



TRIBHUVAN UNIVERSITY

**INSTITUTE OF SCIENCE AND TECHNOLOGY
MADAN BHANDARI MEMORIAL COLLEGE**

A PROJECT REPORT ON

‘Mheecha’

*In partial fulfillment of the requirement for Bachelor of Science in
Computer Science and Information Technology*

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CERTIFICATE OF APPROVAL

This is to certify that the project entitled "**Mheecha**" prepared by **Firoj Paudel, Nilima Mainali, Priyanka Thapa, Subodh Ghimire** as a part of the coursework in the Department of Computer Science and Information Technology is a record of original work carried out under our supervision.

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Acknowledgment

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This project has been a significant learning experience, allowing us to deepen our understanding of web application development, WooCommerce integration, payment gateway implementation (PayPal), user interface design, and real-world e-commerce systems.

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With respect,

Firoj Paudel

Nilima Mainali

Priyanka Thapa

Subodh Ghimire

Abstract

This project presents the practical development of **Mheecha**, a fully operational e-commerce web application developed as part of the E-commerce coursework. The platform provides a comprehensive online shopping solution for a curated range of lifestyle bags, including travel bags, casual bags, trekking bags, and other everyday accessories.

Built on the *WordPress* content management system with the *WooCommerce* plugin, the application incorporates essential e-commerce functionalities such as product catalog management, responsive category navigation, shopping cart, secure checkout process, and Pay-Pal payment gateway integration. The user interface is designed for optimal usability across devices.

The project showcases applied knowledge in web application development, e-commerce system configuration, payment integration, database management, user account handling and responsive design principles. Extensive testing was conducted to ensure functionality, performance, security, and cross-browser compatibility.

Mheecha serves as a practical implementation of modern e-commerce technologies, offering a professional, scalable, and user-friendly online store tailored for students, creators, explorers, and general consumers.

Table of Contents

Acknowledgment	ii
Abstract	iii
List of Figures	v
1 Introduction	1
1.1 Introduction	1
1.2 Problem Statement	1
1.3 Objectives	2
1.4 Proposed System	2
2 Requirement Analysis	3
2.1 Functional Requirements	3
2.2 Non-Functional Requirements	4
2.3 Hardware Requirements	5
2.4 Software Requirements	6
3 System Models	7
3.1 Use Case Diagram	7
3.2 Class Diagram	9
4 Implementation	11
4.1 Key Features	11
4.1.1 Product Catalog	11
4.1.2 Shopping Cart	11
4.1.3 PayPal Integration	12
4.1.4 Search Functionality	12
4.1.5 User Account Management	12
4.2 Website Interface Overview	13
4.2.1 Home Page	13
4.2.2 Shop Page	14
4.2.3 Product Page	15
4.2.4 About Us Page	16
4.2.5 Contact Us Page	17
4.2.6 Shopping Cart Page	18
4.2.7 Checkout Page	19
4.2.8 Order Confirmation Page	20
4.2.9 Admin Dashboard (WooCommerce)	21
5 Testing and SEO	22
5.1 Testing	22
5.2 Search Engine Optimization	23
6 Conclusion and Future Enhancements	24
6.1 Conclusion	24
6.2 Future Enhancements	24
References	25

List of Figures

1	Use Case Diagram for Mheecha	7
2	Class diagram of Mheecha	9
3	Mheecha Home Page	13
4	Mheecha Shop Page	14
5	Mheecha Product Page	15
6	Mheecha About Us Page	16
7	Mheecha Contact Us Page	17
8	Mheecha Shopping Cart Page	18
9	Mheecha Checkout Page	19
10	Mheecha Order Confirmation Page	20
11	Mheecha Order Dashboard	21
12	Mheecha Product Dashboard	21

1 Introduction

1.1 Introduction

The global e-commerce market continues to grow rapidly, with consumers increasingly seeking convenient, reliable, and stylish options for everyday essentials such as bags. However, many online shoppers face challenges in finding high-quality, functional bags that suit their active lifestyles—whether for travel, casual use, trekking, or daily commuting.

Mheecha is a modern e-commerce web application developed to address these needs. Built using *WordPress* with the *WooCommerce* plugin, it provides a seamless online shopping experience for a curated collection of travel bags, casual bags, trekking bags, and other lifestyle accessories.

The platform features an intuitive user interface, responsive design, secure shopping cart, integrated PayPal payment gateway, user account management, and easy navigation across key pages. It emphasizes simplicity, reliability, and user satisfaction, enabling customers to browse, select, and purchase bags that combine function, form, and durability.

Overall, **Mheecha** empowers students, creators, explorers, and everyday users to find the perfect bag for their lifestyle, while demonstrating practical e-commerce development skills.

1.2 Problem Statement

In the rapidly expanding online retail landscape, consumers face several challenges when purchasing bags and lifestyle accessories. The major problems addressed by the Mheecha e-commerce system are outlined below:

- **Fragmented Product Discovery:** Consumers frequently encounter difficulty in locating high-quality, purpose-specific bags (for travel, casual use, trekking, or daily needs) across disparate online retailers, resulting in a fragmented and inefficient shopping experience.
- **Suboptimal User Experience:** Numerous e-commerce platforms suffer from poor navigation, non-responsive layouts, or cumbersome checkout processes, contributing to high cart abandonment rates and reduced customer satisfaction.
- **Limited Payment Accessibility:** Many online stores lack integration with secure and universally accepted payment methods such as PayPal, which is particularly inconvenient for students, international buyers, and users preferring established digital wallets.
- **Trust and Transparency Deficiencies:** Inadequate product information, unclear categorization, and limited customer support channels often undermine consumer confidence and create uncertainty during the online purchasing process.

This project addresses these challenges by developing **Mheecha**, a professional, user-friendly e-commerce platform that offers a curated selection of bags, seamless shopping functionality, secure payments, and an engaging experience.

1.3 Objectives

The primary objectives of the **Mheecha** project are as follows:

- To design and develop a fully functional, user-friendly online store that offers a curated selection of high-quality bags for travel, casual use, trekking, and everyday needs.
- To implement a responsive and intuitive web interface ensuring seamless navigation and shopping experience across desktop and mobile devices.
- To integrate essential e-commerce features, including product catalog management, category-based browsing, shopping cart, secure checkout, and PayPal payment gateway.
- To provide user account functionality, allowing customers to manage profiles, view order history, and update shipping/billing information.

1.4 Proposed System

The proposed system, **Mheecha**, is a modern e-commerce web application developed using the *WordPress* content management system. The platform is designed to provide a professional online shopping experience tailored for students, creators, explorers, and everyday consumers.

Key components and features of the proposed system include:

- **Product Management:** Comprehensive support for multiple product categories (e.g., Travel Bags, Casual Bags, Trekking Bags) with detailed product pages, high-quality images, descriptions, pricing, and variant options.
- **Secure Checkout:** Secure shopping cart functionality, streamlined multi-step checkout process, and integration with the PayPal payment gateway for reliable and widely accepted transactions.
- **User Accounts:** Built-in user authentication and management system enabling registration, login, profile updates, order history viewing, and address management.
- **Admin Backend:** Intuitive WooCommerce dashboard for efficient product management, inventory control, order processing, and basic performance analytics.
- **Performance and Security:** Optimized performance through the responsive Blocksy theme, caching mechanisms, and adherence to standard WordPress security best practices for fast loading times and secure operations.

The system is deployed on a standard web hosting environment and is fully tested for functionality, usability, cross-device compatibility, and basic security. Mheecha serves as a practical, real-world implementation of e-commerce technologies, demonstrating end-to-end development from requirements analysis to deployment.

2 Requirement Analysis

Requirement analysis is the process of identifying, documenting, and analyzing the functional and non-functional needs of a system. It forms the foundation for system design and development by ensuring that the solution meets user expectations and fulfills business and academic objectives.

2.1 Functional Requirements

The functional requirements outline the main features that the **Mheecha** e-commerce system must include to provide a smooth online shopping experience. These requirements are based on user needs and standard e-commerce practices. The key functional requirements are:

1. Product Browsing and Category Navigation

Users can browse products on the main Shop page and navigate using category dropdowns (e.g., Travel Bags, Casual Bags, Trekking Bags).

2. Product Detail Pages

Each product has a dedicated page with high-quality images, detailed descriptions, pricing, variants (e.g., size/color), and an “Add to Cart” button.

3. Shopping Cart Functionality

Users can add or remove items, update quantities, and view a cart summary.

4. Secure Checkout Process

Multi-step checkout allows users to enter shipping and billing details and complete payment via PayPal.

5. Search Functionality

Users can search for products by name, category, or keyword and receive relevant results quickly.

6. User Account Management

Users can register, log in, view order history, update their profile, and manage addresses.

7. Admin Product Management

Administrators can add, edit, or delete products, manage inventory, and process orders through the WooCommerce dashboard.

8. Responsive Design Across Devices

The website adapts smoothly and remains fully usable on desktop, tablet, and mobile screens.

9. Order Confirmation and Tracking

After successful payment, users receive an order confirmation and can track their order status.

10. Contact and Support Form

Users can send messages or inquiries through the Contact Us page for questions or support.

2.2 Non-Functional Requirements

Non-functional requirements specify the quality attributes and constraints of the **Mheecha** e-commerce system. These ensure the platform performs reliably, remains user-friendly, and meets operational standards. The key non-functional requirements are:

1. Performance

The website should load pages within 3 seconds under normal traffic conditions and handle up to 100 concurrent users without significant slowdown.

2. Scalability

The system must support future growth, such as adding more products or categories, and scale to higher traffic by optimizing database queries and using caching.

3. Reliability

The platform should maintain 99% uptime during peak hours, with automatic error handling for failed payments or server issues.

4. Usability

The interface must be intuitive, easy to navigate, and accessible to users with varying technical skills, including clear labels, consistent design, and mobile-friendly layout.

5. Security

The system must protect user data with HTTPS encryption, secure payment processing via PayPal, protection against common vulnerabilities (e.g., SQL injection, XSS), and compliance with basic privacy standards.

6. Maintainability

The codebase and structure (WordPress + WooCommerce) should be well-organized, documented, and easy to update or extend by developers.

7. Portability

The platform should run on standard web hosting environments (e.g., shared hosting, VPS) and be compatible with major browsers (Chrome, Firefox, Safari, Edge).

8. Availability

The site should be accessible 24/7, with minimal planned downtime for updates and automatic recovery from common failures.

9. Compatibility

The website must work consistently across modern browsers (latest versions) and devices (desktop, tablet, mobile) without layout issues or functionality loss.

10. Backup and Recovery

Regular automated backups of the database and files should be implemented, with a recovery time objective (RTO) of less than 4 hours in case of data loss.

2.3 Hardware Requirements

The following hardware specifications are recommended to ensure smooth development, deployment, and operation of the **Mheecha** e-commerce system.

Web Server (Hosting Environment)

A computer or server with sufficient resources to host the website, including WordPress, WooCommerce, product images, database, and potential traffic.

Component	Minimum Specification	Recommended Specification
Processor	Intel Core i5 (8th Gen) or AMD Ryzen 5 equivalent	Intel Core i7/i9 (11th Gen+) or AMD Ryzen 7/9
RAM	4 GB	8-16 GB (for moderate traffic)
Storage	30 GB SSD	50 GB+ NVMe SSD
Operating System	Linux (Ubuntu 20.04 LTS or CentOS/AlmaLinux 8)	Linux (Ubuntu 22.04 LTS or AlmaLinux 9)
Bandwidth	100 Mbps shared connection	1 Gbps or higher

End-User Device

For customers accessing the Mheecha website via browser, basic hardware is sufficient.

Component	Minimum Specification	Recommended Specification
Device	Any modern laptop, desktop, or smartphone	Any modern laptop or desktop
RAM	4 GB	8 GB or higher
Browser	Chrome, Firefox, Edge (latest)	Chrome, Firefox, Edge (latest)
Internet Connection	Stable broadband or mobile data (3G/4G)	High-speed broadband (10 Mbps+)

Backup Storage

Regular backups are essential to protect product listings, images, order history, and customer data.

- **Backup Storage:** External hard drives or cloud-based solutions (e.g., Google Drive, Dropbox, OneDrive) for automated backups.

2.4 Software Requirements

The following software specifications are required to develop, deploy, and operate the **Mheecha** e-commerce system efficiently and securely.

Server-Side Requirements

The main software components needed for the server-side of the **Mheecha** e-commerce platform are as follows:

Software Component	Specification	Purpose
Local Development Environment	XAMPP 8.2+ (Apache, MySQL, PHP 8.1+)	Provides local server for development, testing, and debugging of WordPress and WooCommerce.
Operating System	Linux Ubuntu 22.04 LTS	Stable and secure foundation for production hosting.
Web Server	Nginx 1.24+ (or Apache 2.4 via XAMPP for local)	Handles HTTP requests and improves performance.
Programming Language	PHP 8.1 or 8.2	Executes server-side scripts and dynamic functionality.
Database Management System	MySQL 8.0+ or MariaDB 10.6+	Stores products, users, orders, and settings.
Content Management System	WordPress 6.6+	Manages website structure and content.
E-commerce Plugin	WooCommerce 9.0+	Enables product catalog, cart, checkout, and orders.
Payment Gateway	WooCommerce PayPal Payments	Processes secure customer payments.

Client-Side Requirements

The client-side software components required on the user side for accessing the **Mheecha** e-commerce platform are as follows:

Software Component	Specification	Purpose
Web Browser	Latest stable versions of Google Chrome, Mozilla Firefox, Microsoft Edge, Apple Safari	Renders the website interface and supports interactive features like cart, checkout, and navigation.
JavaScript	Enabled in browser	Enables dynamic features such as real-time cart updates and form validation.
Cookies	Enabled in browser	Maintains user sessions, shopping cart items, and login state.
Internet Connection	Stable broadband or mobile data (3G/4G or higher)	Allows loading of product images, checkout processing, and dynamic content.

3 System Models

The process of creating abstract representations of a system, where each model provides a distinct perspective of the system, is known as system modeling. This process can also be described as depicting a system using graphical notations in the UML. The UML notations employed to represent **Mheecha** are outlined as follows:

3.1 Use Case Diagram

A Use Case Diagram is a behavioral diagram in uml that illustrates a system's functional requirements from the perspective of its users. It depicts the interactions between actors and the system, focusing on what the system should accomplish rather than how it will be implemented. Use case diagrams are useful for identifying key functionalities, defining system boundaries, and ensuring that all user requirements are captured prior to the design phase.

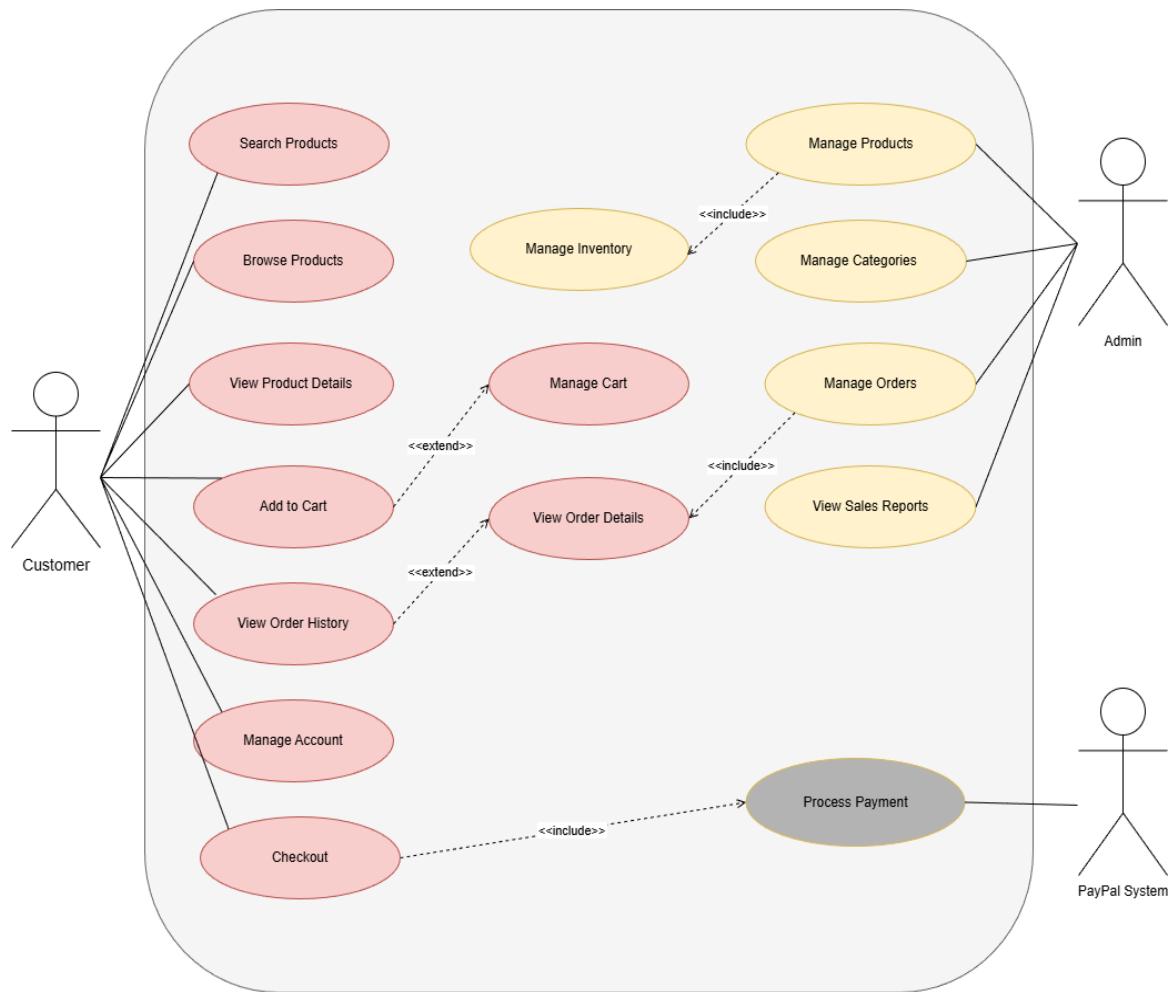


Figure 1: Use Case Diagram for Mheecha

Description:

The following table describes the main use cases of the Mheecha e-commerce system and their responsibilities within the overall architecture:

Use Case	Actors	Description
Search Products	Customer	Enables the customer to search for products by keyword or filter results by category, price, etc.
Browse Products	Customer	Allows the customer to view all available bags in different categories on the Shop page.
View Product Details	Customer	Displays detailed information about a selected product including images, description, price, variants, and stock status.
Add to Cart	Customer	Allows the customer to add a product to the shopping cart from the product or shop page.
Manage Cart	Customer	Lets the customer view cart contents, update quantities, remove items, and see subtotal.
View Order History	Customer	Displays list of previous orders with status and basic details.
View Order Details	Customer	Shows complete information about a specific order. Extended from View Order History.
Manage Account	Customer	Allows the customer to register, log in, update profile, change password, and manage addresses.
Checkout	Customer	Guides the customer through entering shipping/billing details and selecting payment method.
Process Payment	Customer, PayPal System	Handles secure payment processing through PayPal. Included in Checkout.
Manage Products	Admin	Enables the admin to add, edit, or delete products in the catalog.
Manage Inventory	Admin	Allows the admin to update stock levels and availability for each product. Included in Manage Products.
Manage Orders	Admin	Lets the admin view, update status, process, or cancel customer orders.
Manage Categories	Admin	Allows the admin to create, edit, or delete product categories.
View Sales Reports	Admin	Enables the admin to access reports showing total sales, top-selling products, and customer purchase trends to monitor business performance.

3.2 Class Diagram

A class diagram represents the static structure of a system by showing its classes, attributes, methods, and the relationships between them. In the **Mheecha** e-commerce system, the class diagram illustrates how product management, shopping cart functionality, order processing, user accounts, and payment integration are organized and connected.

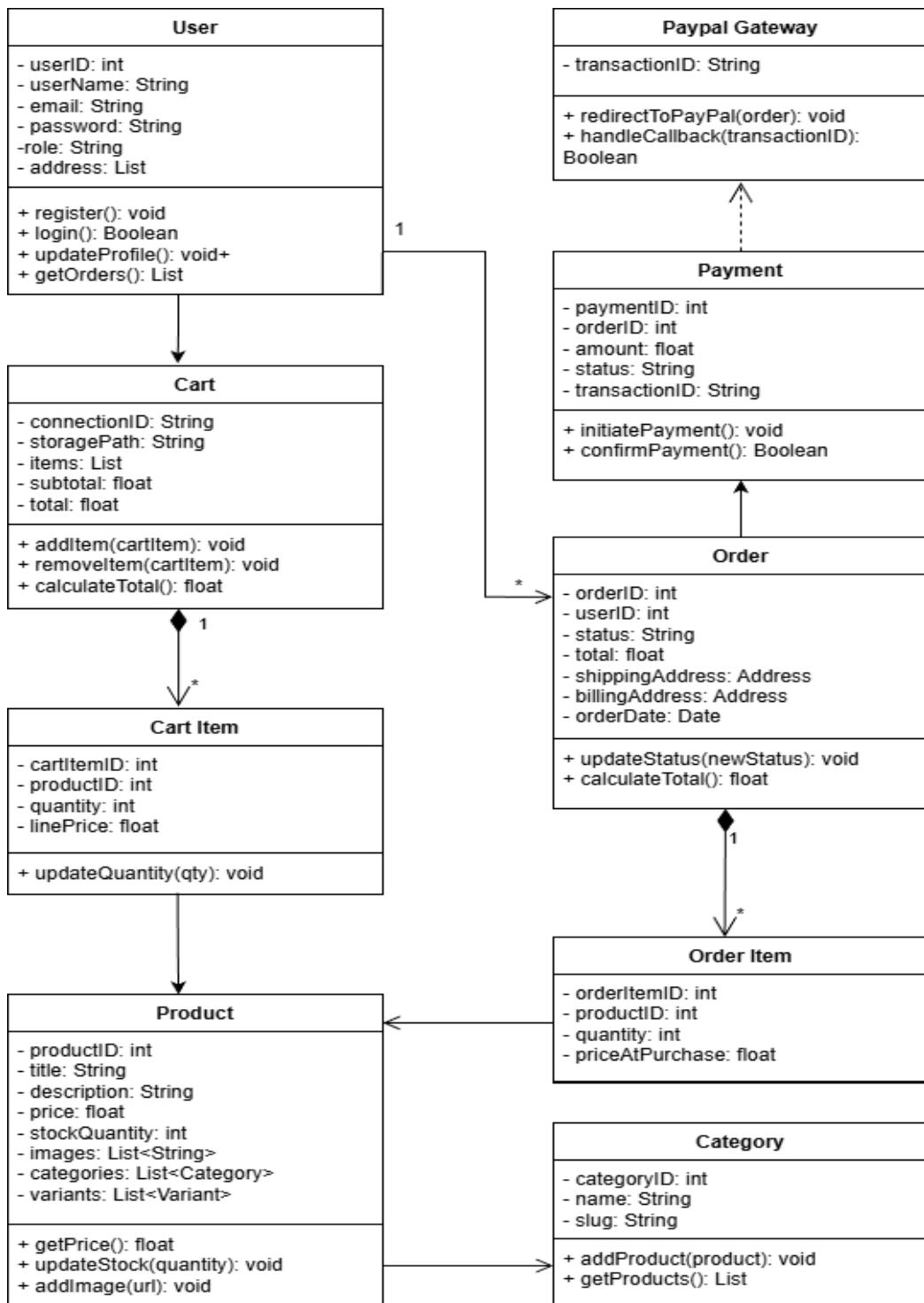


Figure 2: Class diagram of Mheecha

Description:

The following table describes the main classes used in the Mheecha e-commerce system and their responsibilities within the overall architecture:

Class Name	Description
User	Represents an end user (customer or admin) of the Mheecha e-commerce system. The user initiates actions such as browsing products, searching, viewing details, adding to cart, managing cart, checking out, managing account, and viewing order history.
Product	Represents a bag item in the catalog. Stores product details such as title, description, price, stock quantity, images, categories, and variants. Handles product display and inventory updates.
Category	Manages product categories (e.g., Travel Bags, Casual Bags, Trekking Bags). Supports organization, filtering, and navigation on the shop page.
Cart	Represents the user's shopping cart. Manages cart items, quantities, subtotal, and total calculation. Handles adding, removing, and updating items.
CartItem	Represents an individual item in the cart. Links to a Product and stores quantity and line price. Calculates subtotal for the item.
Order	Represents a customer order. Stores order details, status, total, shipping/billing addresses, and order date. Handles order status updates and total calculation.
OrderItem	Represents an item in an order. Links to a Product and stores quantity and price at purchase time. Calculates subtotal for the item.
Payment	Manages payment transactions. Integrates with PayPal to initiate, confirm, and track payments for orders.
PayPalGateway	Represents the external PayPal payment service. Handles redirection to PayPal and callback processing for transaction confirmation.

4 Implementation

The platform was developed using *WordPress* as the content management system and the *WooCommerce* plugin to enable e-commerce functionality. These tools were selected for their robustness, ease of use, and extensive community support, allowing the system to meet the project objectives efficiently. Key features were implemented to provide a seamless, user-friendly shopping experience with secure transactions and effective product presentation.

4.1 Key Features

The core functionalities of the **Mheecha** platform were implemented as follows:

4.1.1 Product Catalog

The product catalog was created using WooCommerce's built-in product management tools. Bags were added as individual products and organized into categories such as Travel Bags, Casual Bags, and Trekking Bags for convenient browsing. Each product entry includes:

- A clear and descriptive title.
- High-quality images showcasing the bag from multiple angles.
- The price of the bag.
- Appropriate categories and tags to facilitate searching and filtering.
- A detailed description covering features, materials, dimensions, and usage tips.

This setup allows customers to easily browse the collection and access all necessary product information directly on the product page.

4.1.2 Shopping Cart

The shopping cart functionality is implemented using WooCommerce's built-in system, providing a robust and user-friendly mechanism for managing selected items during the shopping process. Users are able to:

- Add products to their cart directly from product detail pages or the shop listing using the “Add to Cart” button.
- Access the cart contents at any time via the cart icon in the navigation bar or the dedicated cart page.
- Modify item quantities or remove products from the cart as needed.
- View a real-time summary including subtotal, shipping estimates, and total cost prior to proceeding to checkout.

This implementation ensures a seamless, intuitive, and reliable shopping cart experience consistent with industry-standard e-commerce practices.

4.1.3 PayPal Integration

Secure payment processing was implemented through integration with PayPal as the primary payment gateway. This was achieved by:

- Installing and activating the official *WooCommerce PayPal Payments* plugin from the WordPress repository.
- Configuring the plugin with PayPal account credentials, utilizing sandbox mode for thorough testing during development and switching to live mode for production.
- Enabling PayPal as an available payment method in the WooCommerce settings.

When users select PayPal at checkout, they are securely redirected to the PayPal platform to complete the transaction and are then returned to the Mheecha website with an order confirmation. This implementation fulfills the objective of providing secure and trustworthy payment processing.

4.1.4 Search Functionality

A site-wide search feature was implemented using WooCommerce's built-in search capabilities, enhanced by the theme's responsive design. A prominent search bar was placed in the header navigation menu, allowing users to:

- Enter keywords such as product name, category, or specific bag type.
- Receive instant results displaying matching products with thumbnails, titles, prices, and short descriptions.
- Filter results by category or price range for more precise discovery.

This search functionality improves product discoverability and enhances the overall user experience by enabling quick access to relevant items.

4.1.5 User Account Management

User registration and account management features were implemented using WooCommerce's built-in user system. Registered users can:

- Create an account during checkout or through the dedicated registration page.
- Log in securely to access their personal dashboard.
- View order history, track current orders, and download invoices.
- Update profile details, change passwords, and manage shipping and billing addresses.

These features provide a personalized shopping experience and allow returning customers to manage their information efficiently.

4.2 Website Interface Overview

4.2.1 Home Page

Displays featured products, banners, and categories for easy navigation and quick access to popular items.

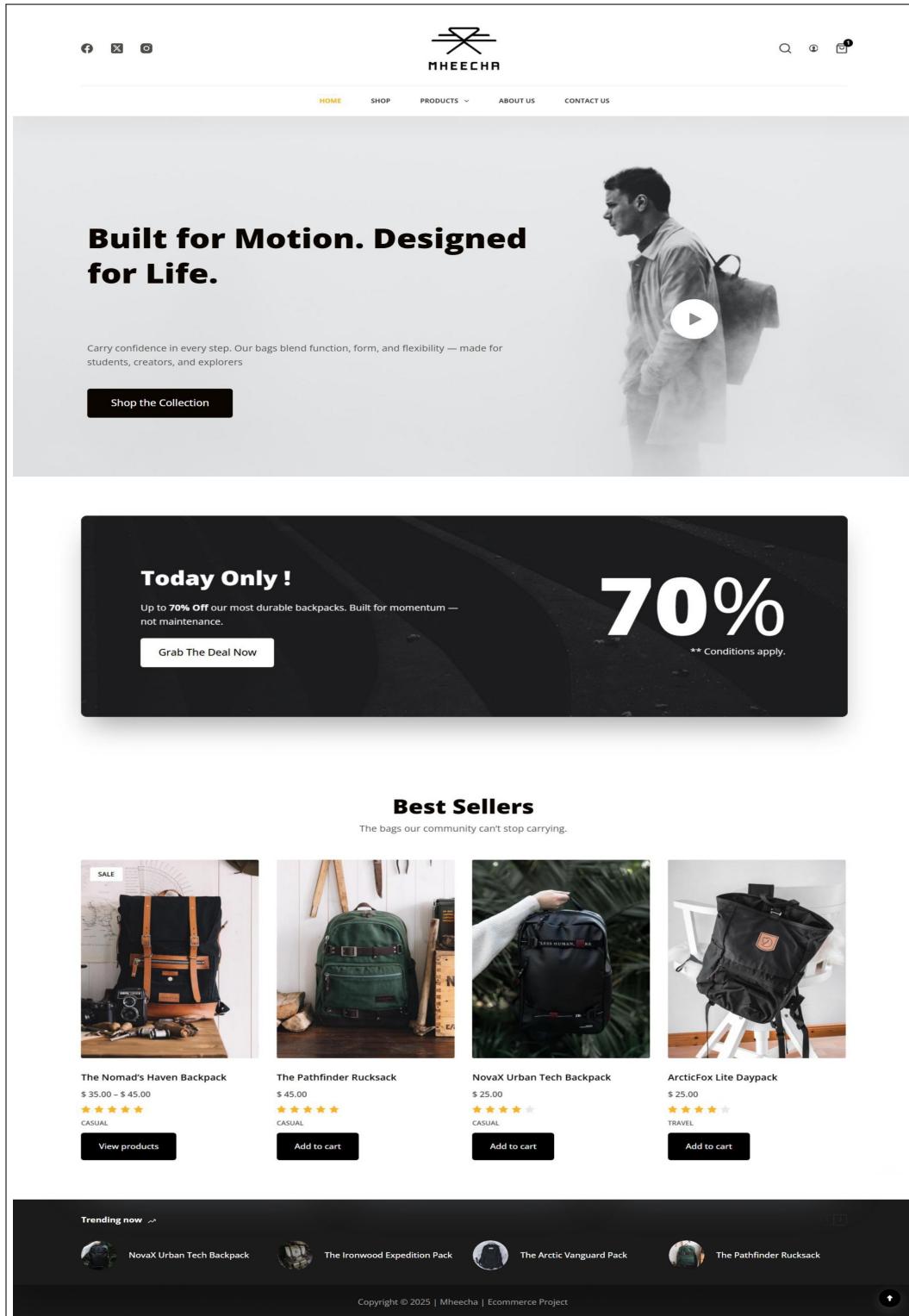


Figure 3: Mheecha Home Page

4.2.2 Shop Page

Displays all products in organized categories for easy browsing

MHEECHA

Default sorting

ArcticFox Lite Daypack \$ 25.00 ★★★★☆ TRAVEL Add to cart

Basket Bag \$ 25.00 CASUAL Buy On Daraz

Bunny Bag \$ 22.00 \$ 27.00 TRAVEL Add to cart

Ember Trail Rolltop Pack \$ 45.00 \$ 55.00 CASUAL Add to cart

NovaX Urban Tech Backpack \$ 25.00 ★★★★☆ CASUAL Add to cart

The Arctic Vanguard Pack \$ 30.00 - \$ 40.00 ★★★★☆ TRAVEL Select options

The Explorer Canvas Leather Backpack \$ 35.00 TRAVEL Add to cart

The Heritage Leather-Canvas Rucksack \$ 35.00 \$ 55.00 TRAVEL Add to cart

The Ironwood Expedition Pack \$ 50.00 \$ 80.00 ★★★★☆ CASUAL Add to cart

The Nomad Heritage Pack \$ 45.00 \$ 60.00 ★★★★☆ CASUAL Add to cart

The Nomad's Haven Backpack \$ 35.00 - \$ 45.00 ★★★★☆ CASUAL View products

The Pathfinder Rucksack \$ 45.00 ★★★★☆ CASUAL Add to cart

Trending now ~

NovaX Urban Tech Backpack The Ironwood Expedition Pack The Arctic Vanguard Pack The Pathfinder Rucksack

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Figure 4: Mheecha Shop Page

4.2.3 Product Page

Shows detailed information about each product, including images, description, and price

The screenshot shows a product page for 'The Arctic Vanguard Pack' on the Mheecha website. At the top, there's a navigation bar with links for HOME, SHOP, PRODUCTS, ABOUT US, and CONTACT US. The main heading is 'The Arctic Vanguard Pack' with a price range of '\$ 30.00 - \$ 40.00'. Below the heading is a description: 'A sleek, weatherproof black backpack built for durability and performance — designed to thrive in snow, city, and beyond.' There are dropdown menus for 'Color' (set to 'Black') and 'Size' (set to 'Medium'). A quantity selector shows '1'. An 'Add to cart' button is prominent. Below the main image, there are four smaller images showing different angles of the backpack. The product has an SKU of 010 and is categorized under TRAVEL. Below the product details, there are tabs for DESCRIPTION, ADDITIONAL INFORMATION, and REVIEWS (1). The description text reads: 'Forged for resilience in the harshest conditions, *The Arctic Vanguard Pack* is the ultimate fusion of performance and minimalist design. Its matte black, weather-resistant shell shrugs off snow, rain, and grit with ease, ensuring your gear stays protected no matter where your path leads. The streamlined silhouette hides a surprisingly spacious interior, complete with padded compartments for laptops, cameras, or field essentials. Every seam, strap, and buckle has been engineered for endurance — made to handle both urban commutes and alpine expeditions. Subtle detailing and a reinforced base give it a tactical elegance, while ergonomic back padding ensures comfort through long treks. Whether you're navigating frozen landscapes or the daily grind, *The Arctic Vanguard* is built to keep pace with your boldest pursuits.'

Related products

Image	Name	Price	Rating	Category	Add to cart
	The Heritage Leather-Canvas Rucksack	\$ 35.00	★★★★★	TRAVEL	Add to cart
	Bunny Bag	\$ 22.00	★★★★★	TRAVEL	Add to cart
	ArcticFox Lite Daypack	\$ 25.00	★★★★★	TRAVEL	Add to cart
	The Explorer Canvas Leather Backpack	\$ 35.00	★★★★★	TRAVEL	Add to cart

Trending now

Image	Name
	NovaX Urban Tech Backpack
	The Ironwood Expedition Pack
	The Arctic Vanguard Pack
	The Pathfinder Rucksack

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Figure 5: Mheecha Product Page

4.2.4 About Us Page

Provides information about the company, mission, and the team.

The screenshot shows the 'About Us' page of the Mheecha website. At the top, there's a navigation bar with links for HOME, SHOP, PRODUCTS, ABOUT US (which is highlighted in yellow), and CONTACT US. The main header is 'About Us' with a subtext 'Mheecha — Bags that move with you.' Below this, there are four circular icons representing 'High Precision', 'Award Winning', 'Environment Friendly', and 'Worldwide Shipping', each with a brief description. The next section is titled 'Our Amazing Team' with a subtitle 'Meet the passionate students behind Mheecha'. It features four team members with their names and roles: Firoj Paudel (Creative Head), Nilima Mainali (Product Designer), Priyanka Thapa (Marketing Lead), and Subodh Ghimire (UI/UX Designer). Each team member has a small profile picture and social media links below their name. A large dark callout box at the bottom left encourages users to 'Visit Our Store' with a 'Start Shopping Now' button. The footer contains a 'Trending now' section with four product cards: NovaX Urban Tech Backpack, The Ironwood Expedition Pack, The Arctic Vanguard Pack, and The Pathfinder Rucksack. The footer also includes the copyright notice 'Copyright © 2025 | Mheecha | Ecommerce Project'.

Figure 6: Mheecha About Us Page

4.2.5 Contact Us Page

Contains a contact form and company details for customer inquiries

The screenshot shows the 'Contact Us' page of the Mheecha website. At the top, there is a navigation bar with links for HOME, SHOP, PRODUCTS, ABOUT US, and CONTACT US. The CONTACT US link is highlighted in yellow. Below the navigation is a header section featuring a photo of a person with a backpack, the text 'Contact Us', and a subtext 'We'd love to hear from you!'. The main content area is divided into four sections: 'Physical Address' (with a location pin icon), 'Work Hours' (with a clock icon), 'Email Address' (with an envelope icon), and 'Phone Numbers' (with a phone icon). Each section contains the company's contact information. Below these sections is a map of Kathmandu, Nepal, showing various landmarks and the location of MADAN BHANDARI MEMORIAL COLLEGE. To the right of the map is a large form titled 'We'd love To Hear From You!' with fields for 'Full Name', 'Email', 'Subject', and 'Message', each accompanied by a required asterisk (*). A 'Send Message' button is at the bottom of the form. At the very bottom of the page is a dark footer bar with a 'Trending now' section showing product thumbnails for 'NovaX Urban Tech Backpack', 'The Ironwood Expedition Pack', 'The Arctic Vanguard Pack', and 'The Pathfinder Rucksack'. The footer also includes a copyright notice: 'Copyright © 2025 | Mheecha | Ecommerce Project'.

Figure 7: Mheecha Contact Us Page

4.2.6 Shopping Cart Page

Displays selected products for purchase and allows quantity adjustments

The screenshot shows the Mheecha Shopping Cart page. At the top, there's a header with social media icons, the Mheecha logo, and a search bar. Below the header, a navigation bar includes links for HOME, SHOP, PRODUCTS (with a dropdown arrow), ABOUT US, and CONTACT US.

The main content area is titled "Cart". It displays two items:

- The Arctic Vanguard Pack - Black, Medium**: \$35.00. Quantity: 1. Includes a minus, plus, and delete button.
- Bunny Bag**: \$22.00. Quantity: 1. Includes a minus, plus, and delete button.

Below the cart table are three buttons: "Coupon code", "Apply coupon" (in a dark box), and "Update cart".

To the right of the cart table is a sidebar titled "Cart totals" which shows:

Subtotal	\$ 57.00
Coupon: mheecha5	-\$ 5.00 [Remove]
Shipping	Free shipping
Shipping to Kathmandu, Bagmati, 44600, Nepal.	
Change address	
Total	\$ 52.00

A large "Proceed to checkout" button is at the bottom of the sidebar.

At the very bottom of the page, there's a dark footer section titled "Trending now" with four product cards: NovaX Urban Tech Backpack, The Ironwood Expedition Pack, The Arctic Vanguard Pack, and The Pathfinder Rucksack. The footer also includes the copyright notice "Copyright © 2025 | Mheecha | Ecommerce Project".

Figure 8: Mheecha Shopping Cart Page

4.2.7 Checkout Page

Enables users to enter billing/shipping details and complete orders

The screenshot shows the Mheecha Checkout page. At the top, there's a header with social media icons, the Mheecha logo, and a search bar. Below the header, the word "Checkout" is centered. On the left, there's a "Billing details" form with fields for First name, Last name, Country / Region (Nepal), Street address (Dhaneshwor), Town / City (Kathmandu), State / Zone (Bagmati), Postcode / ZIP (optional) (44600), Phone (9812345678), and Email address (ghimiresubodh59@gmail.com). There are also sections for "Ship to a different address?" and "Order notes (optional)". On the right, there's a "Your order" summary table:

Product	Subtotal
The Arctic Vanguard Pack - Black, Medium × 1	\$ 35.00
Bunny Bag × 1	\$ 22.00
Subtotal	\$ 57.00
Coupon: mheecha5	-\$ 5.00 [Remove]
Shipping	Free shipping
Total	\$ 52.00

At the bottom of the right sidebar, there are payment options: "Cash on delivery" (radio button selected) and "PayPal" (radio button). A note states: "Your personal data will be used to process your order, support your experience throughout this website, and for other purposes described in our privacy policy." A yellow "PayPal Checkout" button is at the bottom.

Trending now ↗

NovaX Urban Tech Backpack The Ironwood Expedition Pack The Arctic Vanguard Pack The Pathfinder Rucksack

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Figure 9: Mheecha Checkout Page

4.2.8 Order Confirmation Page

Displays order details confirming successful payment and purchase completion.

The screenshot shows the Mheecha E-commerce website's order confirmation page. At the top, there is a header with social media icons (Facebook, X, Instagram), the Mheecha logo, and a search bar. Below the header, a navigation menu includes links for HOME, SHOP, PRODUCTS (with a dropdown arrow), ABOUT US, and CONTACT US.

The main content area features a "Checkout" section with a success message: "Thank you. Your order has been received." Below this, order details are listed in a table:

Order number: 702	Date: December 27, 2025
Total: \$ 52.00	Payment method: PayPal

Under "Order details", a table summarizes the purchase items and costs:

Product	Total
The Arctic Vanguard Pack - Black, Medium × 1	\$ 35.00
Bunny Bag × 1	\$ 22.00
Subtotal:	\$ 57.00
Discount:	-\$ 5.00
Shipping:	Free shipping
Total:	\$ 52.00
Payment method:	PayPal

Below the order summary, two address sections are shown: "Billing address" and "Shipping address". Both sections contain identical information:

Subodh Ghimire
Dhaneshwor
Kathmandu
Bagmati
44600
Nepal
9812345678
ghimiresubodh59@gmail.com

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Figure 10: Mheecha Order Confirmation Page

4.2.9 Admin Dashboard (WooCommerce)

Order Dashboard

Displays all received orders with status and customer details for easy management.

The screenshot shows the WooCommerce Order dashboard. At the top, there are buttons for 'Add order' and 'Screen Options'. Below that, a filter bar includes 'All (4)', 'Processing (1)', 'On hold (1)', and 'Completed (2)'. There are also buttons for 'Bulk actions', 'Apply', 'All dates', 'All sales channels', 'Filter by registered customer', and 'Filter'. The main area displays a table with the following data:

	Order	Date	Status	Total	Origin
<input type="checkbox"/>	#704 Nilima Mainali	25 minutes ago	On hold	\$ 40.00	Direct
<input type="checkbox"/>	#703 Priyanka Thapa	27 minutes ago	Processing	\$ 45.00	Direct
<input type="checkbox"/>	#702 Subodh Ghimire	1 hour ago	Completed	\$ 52.00	Direct
<input type="checkbox"/>	#676 Firoj Paudel	Dec 26, 2025	Completed	\$ 20.00	Direct

At the bottom, there are 'Bulk actions' and 'Apply' buttons.

Figure 11: Mheecha Order Dashboard

Product Dashboard

Displays all products, allowing the admin to add, edit, or remove items, manage inventory, and update product details efficiently.

The screenshot shows the WooCommerce Product dashboard. At the top, there are buttons for 'Add new product', 'Import', and 'Export'. Below that, a filter bar includes 'All (13)', 'Published (13)', 'Trash (1)', and 'Sorting'. There are also buttons for 'Bulk actions', 'Apply', 'Select a category', 'Filter by product type', 'Filter by stock status', 'Filter by brand', and 'Filter'. The main area displays a table with the following data:

	Name	SKU	Stock	Price	Categories	Tags	Brands	Date
<input type="checkbox"/>	Basket Bag	001	In stock	\$ 25.00	Casual	—	—	Published 2020/03/18 at 3:35 pm
<input type="checkbox"/>	Bunny Bag	002	In stock	\$ 27.00 \$ 22.00	Travel	—	—	Published 2020/03/16 at 9:21 am
<input type="checkbox"/>	The Explorer Canvas Leather Backpack	003	In stock	\$ 35.00	Travel	—	—	Published 2020/03/16 at 9:19 am
<input type="checkbox"/>	The Heritage Leather-Canvas Rucksack	004	In stock	\$ 55.00 \$ 35.00	Travel	—	—	Published 2020/03/16 at 9:14 am
<input type="checkbox"/>	Ember Trail Rolltop Pack	005	In stock	\$ 50.00 \$ 45.00	Casual	—	—	Published 2020/03/16 at 9:11 am

Figure 12: Mheecha Product Dashboard

5 Testing and SEO

5.1 Testing

To ensure the reliability, security, and usability of the **Mheecha** e-commerce platform, a comprehensive testing strategy was adopted throughout the development lifecycle. Testing was performed across functional, usability, compatibility, and performance dimensions.

Functional Testing

Functional testing validated that all core features operate correctly:

- Product catalog, category navigation, and search functionality were tested by adding sample products and verifying accurate display, filtering, and sorting.
- Shopping cart operations (adding/removing items, quantity updates, subtotal calculation) were validated with multiple products and edge cases.
- Checkout process, including shipping/billing information entry and PayPal payment flow, was tested using sandbox mode to confirm successful order creation and confirmation.
- User account features (registration, login/logout, profile updates, order history viewing) were checked for data accuracy and persistence.
- Administrative functions (product addition/editing, inventory management, order processing) were verified end-to-end through the WooCommerce dashboard.

Usability Testing

Usability testing focused on the user experience:

- Navigation menus, dropdowns, buttons, and search bar were evaluated for intuitiveness and accessibility.
- The interface was tested on real users to assess ease of browsing, adding items to cart, and completing purchases.
- Feedback was collected on layout clarity, text readability, and overall user satisfaction.

Compatibility Testing

Compatibility was verified across different environments:

- Browsers: Latest versions of Google Chrome, Mozilla Firefox, Microsoft Edge, and Apple Safari.
- Devices: Desktop computers, tablets, and mobile phones (iOS and Android) to confirm responsive design and touch-friendly interaction.

Performance Testing

Performance was evaluated using browser developer tools and manual checks:

- Page load times were measured to ensure most pages load within 3 seconds under normal conditions.
- Cart updates, checkout process, and image loading were tested for responsiveness.

All identified issues were resolved, resulting in a stable, functional, and user-friendly platform ready for deployment.

5.2 Search Engine Optimization

Search Engine Optimization (SEO) was implemented to enhance the visibility and discoverability of the Mheecha e-commerce platform on search engines such as Google, Bing, and others. The following detailed SEO practices were incorporated:

- **Clean and SEO-Friendly URLs**

WordPress permalinks were configured to generate readable and descriptive URLs instead of default query strings.

- **Keyword Research and Optimization**

Relevant keywords related to bags, fashion accessories, and online shopping were researched and strategically integrated into product titles, descriptions, headings, and content to improve search engine ranking and attract targeted traffic.

- **Meta Titles and Descriptions**

The Yoast SEO plugin was installed and configured to automatically generate optimized meta titles and descriptions for all pages, product listings, and categories. Custom meta tags were added to improve click-through rates from search results.

- **Image Optimization**

All product images were given descriptive file names and meaningful alt text. This improves accessibility and helps images appear in Google Image Search.

- **Mobile-First Responsive Design**

The Blocksy theme ensures full mobile responsiveness, meeting Google's mobile-first indexing requirements and improving rankings on mobile searches.

- **Internal Linking**

Strategic internal links were added between related products, category pages, and informational pages (About Us, Contact Us) to improve site structure and crawlability.

These SEO measures enhance organic search visibility, improve user experience, and support long-term traffic growth for the Mheecha e-commerce platform.

6 Conclusion and Future Enhancements

6.1 Conclusion

The **Mheecha** e-commerce platform was successfully designed and developed as a functional online store for lifestyle bags, catering to travel, casual, and trekking needs. Built using *WordPress* the system provides a seamless shopping experience with essential features such as product browsing, shopping cart, secure checkout via PayPal, user account management, and responsive design.

The platform was developed locally using the *XAMPP* environment, ensuring efficient testing and iteration during the project lifecycle. The implementation demonstrates practical application of web development technologies, e-commerce system configuration, payment gateway integration, and user-centric interface design. The website meets its core objectives by offering a reliable, intuitive, and visually appealing online shopping solution for students, creators, explorers, and everyday users.

Overall, Mheecha not only fulfills the academic requirements but also establishes a strong foundation for real-world deployment, effectively showcasing modern web technologies and industry-standard e-commerce best practices.

6.2 Future Enhancements

The Mheecha platform can be further enhanced in future versions through the following improvements:

1. Advanced User Management

Implementation of role-based access control, customer loyalty programs, and personalized recommendations to enhance user engagement and retention.

2. Additional Payment Gateways

Integration of alternative payment methods such as Stripe, Razorpay, or mobile wallets to support a wider range of users and regions.

3. Wishlist and Favorites

Introduction of a wishlist feature for logged-in users to save products for future purchase.

4. Advanced Search and Filters

Enhancement of search functionality with filters for price range, material, size, and color to improve product discoverability.

5. Cloud Deployment and Scalability

Deployment on a cloud platform (e.g., AWS, DigitalOcean, or SiteGround) to ensure high availability, automatic scaling, and improved performance under increased traffic.

6. Mobile Application

Development of a companion mobile app for iOS and Android to provide a native shopping experience.

References

- [1] WordPress.org, *WordPress Codex and Developer Documentation*, 2024. [Online]. Available: <https://wordpress.org/documentation/>
- [2] WooCommerce Team, *WooCommerce Documentation*, Automattic Inc., 2024. [Online]. Available: <https://woocommerce.com/documentation/>
- [3] Creative Themes, *Blocksy Theme Documentation*, 2024. [Online]. Available: <https://creativethemes.com/blocksy/docs/>
- [4] WooCommerce, *WooCommerce PayPal Payments – Official Plugin Documentation*, 2024. [Online]. Available: <https://woocommerce.com/products/woocommerce-paypal-payments/>
- [5] Apache Friends, *XAMPP Official Documentation*, 2024. [Online]. Available: <https://www.apachefriends.org/docs/>
- [6] The PHP Group, *PHP: Hypertext Preprocessor – Official Manual*, 2024. [Online]. Available: <https://www.php.net/manual/en/>
- [7] Oracle Corporation, *MySQL 8.0 Reference Manual*, 2024. [Online]. Available: <https://dev.mysql.com/doc/refman/8.0/en/>
- [8] MariaDB Foundation, *MariaDB Knowledge Base*, 2024. [Online]. Available: <https://mariadb.com/kb/en/documentation/>