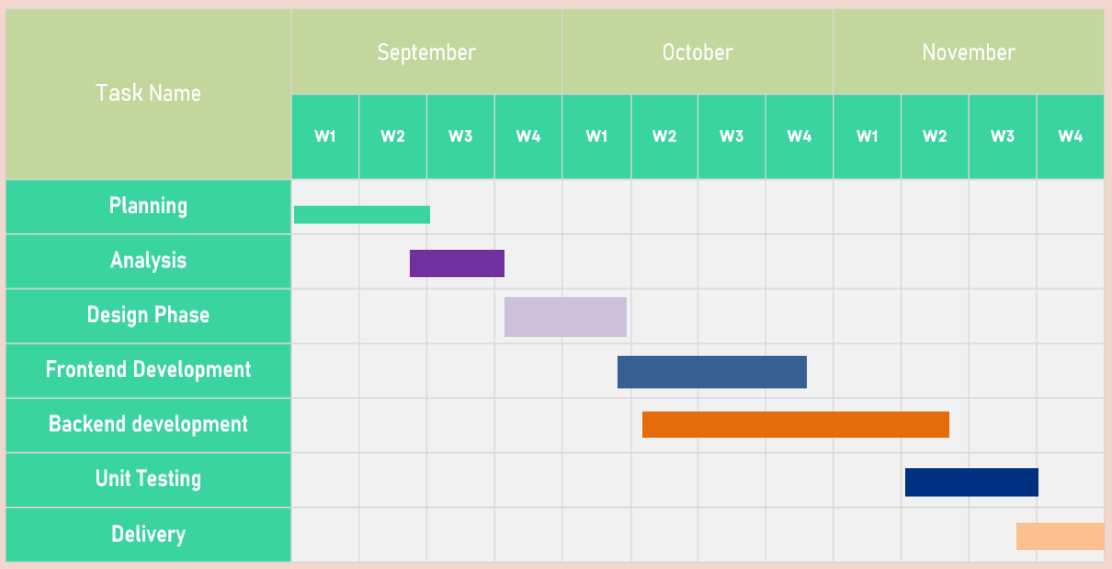


Figure 3.2: Gantt Chart

3.1.3 Data Modeling: ER Diagram

A data model is a mechanism that provides this abstraction for the database application. Data modeling is used for representing entities and their relationship in the database. E-R (Entity Relationship) Model can be referred to as a Data Model. E-R Model is a popular high-level conceptual data model. This model and its variations are frequently used for the conceptual design of database applications and many database design tools employ its concept.

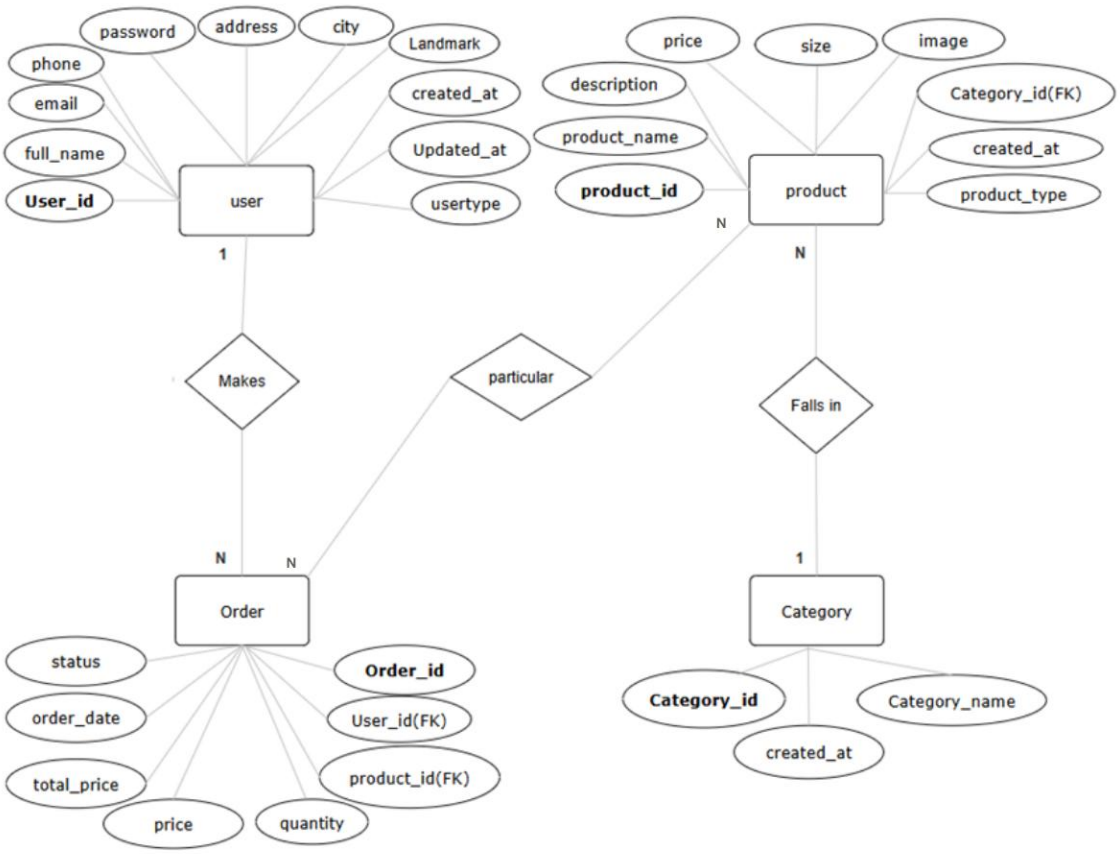


Figure 3.3: Entity Relationship Diagram of T-shirt Shopping System

This ER diagram is like a blueprint for a T-shirt shopping system. It has three main parts: customers, T-shirts, and shopping carts. Customers log in with a username and password. Each T-shirt has attributes like name, size, color, price, and stock to track availability. Customers can add multiple T-shirts to their shopping cart. A cart contains various items, each with details such as quantity and total price. Once the cart is finalized, it can be checked out, and the order goes for admin approval. The system also supports categorizing T-shirts into limited edition and general products.

3.1.4 Process Modeling: DFD

3.1.4.1. DFD level 0

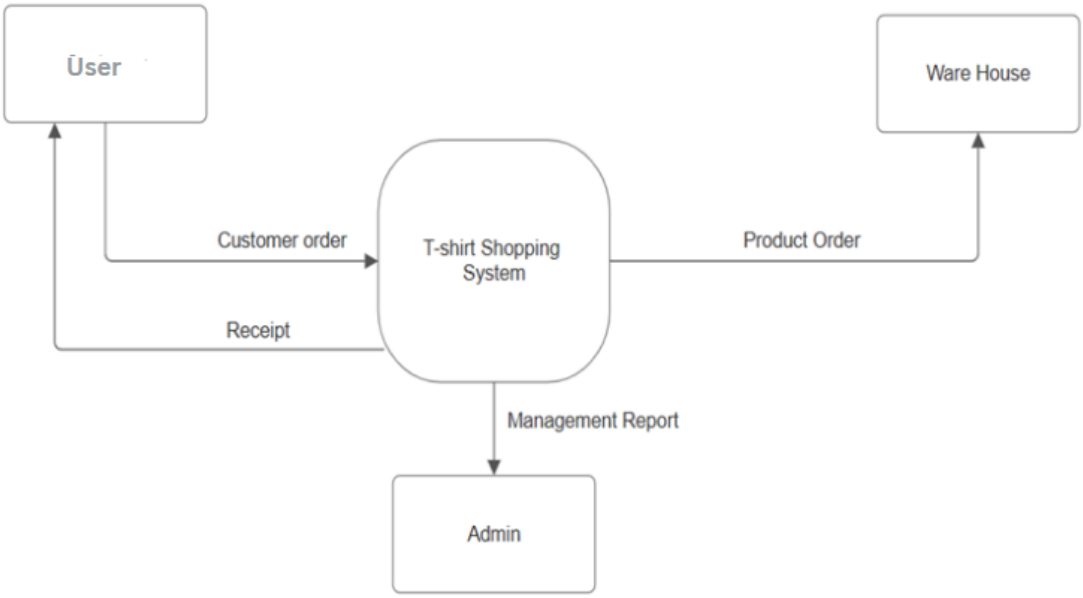


Figure 3.4: Level 0 DFD

This DFD Level 0 serves as a basic blueprint for a T-shirt Shopping System's operations. It depicts a single process – "Purchase T-shirts" – which interacts with two external entities. Users, the external entity, browse the website and log in with their credentials. The system validates the login and retrieves inventory information (another external entity) to display available T-shirts. Users can then proceed to select products, add them to their cart, and complete the purchase process. This simplified view highlights the core functionality of user authentication, inventory interaction, and order processing.

3.1.4.2 DFD level 1

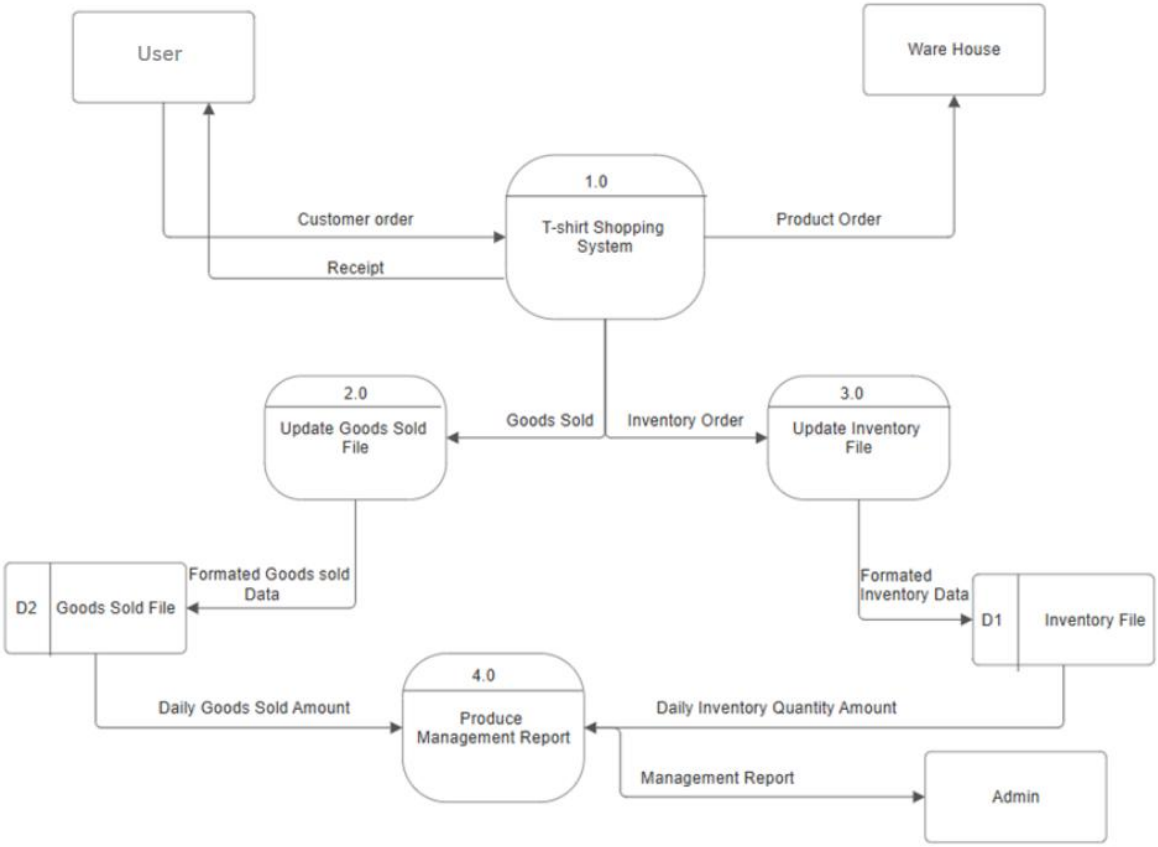


Figure 3.5: Level 1 DFD

This Level 1 DFD provides a deeper view of the T-shirt Shopping System. The system interacts with two external entities: User and Database. Users can request to log in, browse products, add items to their cart, and complete the purchase process. The system validates the login request and responds accordingly. Once logged in, users can browse available T-shirts, select products, and add them to their shopping cart. The system stores the product selection in the database. Users can also modify their cart, remove items, and adjust quantities. The system updates the database with these changes. Finally, users can proceed to checkout, entering payment details, which the system stores securely in the database to complete the transaction.

3.2 System Design

3.2.1 SDLC Model

- **Agile Model**

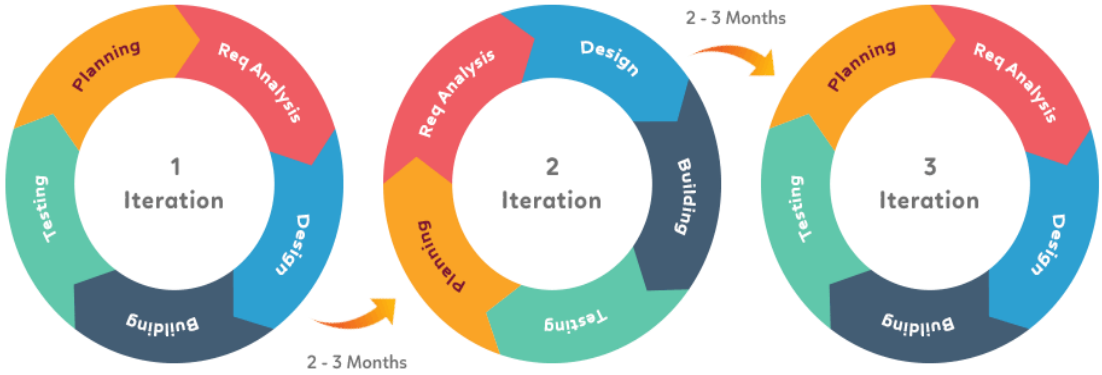


Figure 3.6: AGILE MODEL

The project utilized the agile model due to its iterative and flexible development process. The use of the Agile model was the most suitable approach for the development of the system, as it allowed for continuous feedback, adaptability to changing requirements, and iterative delivery of functional components throughout the development lifecycle. This approach ensured that the system was developed incrementally, with regular collaboration and adjustments based on stakeholder input.

3.2.2 Architectural Design

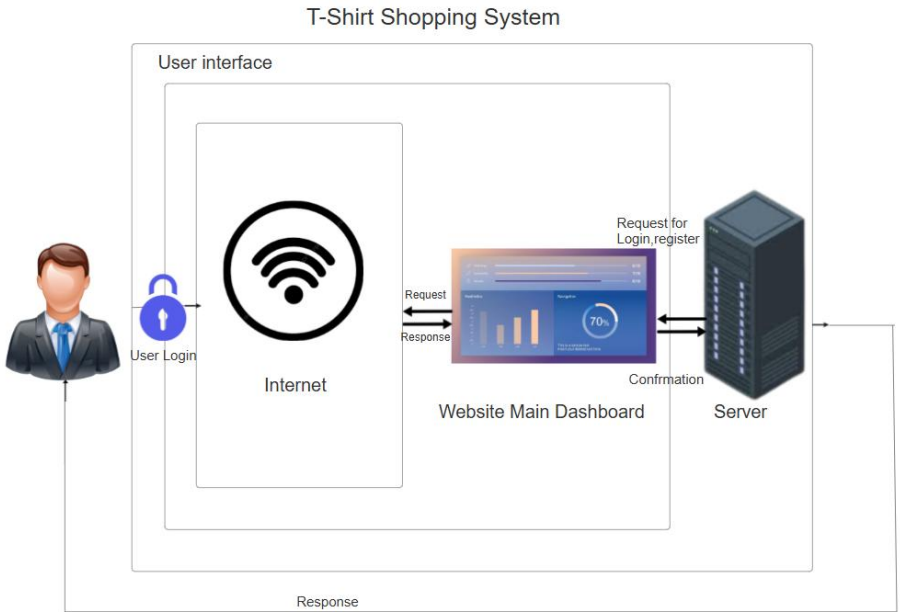


Figure 3.7: Architectural Design of T-shirt Shopping System

T-shirt shopping website utilizes a client-server architecture for managing user data and functionalities. The user interacts with the website through a browser on their device, which then transmits requests to a central application server. This server acts as the brain of the system, processing user requests such as browsing products, adding T-shirts to the cart, and placing orders, while interacting with the database. The database, likely a MySQL or PostgreSQL system in this case, stores all the website's data, such as user information, T-shirt details (e.g., size, color, price, and stock), shopping cart contents, and order histories. When the user interacts with the website, a request is sent to the server, which retrieves or updates data from the database as required. Finally, the server relays the processed information back to the website, which displays it to the user in real time. This continuous flow between the user, website, server, and database ensures a seamless and efficient shopping experience while maintaining secure and organized data management.

3.2.3 Database Schema Design

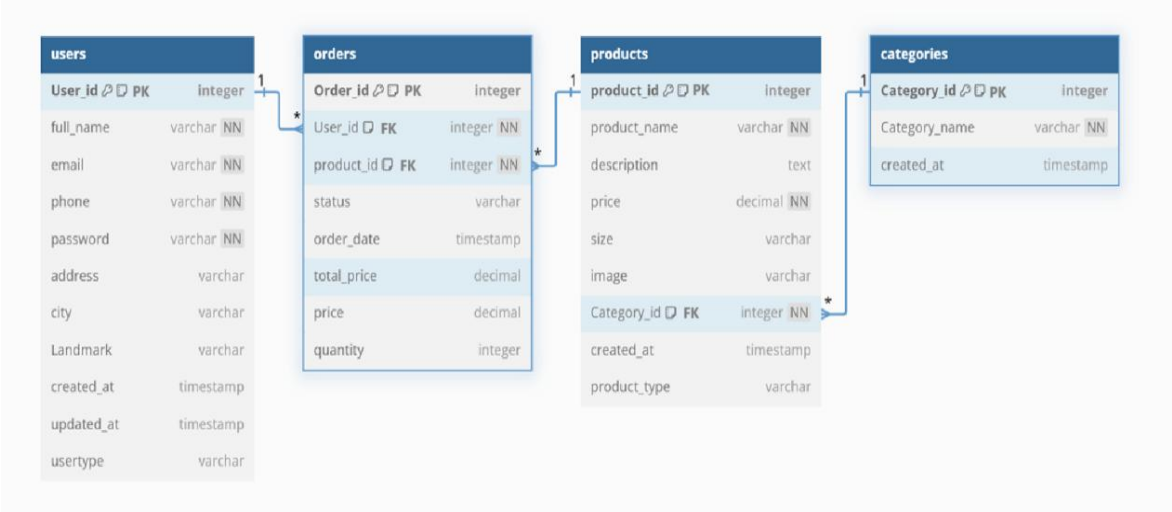


Figure 3.8: Database Schema of T-shirt Shopping system

Database Schema consists of four tables: User, Order, Product and Category.

- User Table: This table stores information about the users of the system, including their username, email address, and password.
- Order Table: This table stores information about the items added to the user's cart, including the user_id (linking the cart to a specific user), the product name from the Product Info table, and quantity.
- Product Table: This table stores details about the T-shirts available for purchase, including the product name, size, color, and price.
- Category Table: This table makes sure that there is product for making division according to their category.

3.2.4 Interface Design (UI/UX)

Interface Design focuses on anticipating what users might need to do and ensuring that the interface has elements that are easy to access, understand, and use to facilitate those actions. UI brings together concepts from interaction design, visual design, and information architecture.

i. Startup page:

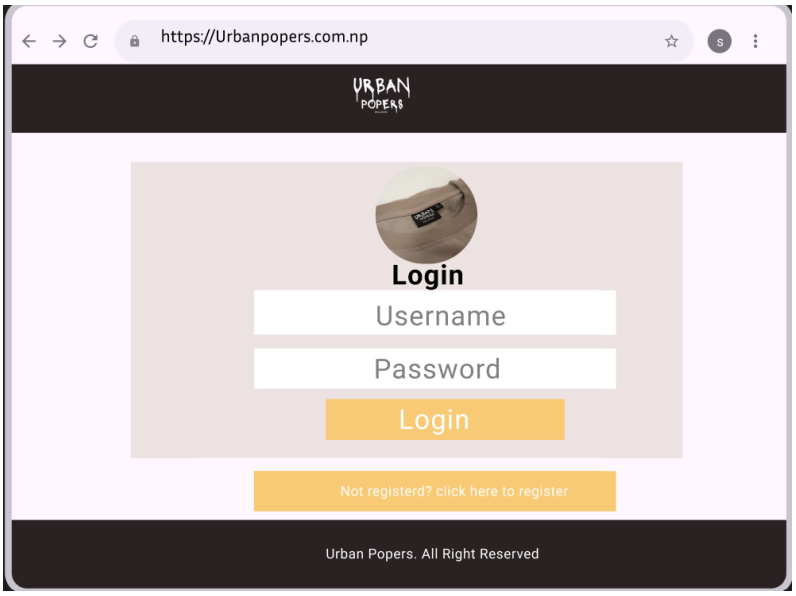


Figure 3.9: Startup figure of T-shirt Shopping System

This image is the login screen for the T-shirt Shopping System. You can enter your Username, password, and tap LOGIN to access the main Dashboard Panel.

1. **Main menu**

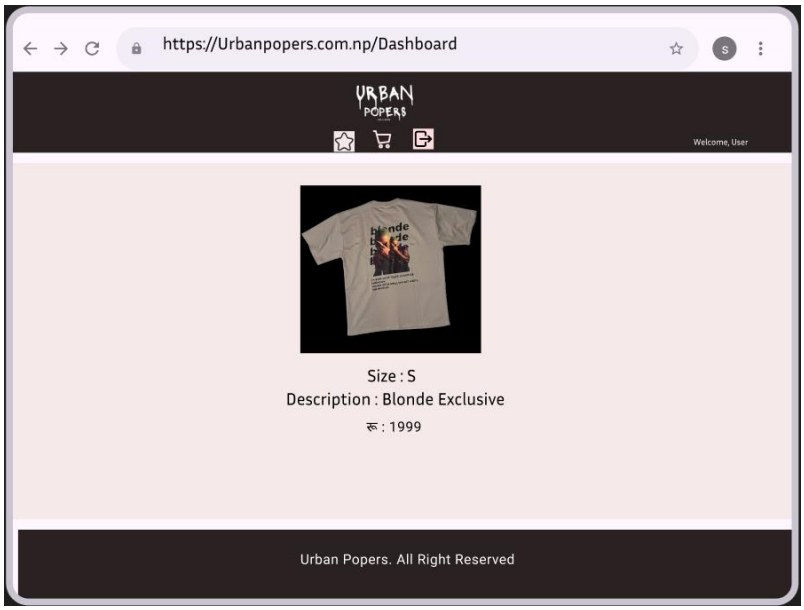


Figure 3.10: Main menu

This image shows the Dashboard items which is available with size, price, and description. Here, you can see details. All the necessary items are shown here with proper alignments which makes user to see it clearly. Finally, tap ‘to Text’ to add it(cart).

2. View General Items

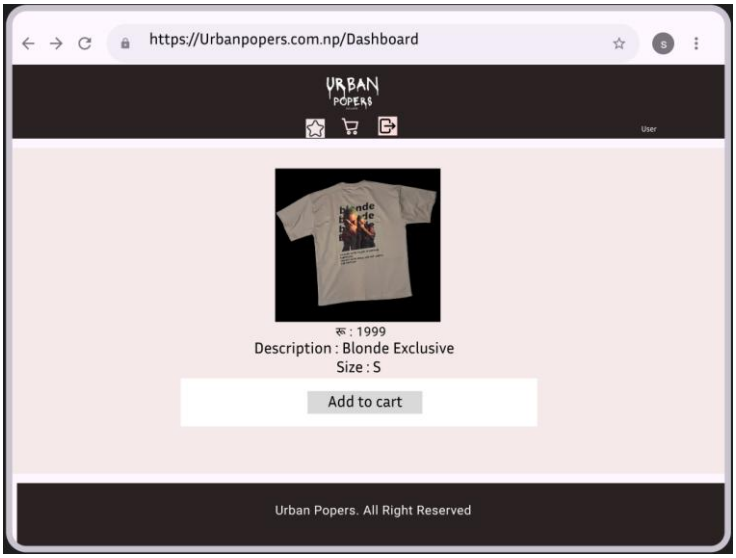


Figure 3.11: General Items

The image shows the general items which is available with size, price, and description. Here, you can see details. Finally, tap ‘to Text’ to add it(cart).

3. View Limited Items

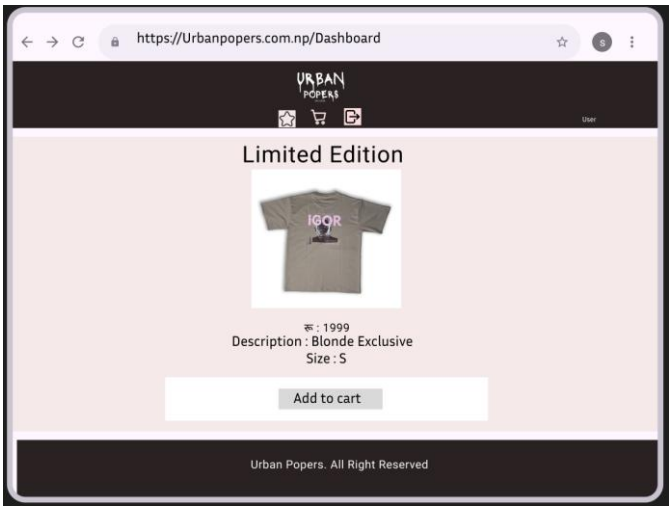


Figure 3.12: Profile of Limited Items

The image shows the limited items which is available with size, price, and description. It is a limited section which does only show 1-2 items and after time the stock will be finish admin will delete it . You can see details. Finally, tap ‘to Text’ to add it(cart).And check out.

4. View Cart

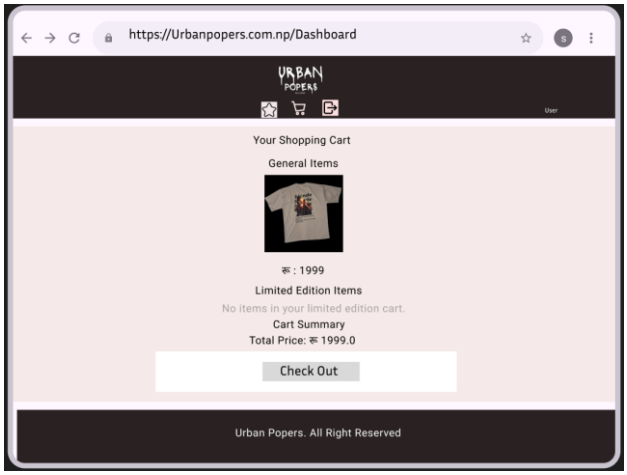


Figure 3.13: Check Cart

The checkout page displays a shopping cart with sections for general items and limited edition items. General items include product images, names, and prices, while the limited edition section is highlighted separately, showing when no items are added. A cart summary displays the total price, and a "Check Out" button completes the purchase. The design ensures clear navigation and distinction between item types.

5. Check Out User

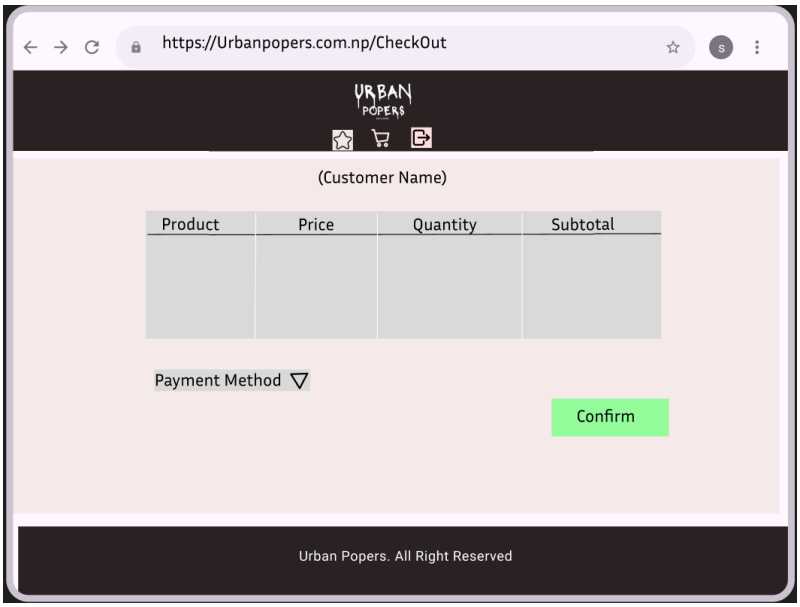


Figure 3.14: Check Out

This interface is for showing the total items that have been added by the customer. Its shows the total price of the customers.

6. Billing After Approval

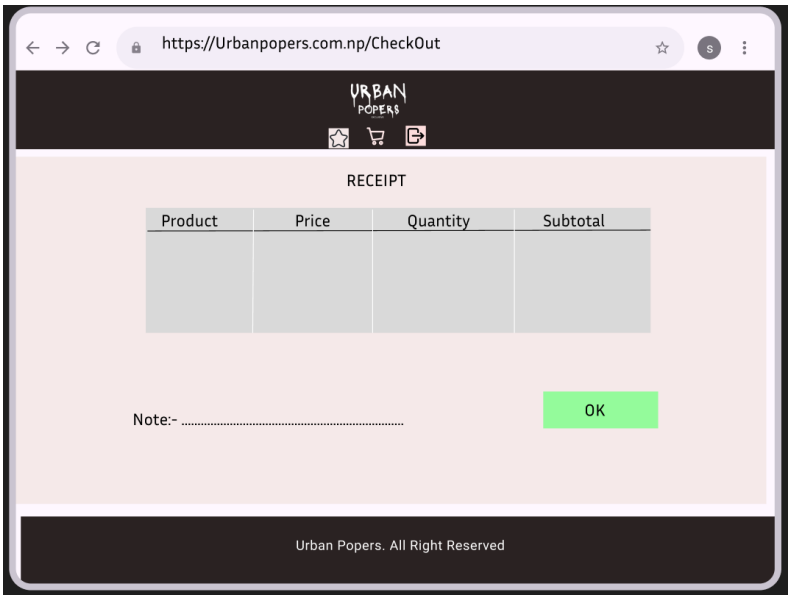


Figure 3.15: Billing System

This interface shows a T-shirt Shopping system last receipt that will shown on the admin and then the admin will approve it and it displays it to the customer interface system.

3.2.5 Physical DFD

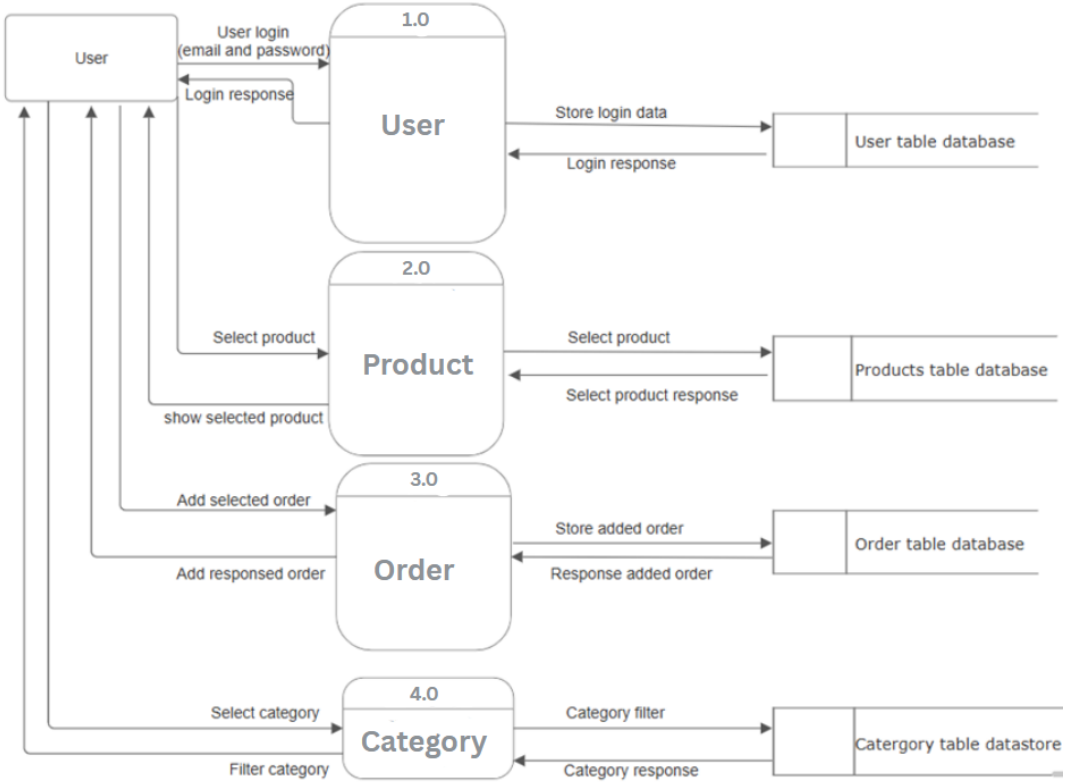


Figure 3.16: Physical DFD

This physical data flow diagram represents the flow of data in an e-commerce system, outlining user interactions and backend processes. The process begins with the user logging in by providing credentials such as a username and password. These details are verified against the User table database, and upon successful authentication, the system responds with a confirmation. Once logged in, the user can browse general products, where details like Product_name, description, and price are retrieved from the Products table database and displayed. For limited edition items, the system fetches additional details such as Product_name, description, price, image path, and size from the Limited products table database and displays them to the user. The user can then add items to the cart, with product details such as Product_id, image path, quantity, and user_id being stored in the Cart table database. The cart's contents are readily accessible for review. During the checkout process, the user provides personal and order-related details, including user_id, full_name, email, phone, order_note, city_address, landmark, total_price, and checkout_date. These details are stored in the Checkout table database, and the system waits for approval to finalize the order.

CHAPTER 4. IMPLEMENTATION AND TESTING

4.1. Implementation

This section talks about the implementation of the system.

4.1.1. Tools Used

i) Front End

a) HTML

Provides the basic structure of web pages, including forms, tables, and navigation.

b) CSS

Styles the web pages with colors, fonts, layouts, and responsiveness.

c) Javascript

Adds interactivity such as form validation, dynamic content updates, and user-friendly UI enhancements.

ii) Back End

a) MySQL

Handles server-side logic, processes form submissions, manages user authentication, and connects to the database.

b) Php

Stores customer orders, product details, inventory, and transaction records securely.

4.1.2 Implementation detail of modules

Login Module

```
<?php
session_start();
include '../Includes/Database.php';
if ($_SERVER["REQUEST_METHOD"] == "POST" && isset($_POST['email']) && isset($_POST['password'])) {
    $email = trim($_POST['email']);
    $password = trim($_POST['password']);
    $stmt = $conn->prepare("SELECT user_id, full_name, password, usertype FROM users WHERE email = ?");
```

```
    $stmt->bind_param("s", $email);
    $stmt->execute();
    $result = $stmt->get_result();
    if ($result->num_rows > 0) {
        $row = $result->fetch_assoc();
if (password_verify($password, $row['password']))
            $_SESSION['user_id'] = $row['user_id'];
            $_SESSION['full_name'] = $row['full_name'];
            $_SESSION['usertype'] = $row['usertype'];
            if ($row['usertype'] === 'admin') {
                header("Location: ../Pages/index.php?success=" . urlencode("Welcome
Admin!"));
            } else {
                header("Location: ../Pages/index.php?success=" . urlencode("Login
Successful"));
            }
            exit();
        } else {
            $_SESSION['error_message'] = "Invalid Password";
            header("Location: ../Pages/loginPage.php");
            exit();
        }
    } else {
        $_SESSION['error_message'] = "Invalid Email or Password";
        header("Location: ../Pages/loginPage.php");
        exit();
    }
}
$conn->close();
?>
```

Login Module Details

- Validates email & password input.
- Fetches user details from the users table.
- Verifies the password using password_verify().
- Stores user info in session upon successful login.
- Redirects:
    - Admin → index.php?success=Welcome Admin!
    - User → index.php?success=Login Successful
- Displays an error message if login fails.

Category Module

<form action="index.php" method="GET" class="category-filter-form" style="text-align: right;">

<label for="category-select"> Filter by Category:</label>

<select name="category_id" id="category-select" onchange="this.form.submit()">

<option value="5" <?php echo ($categoryId == 5) ? 'selected' : ''; ?>>All Products</option>

<option value="1" <?php echo ($categoryId == 1) ? 'selected' : ''; ?>>Hoodie</option>

<option value="2" <?php echo ($categoryId == 2) ? 'selected' : ''; ?>>Shirt</option>

<option value="3" <?php echo ($categoryId == 3) ? 'selected' : ''; ?>>T-shirt</option>

<option value="4" <?php echo ($categoryId == 4) ? 'selected' : ''; ?>>Sweat Shirt</option>

</select>

</form>

Category Module Details

- A dropdown menu allows users to filter products by category.
- When a category is selected, the form auto-submits using onchange="this.form.submit()".
- The filter is applied using the category_id passed via GET request (index.php?category_id=value).
- The selected category remains highlighted using PHP's selected attribute.

4.2 Testing

4.2.1 Test cases for Unit Testing

Table 4.1 User Registration Test Cases

S.N.	Payload	Expected Result	Actual Result	Result
1.	Email: sujalchhetrikarki@gmail.com Password: Full Name: Phone no.:	Fields are required.	Please fill out this field	Pass
2.	Full_name: sujal chhetri karki Email: sujalchhetrikarki@gmail.com Phone no.:987654321 Password: 1234 Address: simara City: simara Landmark: Lotus Academy	Registered and logged in. Then, redirected to main dashboard.	Registered, logged in and redirected to main menu.	Pass

Table 4.2 User Login Test Cases

S.N.	Payload	Expected Result	Actual Result	Result
1	Email: sujalchhetrikarki@gmail.com Password: Hello	Invalid Password	Invalid Password	Pass
2	Email: sujalchhetrikarki@gmail.com Password: 1234	Logged in and redirected to main menu.	Logged in and redirected to main menu.	Pass

Table 4.3 Add items

S.N.	Payload	Expected Result	Actual Result	Result
1	User name: sujal chhetri karki	Select Items	Selected	Pass
2	User name:	Most logged in.	Needs to be registered first	pass

Table 4.4 checkout

S.N.	Payload	Expected Result	Actual Result	Result
1	User name: sujal chhetri karki	Check out and see the selected cart option and confirm.	Message with go to admin to approve it	Pass
2	User name: sujal chhetri karki	Fields are required	Need to be login	Pass

CHAPTER 5: CONCLUSION AND FUTURE RECOMMENDATIONS

5.1. Lesson Learnt / Outcome

The T-shirt Shopping System website aims to provide a convenient platform for purchasing T-shirts; however, a critical analysis reveals several key areas that require attention and improvement.

User Interface (UI) and User Experience (UX): While the website offers a streamlined interface for browsing and purchasing products, it is essential to evaluate the effectiveness of the UI and UX in driving customer engagement and conversions. User feedback and usability testing should be conducted to identify pain points and areas for enhancement, ensuring that the platform meets the needs and expectations of its users.

Order Management Reliability: The system claims to support both online and offline order management, but the reliability and performance of these features must be scrutinized. Challenges such as real-time inventory synchronization, payment gateway stability, and inconsistencies in offline order processing can significantly impact the platform's reliability and user trust. Implementing robust testing and monitoring mechanisms will be crucial to address these issues.

Data Security: The security of user data is of utmost importance, particularly given the sensitive nature of payment and personal information. Any vulnerabilities in data protection could compromise user privacy and deter customers from using the platform. It is vital to adopt best practices in cybersecurity, including encryption, secure payment processing, and regular security audits, to safeguard user information.

Development Methodology: The project utilized the waterfall methodology, which may present limitations in adapting to changing market demands and customer feedback. Transitioning to a more iterative approach, such as Agile, could enhance flexibility and responsiveness to evolving business needs and customer preferences. This shift would allow for continuous improvement and quicker adaptation to user feedback.

In summary, the critical analysis of the T-shirt Shopping System project highlights the importance of evaluating UI/UX effectiveness, ensuring the reliability of order management features, prioritizing data security, and adopting a more adaptable development methodology. Addressing these areas will be essential for the platform's success in delivering a seamless shopping experience and meeting customer expectations.

5.2. Conclusion

In conclusion, the T-shirt Shopping System represents a promising platform for simplifying the online shopping experience with its focus on seamless navigation and convenient purchasing options. While it offers clear benefits in enhancing customer satisfaction and accessibility, there remains a need for ongoing refinement, particularly in areas such as user interface effectiveness and data security. By prioritizing customer feedback and embracing iterative improvements, the platform has the potential to evolve into a more robust and user-centric tool for delivering an exceptional shopping experience and meeting diverse customer preferences.

5.3. Limitations and Future Enhancements

5.3.1. Limitations

Some of the limitations of this project are:

- No Physical Store: The business operates exclusively online without a brick-and-mortar presence, which limits direct customer interaction and walk-in sales but reduces operational costs.
- No Sales on Other Websites/Platforms: Products are sold solely on the dedicated T-shirt Shopping System website, avoiding reliance on third-party platforms like Amazon or eBay, but potentially limiting audience reach.
- No Custom Inventory System: The system does not include a tailored inventory management solution, which may lead to challenges in tracking stock levels or integrating with other tools efficiently.
- No Chatbot or AR Experience: The platform lacks advanced features like chatbots for instant customer support or augmented reality (AR) tools for virtual try-ons, which could enhance user engagement and satisfaction.

5.3.2. Future Enhancements

In the future, the T-shirt Shopping System could integrate digital payment options such as eSewa, Khalti, or banking systems for greater convenience and accessibility, moving beyond the current reliance on cash-on-delivery. Additionally, enhancements in reporting and analytics would provide valuable insights into sales trends, customer preferences, and inventory performance. Developing a mobile app could further improve user accessibility and engagement, while implementing features such as personalized recommendations and product filters powered by machine learning would create a more tailored shopping experience. Incorporating gamification elements, such as rewards or loyalty points, could also enhance customer motivation and retention, ultimately driving sales growth and customer satisfaction.

Reference

[1] "Daraz – Online Shopping in South Asia", Daraz. [Online]. Available: https://www.daraz.com [Accessed: Dec.21,2024].

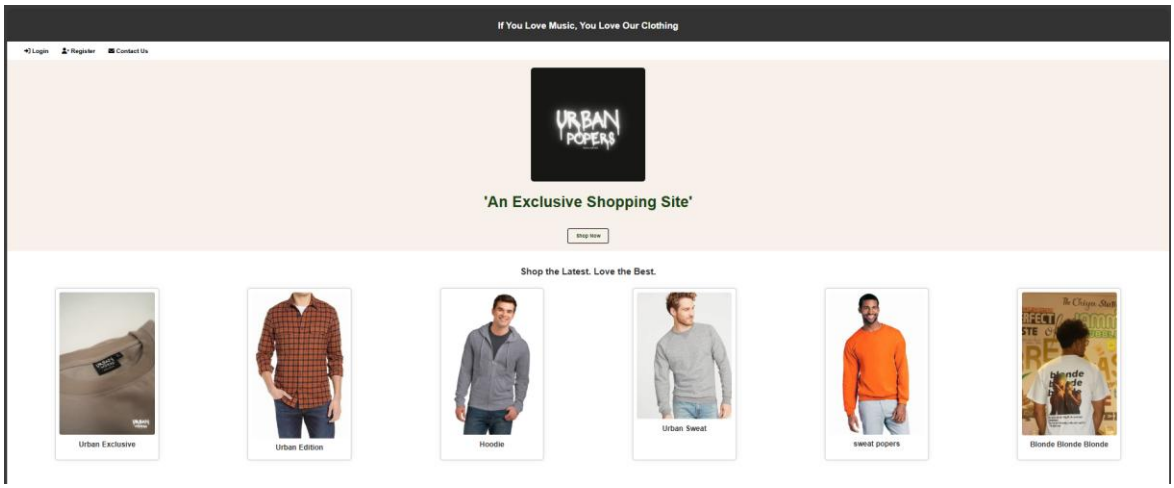
[2] "Thulo.com – Online Shopping in Nepal", Thulo.com. [Online]. Available: https://www.thulo.com [Accessed: Dec.30,2024].

[3] "Flipkart – Online Shopping for Electronics, Apparel, and More", Flipkart. [Online]. Available: https://www.flipkart.com [Accessed: Jan.21,2025].

[4] "Amazon – Online Shopping for T-shirts, Apparel, and More", Amazon. [Online]. Available: https://www.amazon.com [Accessed: Feb.4,2025].

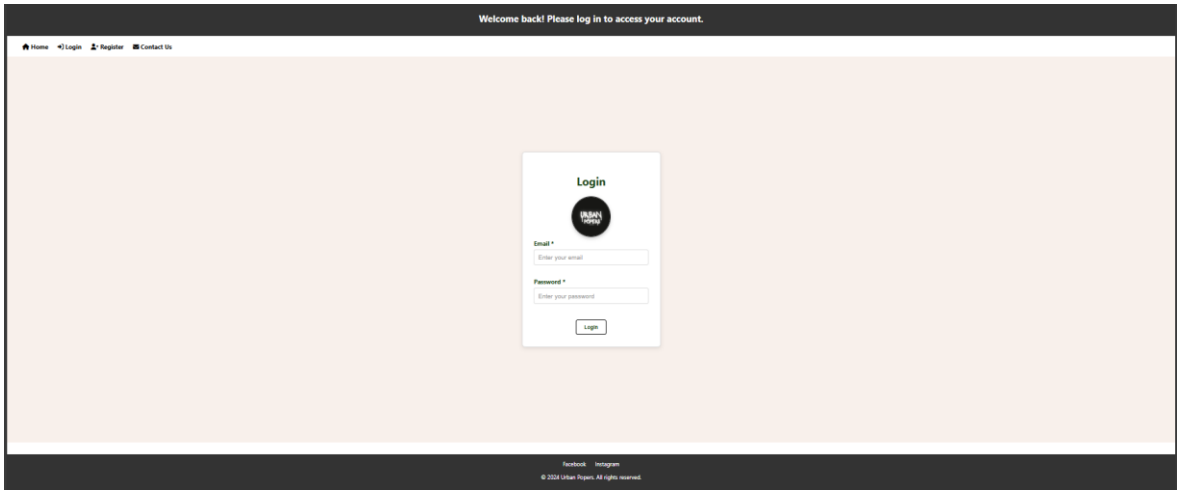
APPENDIX A

• Front Section



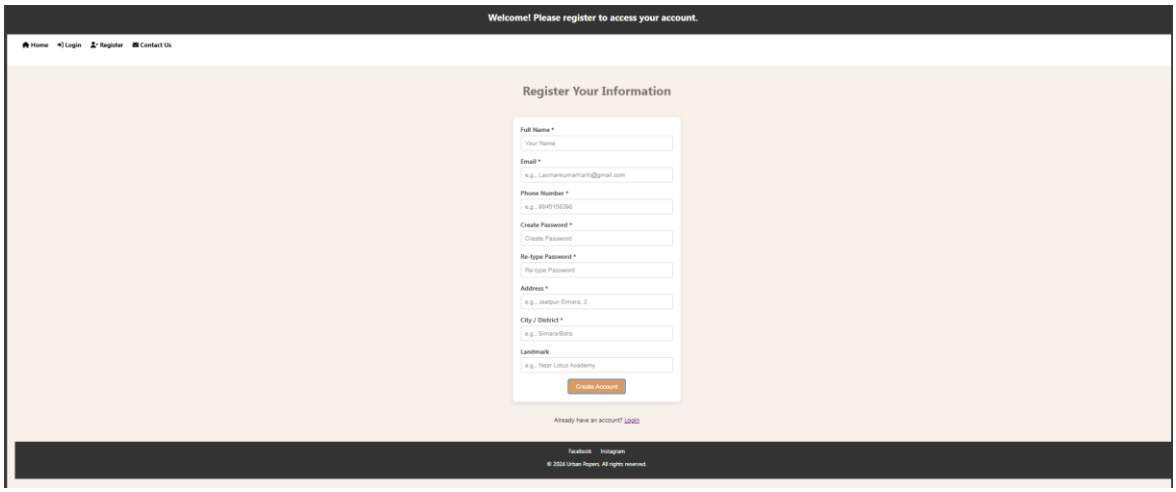
Appendix: A1

• Login Section



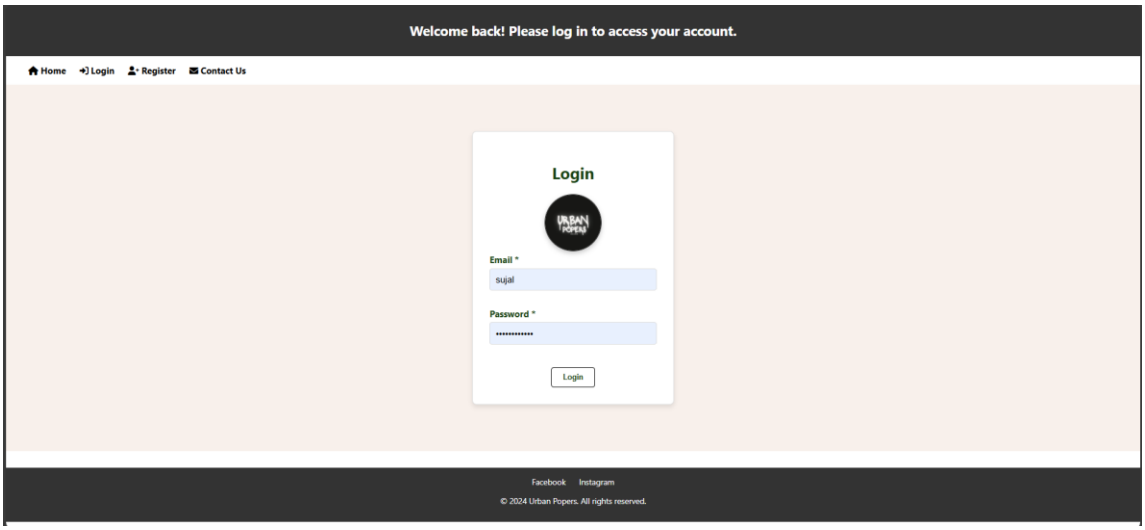
Appendix: A2

- **Register Account**



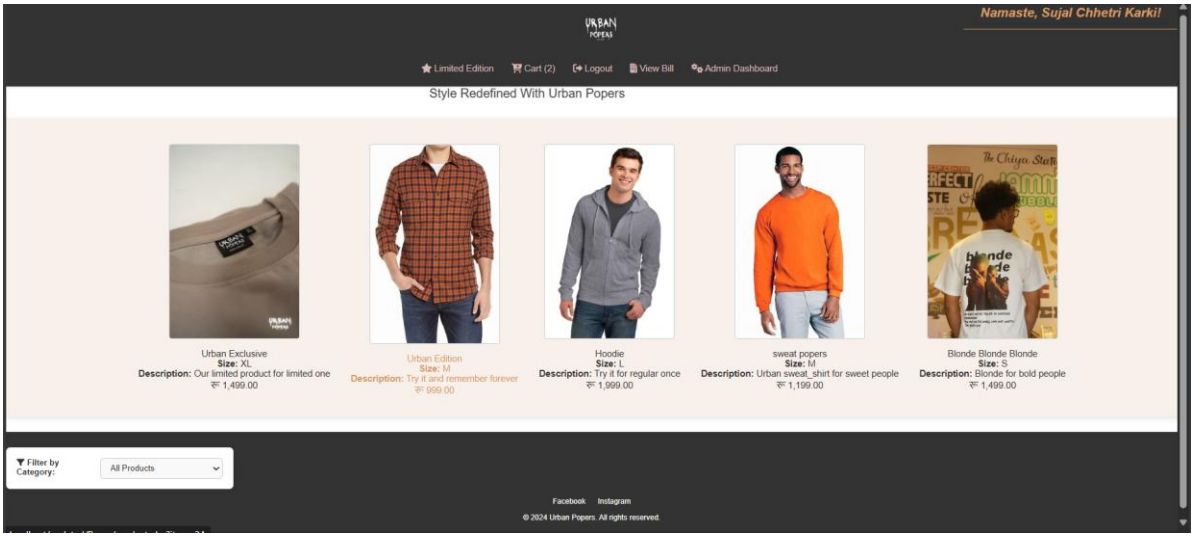
Appendix: A3

- **Login Page**



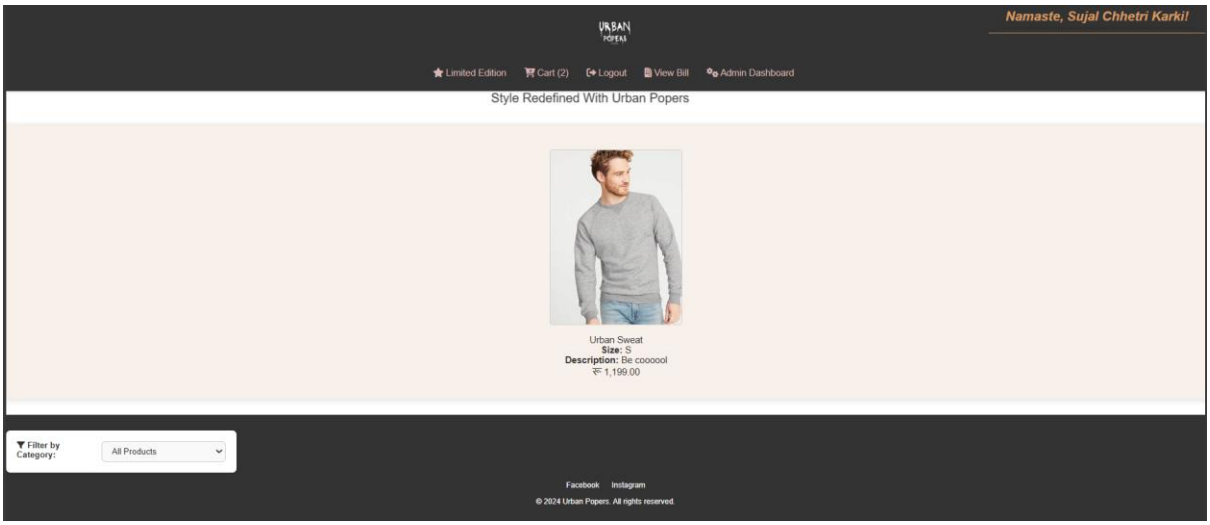
Appendix: A4

• **Main dashboard**



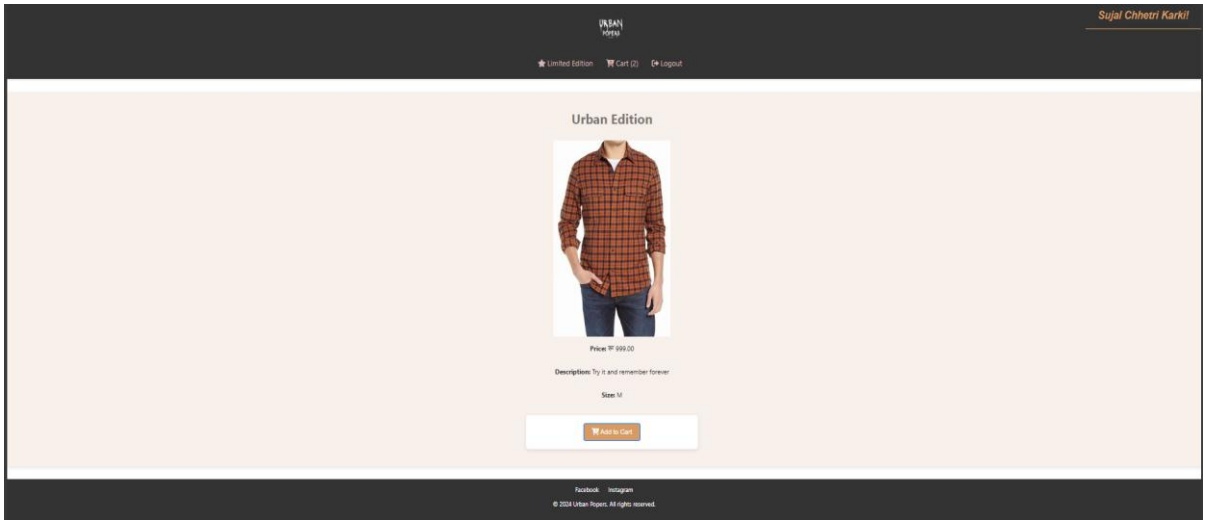
Appendix: A5

- **Limited Edition**



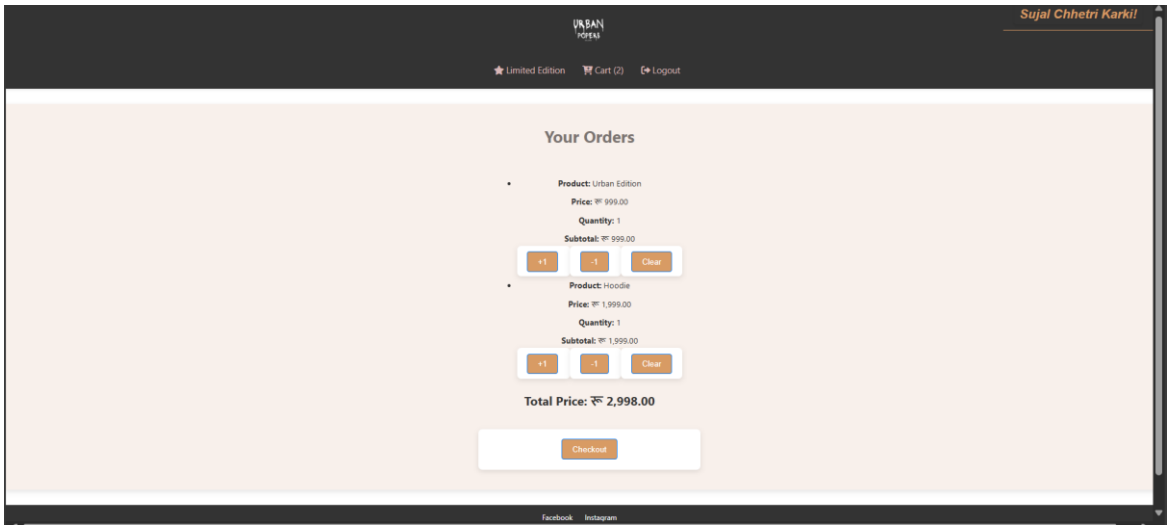
Appendix: A6

- **Adding Items**



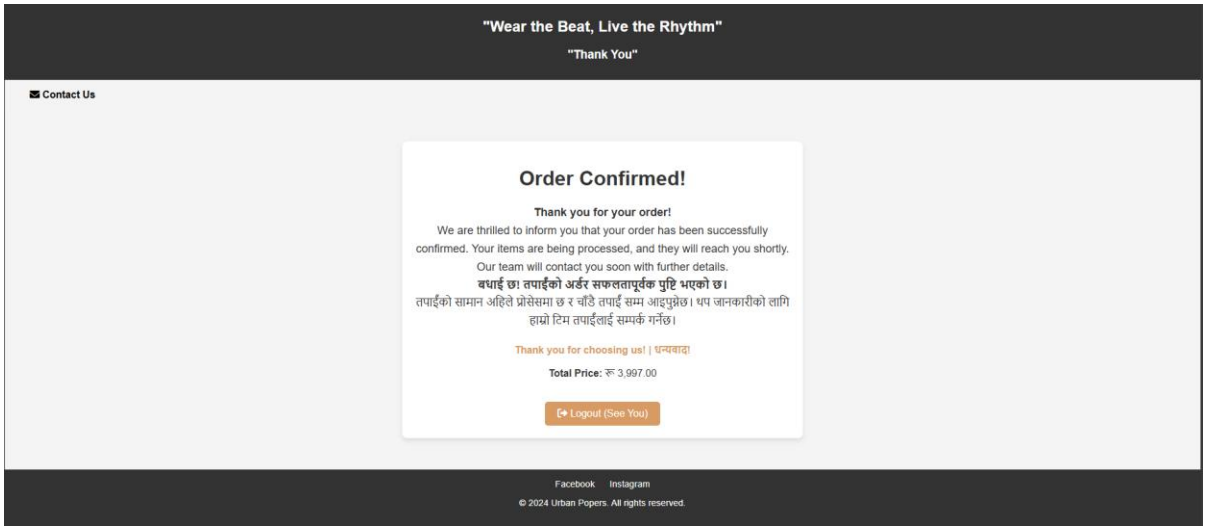
Appendix: A7

- **Cart**



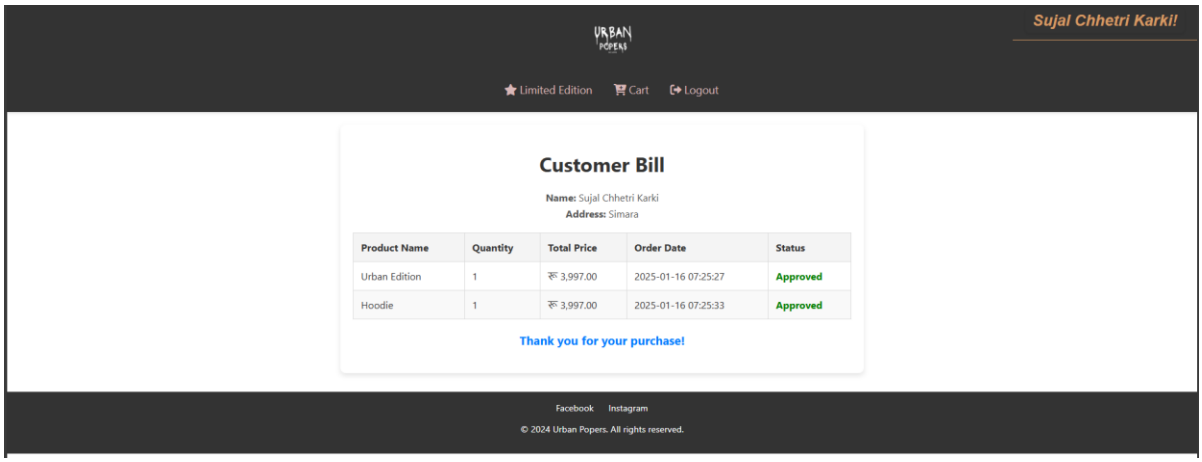
Appendix: A8

- **Checkout**



Appendix: A9

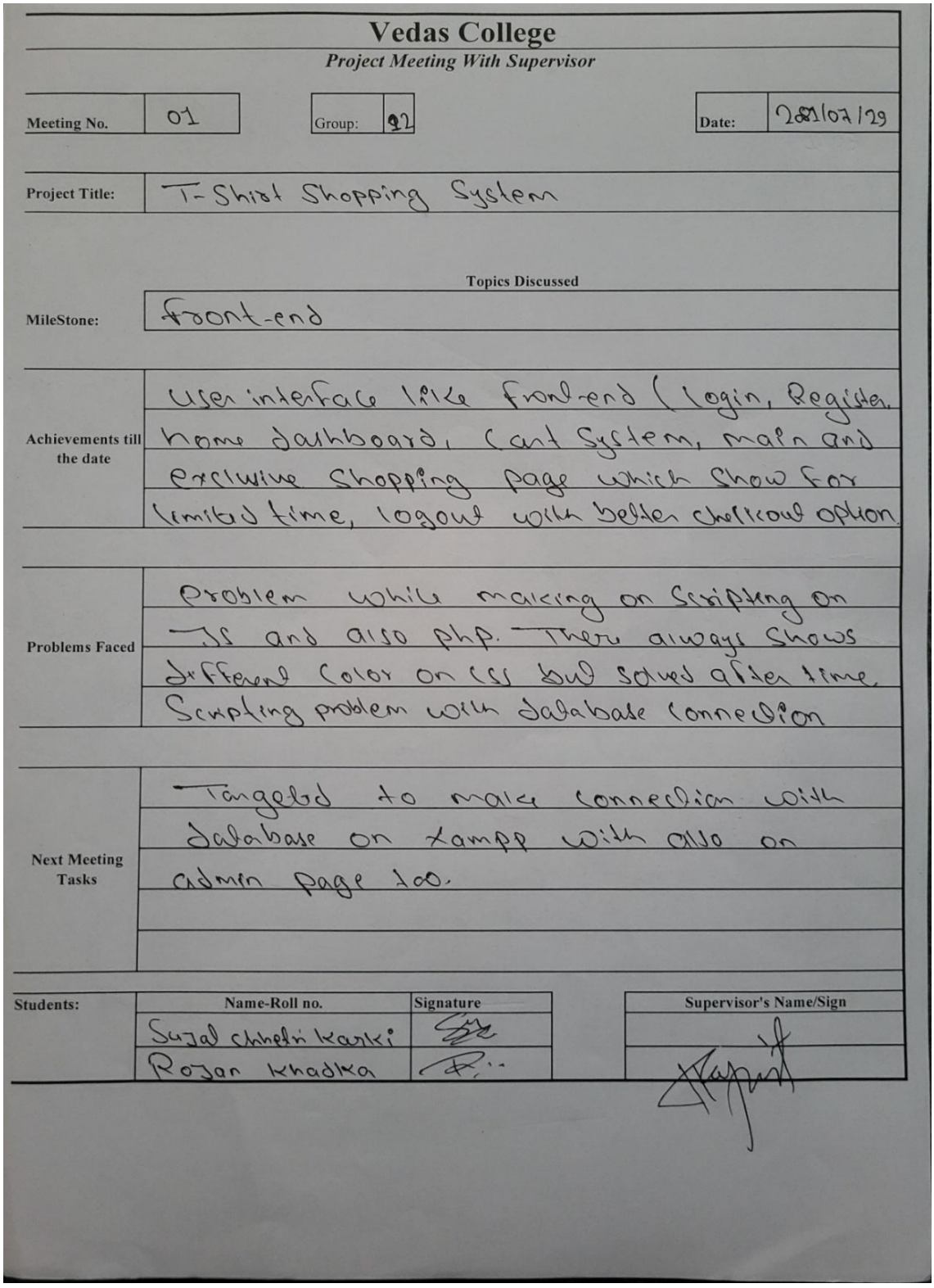
- **Bill of the Customer**



Appendix: A10

APPENDIX B

- **Meeting 1**



Vedas College

Project Meeting With Supervisor

Meeting No.	01	Group:	12	Date:	2081/07/29

Project Title: T-Shirt Shopping System

Topics Discussed

MileStone: front-end

Achievements till the date: User interface like front-end (login, Register, home dashboard, Cart System, main and exclusive Shopping page which show for limited time, logout with better checkout option

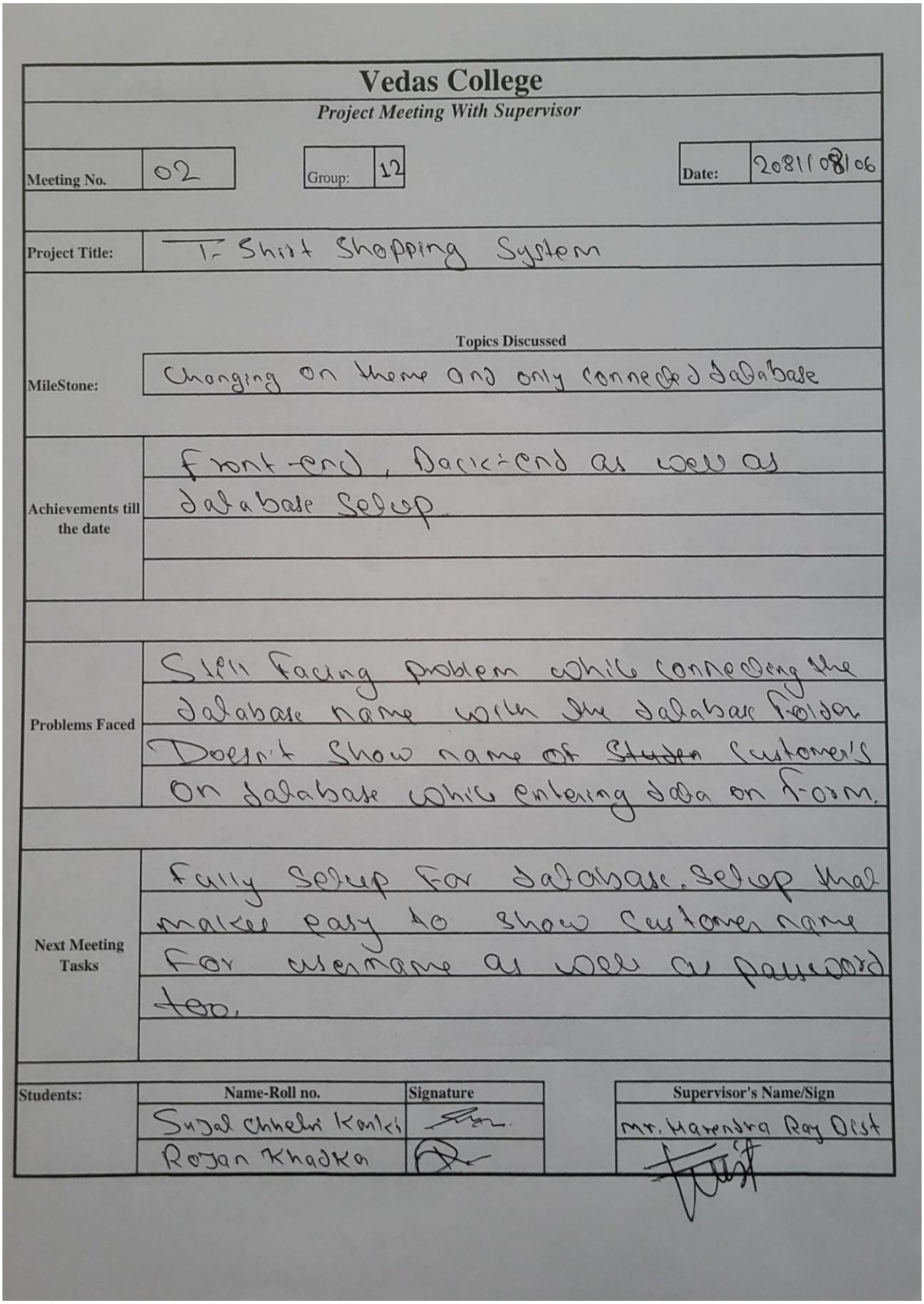
Problems Faced: Problem while making on Scripting on JS and also php. There always shows different color on CSS but solved after time. Scripting problem with database connection

Next Meeting Tasks: Targeted to make connection with database on xampp with also on admin page too.

Students:	Name-Roll no.	Signature	Supervisor's Name/Sign
	Sujal Chhetri Karki		
	Rojan Khadka		

Appendix: B1

- **Meeting 2**



Vedas College

Project Meeting With Supervisor

Meeting No.	02	Group:	12	Date:	2081/08/06

Project Title: T- Shirt Shopping System

Topics Discussed

MileStone: Changing on theme and only connected database

Achievements till the date: Front-end, Backend as well as database setup.

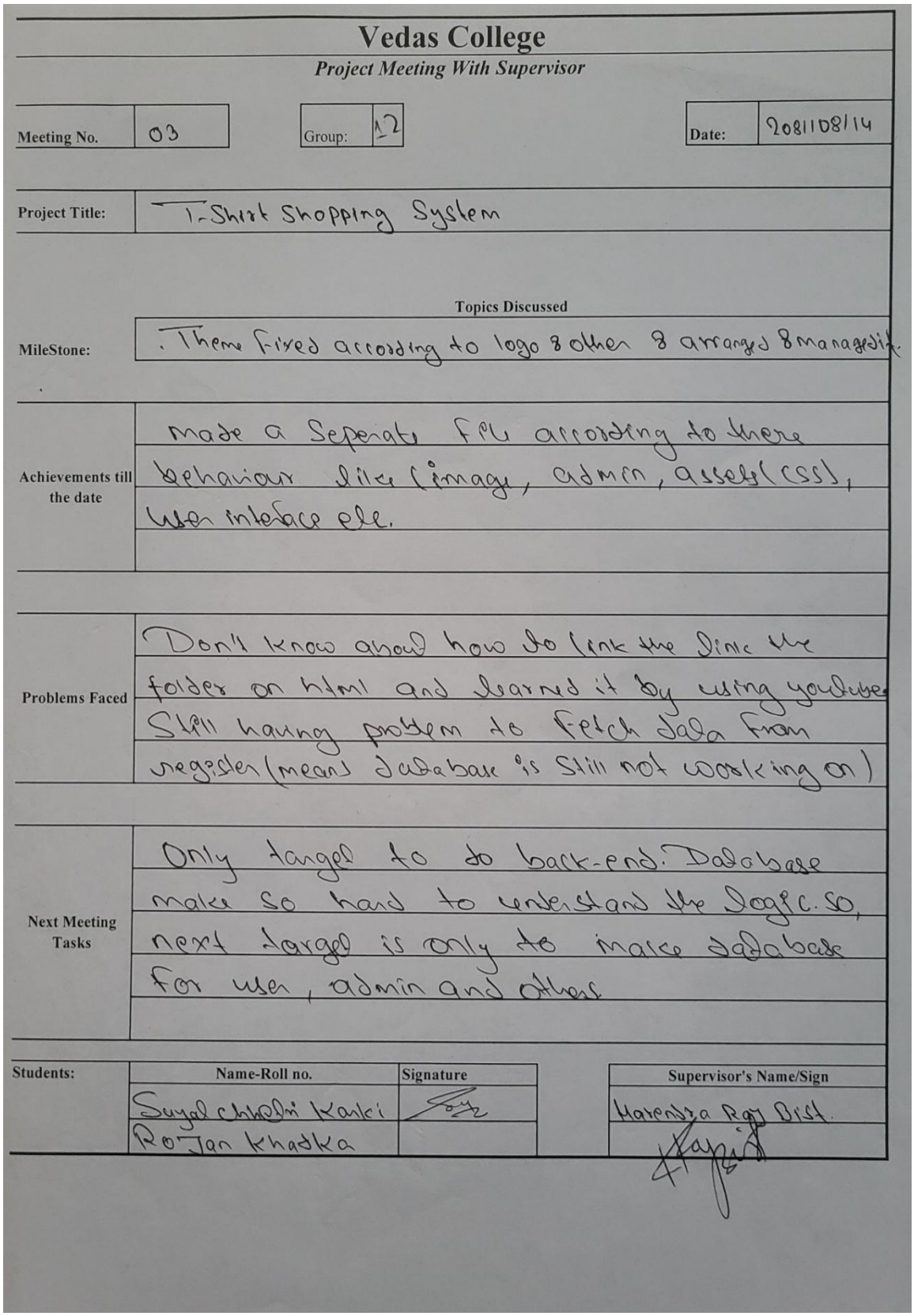
Problems Faced: Still facing problem while connecting the database name with the database folder. Doesn't show name of ~~Studen~~ Customers on database while entering data on form.

Next Meeting Tasks: Fully setup for database. Setup that makes easy to show Customer name for username as well as password too.

Students:	Name-Roll no.	Signature	Supervisor's Name/Sign
	Sujal Chhetri Kami		Mr. Harendra Raj Dist
	Rojan Khadka		

Appendix: B2

- **Meeting 3**



Vedas College

Project Meeting With Supervisor

Meeting No.	03	Group:	12	Date:	2081108/14

Project Title: T-Shirt Shopping System

Topics Discussed

MileStone: . Theme fixed according to logo & other & arranged & managed.

Achievements till the date: made a Seperate file according to there behaviour like (image, admin, assets(css), user interface etc.

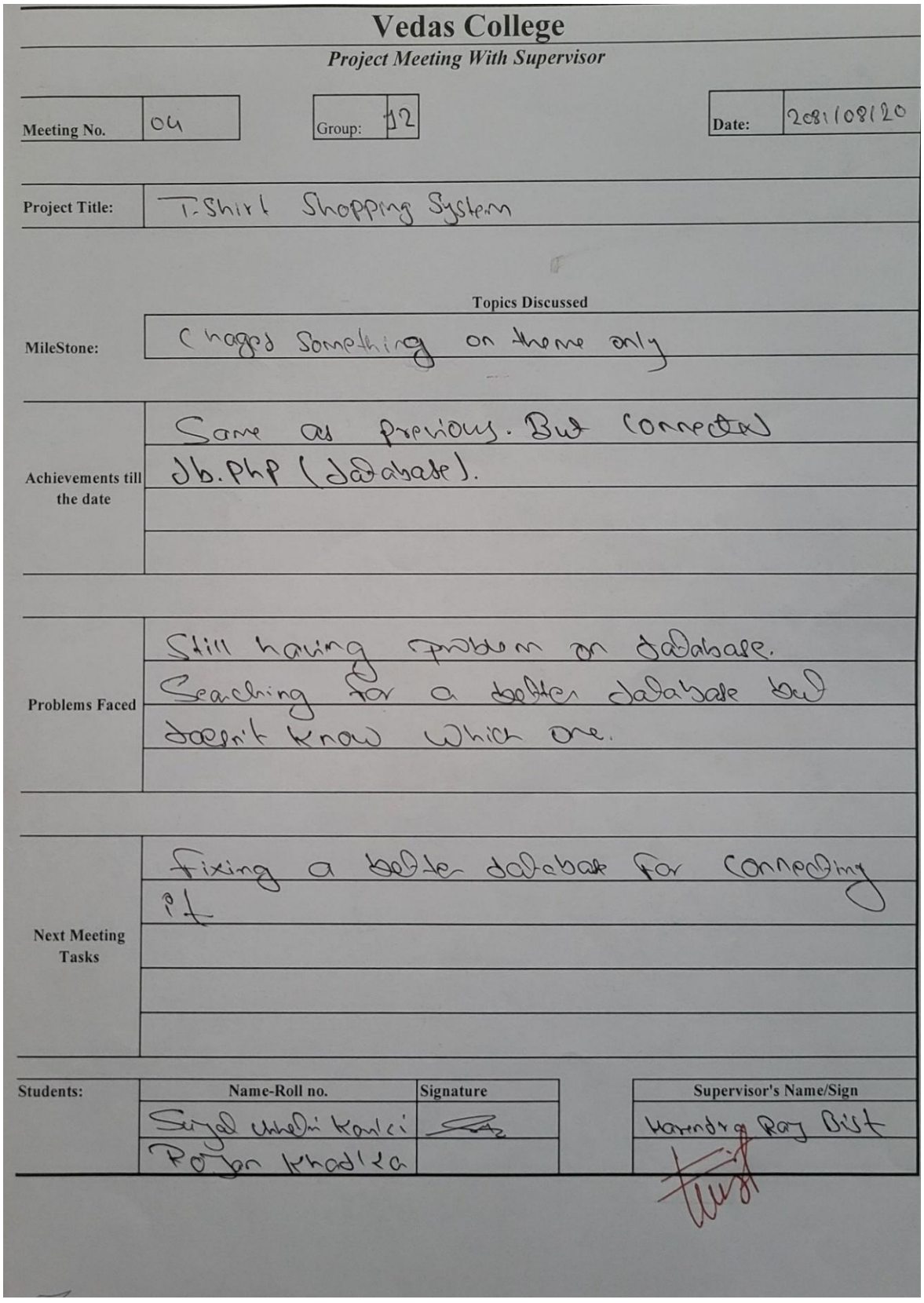
Problems Faced: Don't know about how to link the link the folder on html and learned it by using youtube. Still having problem to fetch data from register(means database is still not working on)

Next Meeting Tasks: Only target to do back-end. Database make so hard to understand the logic. So, next target is only to make database for user, admin and others

Students:	Name-Roll no.	Signature	Supervisor's Name/Sign
	Sugal Chhetri Kanki		Narendra Raj Bist.
	Rojan Khadka		

Appendix: B3

- **Meeting 4**



Vedas College

Project Meeting With Supervisor

Meeting No.	04	Group:	12	Date:	2081/08/20

Project Title: T-Shirt Shopping System

Topics Discussed

MileStone: Changed Something on theme only

Achievements till the date: Same as previous. But connected db.php (database).

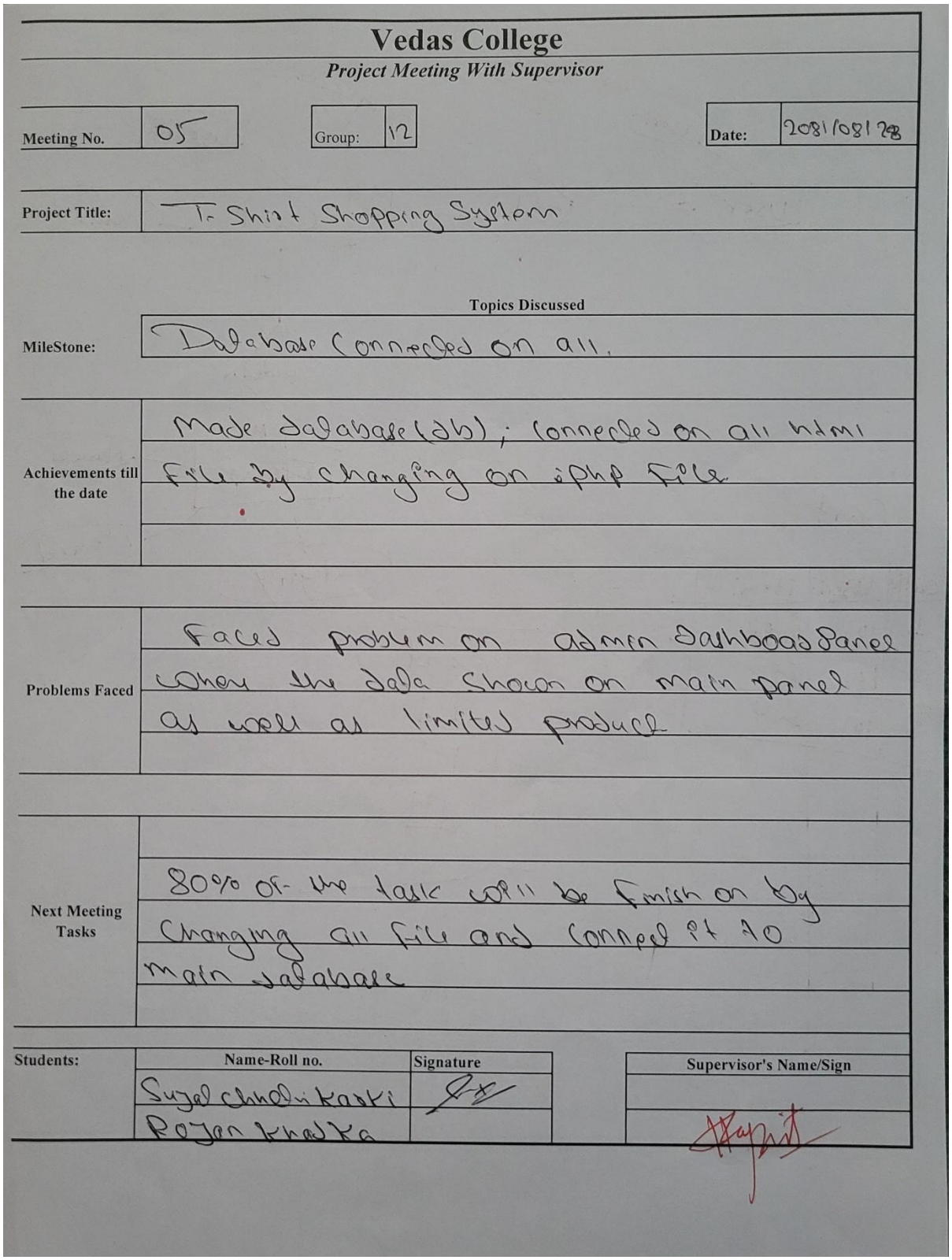
Problems Faced: Still having problem on database. Searching for a better database but doesn't know which one.

Next Meeting Tasks: fixing a better database for connecting it

Students:	Name-Roll no.	Signature	Supervisor's Name/Sign
	Sujal Uttam Kanci		Harendra Raj Bist
	Rojan Khadka		

Appendix: B4

- **Meeting 5**



Vedas College

Project Meeting With Supervisor

Meeting No.	05	Group:	12	Date:	2081/08/28

Project Title: T-Shirt Shopping System

Topics Discussed

MileStone: Database Connected on all.

Achievements till the date: Made database (db); connected on all html file by changing on php file

Problems Faced: Faced problem on admin Dashboard Panel where the data shown on main panel as well as limited product

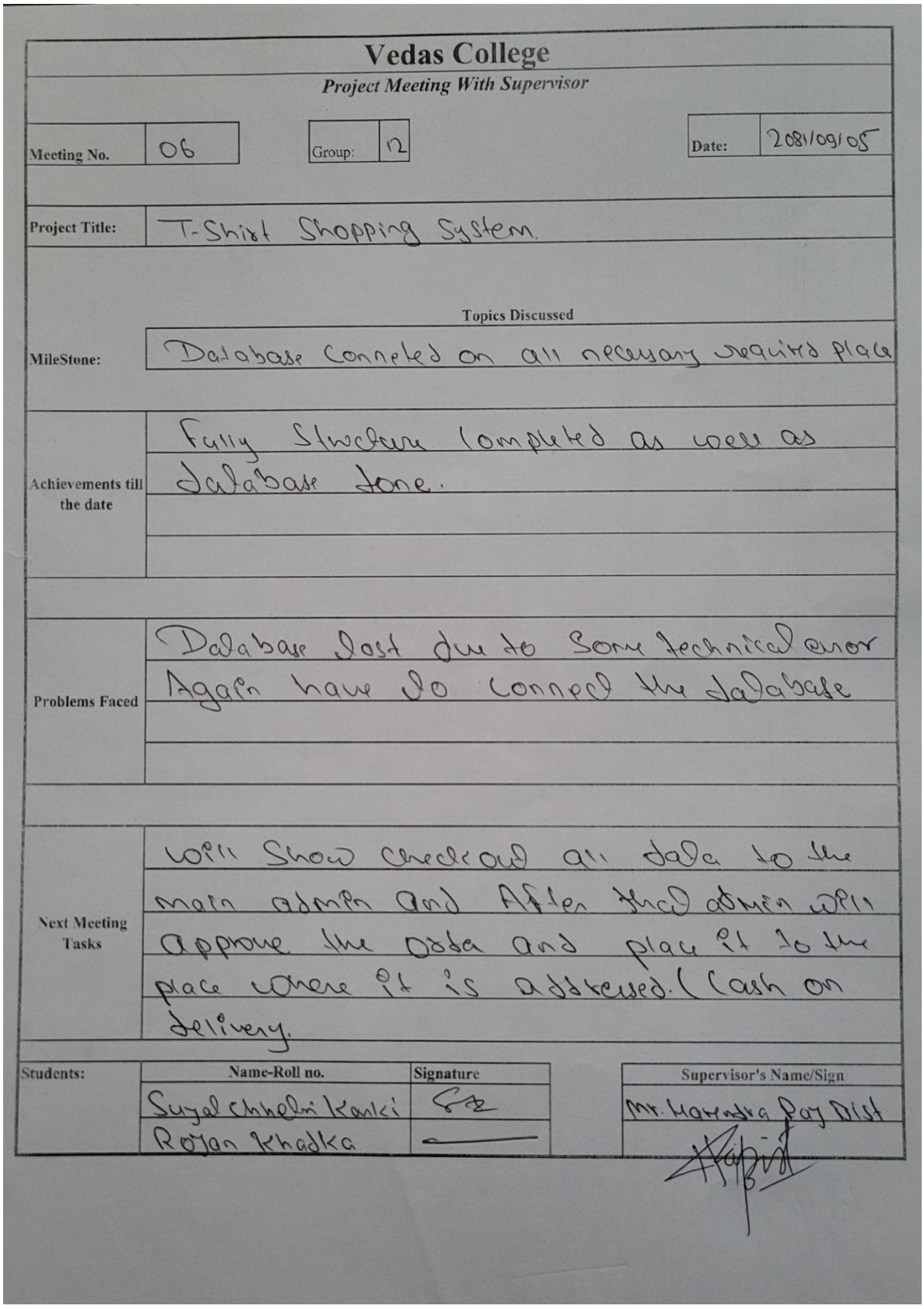
Next Meeting Tasks: 80% of the task will be finish on by changing all file and connect it to main database

Students:	Name-Roll no.	Signature
	Sujal Chhetri Kasti	
	Rojan Khadka	

Supervisor's Name/Sign

Appendix: B5

- **Meeting 6**



Vedas College

Project Meeting With Supervisor

Meeting No.	06	Group:	12	Date:	2081/09/05

Project Title: T-Shirt Shopping System.

Topics Discussed

MileStone: Database Conneted on all necesary required place

Achievements till the date: Fully Structure completed as well as Database done.

Problems Faced: Database lost due to some technical error Again have to conned the database

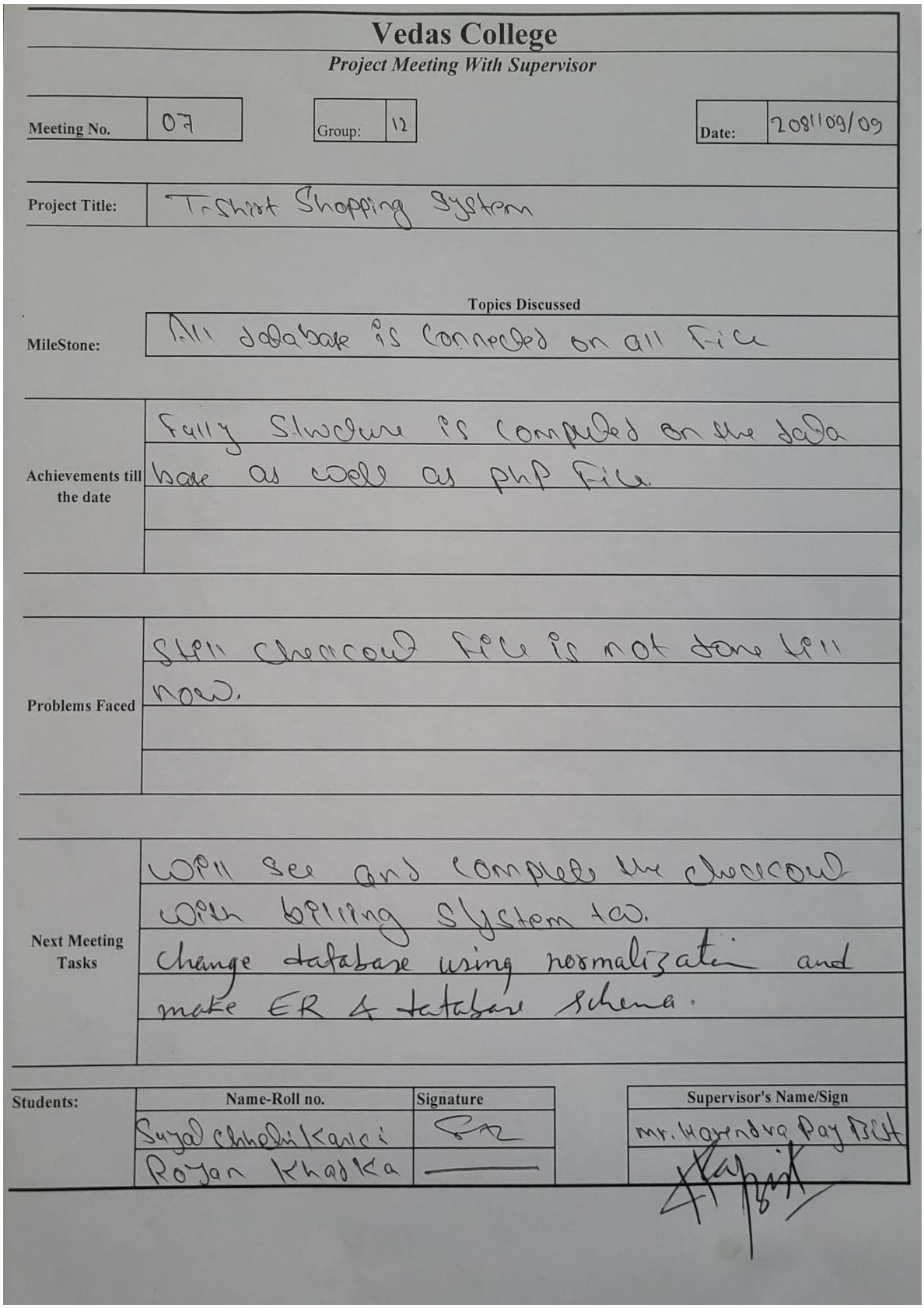
Next Meeting Tasks: will Show checkout all data to the main admin and After that admin will approve the order and place it to the place where it is addressed. (Cash on delivery.

Students:	Name-Roll no.	Signature
	Sujal Chhetri Kanki	
	Rojan Khadka	

Supervisor's Name/Sign
Mr. Harendra Raj Dist

Appendix: B6

- **Meeting 7**



Vedas College

Project Meeting With Supervisor

Meeting No.	07	Group:	12	Date:	2081/09/09

Project Title: T-Shirt Shopping System

Topics Discussed

MileStone: All database is connected on all file

Achievements till the date: Fully structure is completed on the database as well as php file.

Problems Faced: Still checkout file is not done till now.

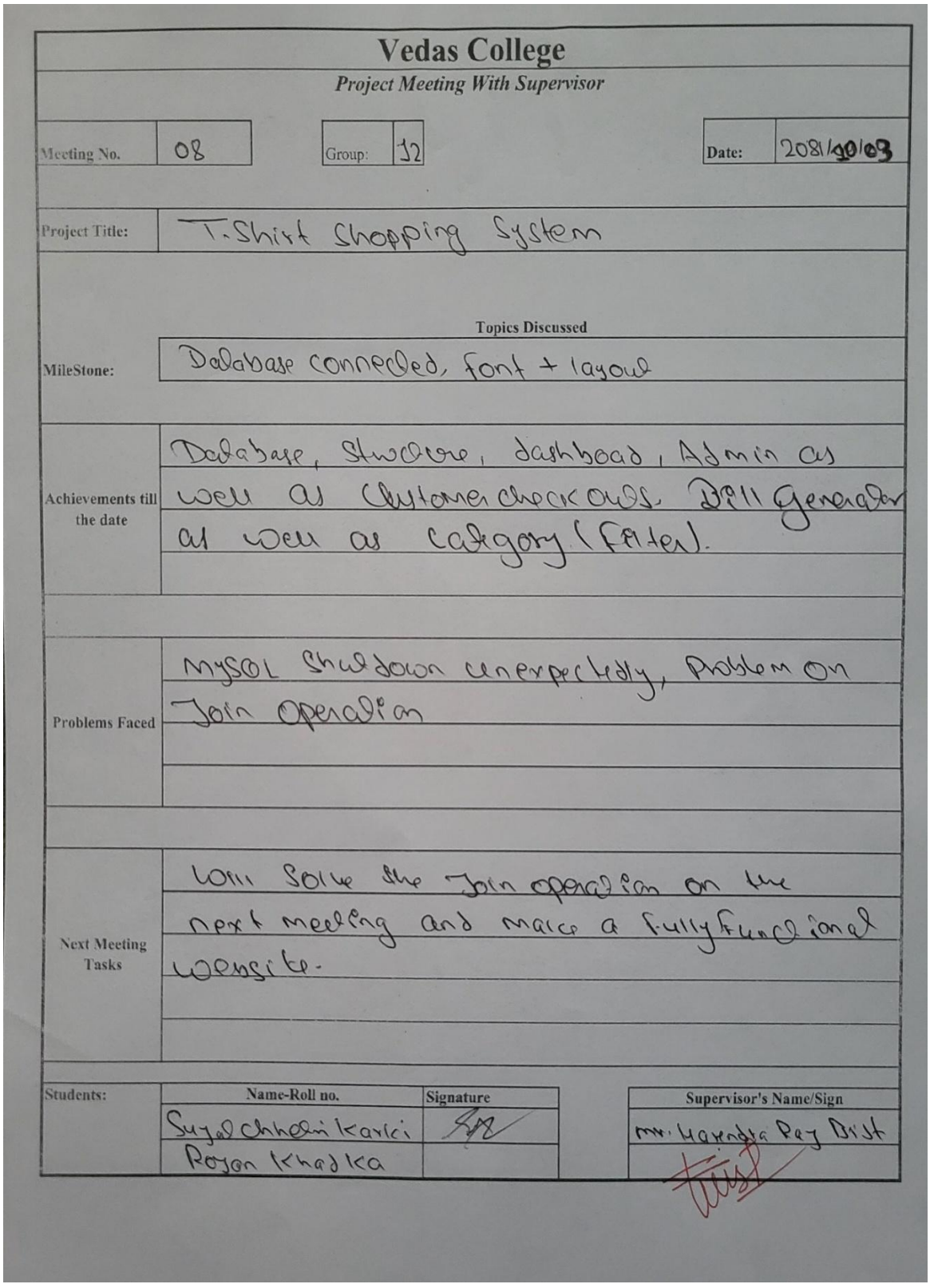
Next Meeting Tasks: Will see and complete the checkout with billing system too. Change database using normalization and make ER & database schema.

Students:	Name-Roll no.	Signature
	Suyal Chhetri Kanchi	
	Rojan Khadka	

Supervisor's Name/Sign: mr. Hayendra Pay Bist

Appendix: B7

- **Meeting 8**



Vedas College

Project Meeting With Supervisor

Meeting No.	08	Group:	J2	Date:	2081/10/03

Project Title:	T-Shirt Shopping System
	Topics Discussed
MileStone:	Database connected, font + layout
Achievements till the date	Database, Structure, dashboard, Admin as well as Customer checkouts. Bill Generator as well as category (Filter).
Problems Faced	MySQL shutdown unexpectedly, Problem on Join Operation
Next Meeting Tasks	Will Solve the Join operation on the next meeting and make a fully functional website.

Students:	Name-Roll no.	Signature	Supervisor's Name/Sign
	Sujal Chhetri Karki		Mr. Mahendra Raj Bist
	Rojan Khadka		

Appendix: B8