



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
School of Electrical Engineering and Computer Science (SEECS)

CS-344: WEB ENGINEERING

END SEMESTER PROJECT

E-COMMERCE WEBSITE

| E-COMMERCE WEBSITE | |
|--------------------|--------|
| NAME | CMS ID |
| Ahmar Kamran | 404374 |
| Saif Sheikh | 429592 |
| Zainab Athar | 405094 |

DATE OF SUBMISSION: 29 DECEMBER 2024

PROBLEM STATEMENT

Shopi is an e-commerce platform designed to empower rural women entrepreneurs by providing them with an accessible and user-friendly online marketplace. It enables these women to showcase and sell their products, reaching a wider audience beyond their local communities. The platform focuses on simplicity, security, and scalability, offering features like product listings, secure payment options, and order tracking. By bridging the gap between rural businesses and urban markets, Shopi promotes financial independence and fosters social empowerment for women in rural areas.

TECH STACK USED

1. Frontend Development:

- **HTML, CSS, JavaScript:** For building the structure, styling, and interactivity of the user interface.

2. Backend Development:

- **Laravel (PHP Framework):**
 - Used for server-side scripting, routing, and MVC architecture to manage business logic.
 - Provides built-in security features and database management tools.

3. Database Management:

- **MySQL:**
 - Relational database for storing user data, product details, orders, and transactions securely.

STAKEHOLDER REQUIREMENTS

1. Rural Women Entrepreneurs (Primary Users):

- **User-Friendly Interface:** Simple and intuitive design for easy navigation, even for users with limited technical knowledge.
- **Product Management Tools:** Ability to add, edit, and manage product listings with images, descriptions, and prices.
- **Secure Payment System:** Reliable payment gateway to ensure safe transactions.

2. Customers (Buyers):

- **Product Search and Filtering:** Quick search options and filters to find products easily.
- **Secure Checkout:** Multiple payment methods with encryption for safe transactions.

3. Website Administrators (Backend Management):

- **User Management:** Create, update, and monitor user accounts for both sellers and buyers.
- **Content Moderation:** Approve or reject product listings to ensure quality and compliance.

FEATURES

USER DASHBOARD

A centralized control panel for managing users, products, orders, and analytics, ensuring smooth platform operations and security oversight.

- ❖ Profile Management: Update personal details, addresses, and preferences.
- ❖ Order History: View past orders, invoices, and delivery statuses.
- ❖ Product Management (for Sellers): Add, edit, and delete product listings with images and descriptions.

ADMIN DASHBOARD

A personalized space for buyers and sellers to manage profiles, orders, product listings, and track earnings or purchases.

- ❖ User Management: View, edit, and manage user accounts (sellers and buyers).
- ❖ Product Moderation: Approve, reject, or remove product listings to maintain quality standards.
- ❖ Order Management: Monitor orders, track status, and handle refunds or disputes.
- ❖ Analytics & Reports: Generate reports on sales, traffic, and user engagement for performance tracking.
- ❖ Inventory Control: Oversee stock levels and manage product categories.

USER CONVENIENCE

Simplified navigation, mobile-friendly design, secure payments, order tracking, and multilingual support for an easy and accessible shopping experience.

- ❖ Search and Filters: Advanced product search and filters based on categories, price, and ratings.
- ❖ Responsive Design: Mobile-friendly interface for easy access on any device.
- ❖ Quick Checkout: Simplified checkout process with saved addresses and payment options.

IMPACT

Shopi empowers rural women entrepreneurs by providing them with a platform to showcase and sell their products, enabling financial independence and social growth. It bridges the gap between rural businesses and urban markets, fostering economic development and community upliftment.

TESTING

The platform underwent extensive testing to ensure functionality, security, and usability. Key test results include:

- **Unit Tests:** All unit tests passed, verifying the correctness of individual components.
- **Integration Tests:** Integration tests confirmed that different components of the system work together as expected.
- **User Acceptance Testing (UAT):** Feedback from rural women entrepreneurs was positive, with users finding the platform easy to use and effective for selling their products

TECHNICAL DECISIONS

Several key technical decisions were made during the development of the e-commerce platform:

- **Framework Selection:** Laravel was chosen for its robust features, ease of use, and strong community support.
- **Database:** MySQL was selected for its reliability and compatibility with Laravel.
- **Authentication:** Laravel's built-in authentication system was used to ensure secure user login and registration.
- **Storage:** The public directory was used for storing images, with a symbolic link to storage for public access.

CONFLICTING REQUIREMENTS AND RESOLUTIONS

During the development process, several conflicting requirements were identified and resolved:

1. **Requirement Conflict:** Some stakeholders wanted a complex, feature-rich platform, while others preferred a simple, easy-to-use interface.
 - **Resolution:** The platform was designed with a modular approach, allowing for the addition of advanced features over time while maintaining a simple and intuitive interface for initial users.
2. **Requirement Conflict:** There was a need for both high security and ease of access for rural women with limited digital literacy.
 - **Resolution:** The platform implemented strong security measures such as hashed passwords and secure payment processing, while also providing user-friendly tutorials and support to help users navigate the system.
3. **Requirement Conflict:** Some stakeholders wanted extensive customization options for product listings, while others were concerned about the complexity this would add.
 - **Resolution:** The platform included basic customization options for product listings, with the ability to add more advanced customization features in future updates based on user feedback.

TEST RESULTS

PS C:\xampp\htdocs\Shopi> php artisan test

PASS Tests\Feature\CartTest

| | |
|--|--------|
| ✓ it can add item to cart | 14.10s |
| ✓ it can increment item quantity in cart | 0.13s |
| ✓ it can decrement item quantity in cart | 0.14s |
| ✓ it can remove item from cart | 0.14s |
| ✓ it can clear the cart | 0.13s |

PASS Tests\Feature\CheckoutTest

| | |
|--|--------|
| ✓ it redirects unauthenticated users to login on checkout page | 1.58s |
| ✓ it allows authenticated users to access checkout page | 10.46s |
| ✓ it validates the order details for authenticated users | 0.65s |
| ✓ it restricts unauthenticated users from order creation | 0.14s |
| ✓ it restricts unauthenticated users from payment routes | 0.24s |

PASS Tests\Feature\DashboardTest

| | |
|---|-------|
| ✓ it renders the dashboard with user orders | 2.06s |
| ✓ it generates an invoice pdf | 0.88s |

PASS Tests\Feature\ProductDetailsTest

| | |
|---|-------|
| ✓ it renders the product details page with valid product id | 0.42s |
| ✓ it returns 404 for invalid product id | 0.35s |

PASS Tests\Feature\Auth\AuthenticationTest

| | |
|--|-------|
| ✓ login screen can be rendered | 1.44s |
| ✓ users can authenticate using the login screen | 1.04s |
| ✓ users can not authenticate with invalid password | 0.56s |

PASS Tests\Feature\Auth\EmailVerificationTest

| | |
|---|-------|
| ✓ email verification screen can be rendered | 0.43s |
| ✓ email can be verified | 0.35s |
| ✓ email is not verified with invalid hash | 0.38s |

PASS Tests\Feature\Auth\PasswordConfirmationTest

| | |
|---|-------|
| ✓ confirm password screen can be rendered | 0.92s |
| ✓ password can be confirmed | 0.24s |
| ✓ password is not confirmed with invalid password | 0.37s |

PASS Tests\Feature\Auth\PasswordResetTest

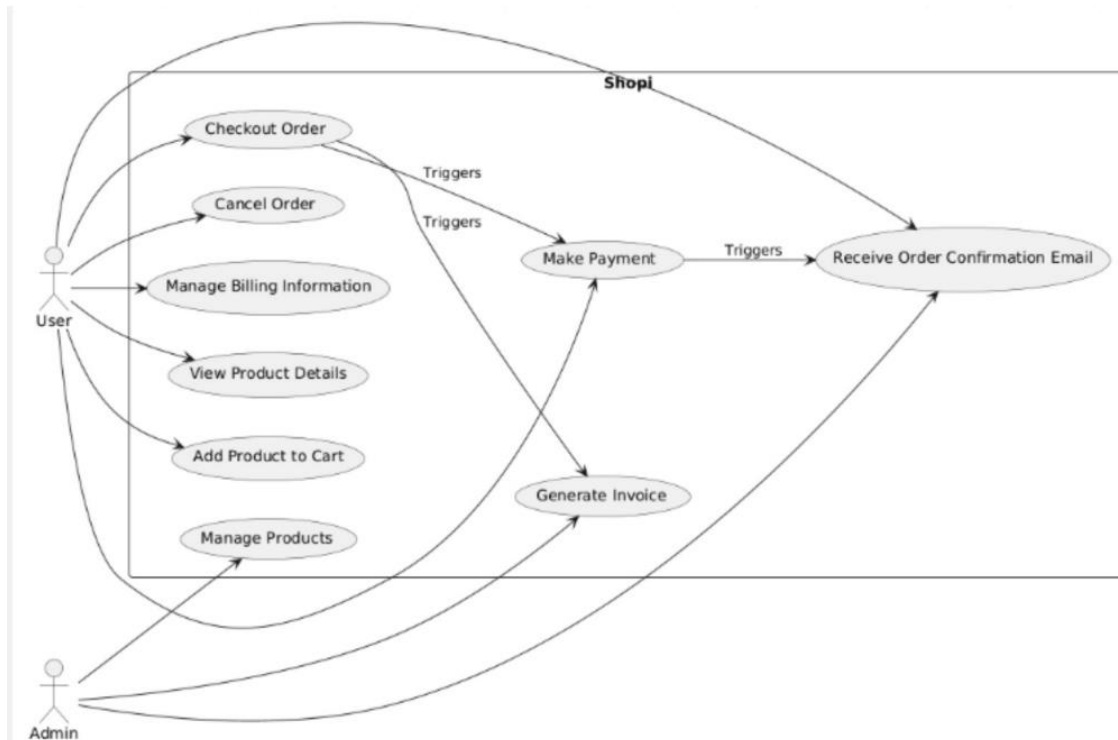
| | |
|--|-------|
| ✓ reset password link screen can be rendered | 1.01s |
| ✓ reset password link can be requested | 2.49s |
| ✓ reset password screen can be rendered | 1.53s |
| ✓ password can be reset with valid token | 0.53s |

PASS Tests\Feature\Auth\PasswordUpdateTest

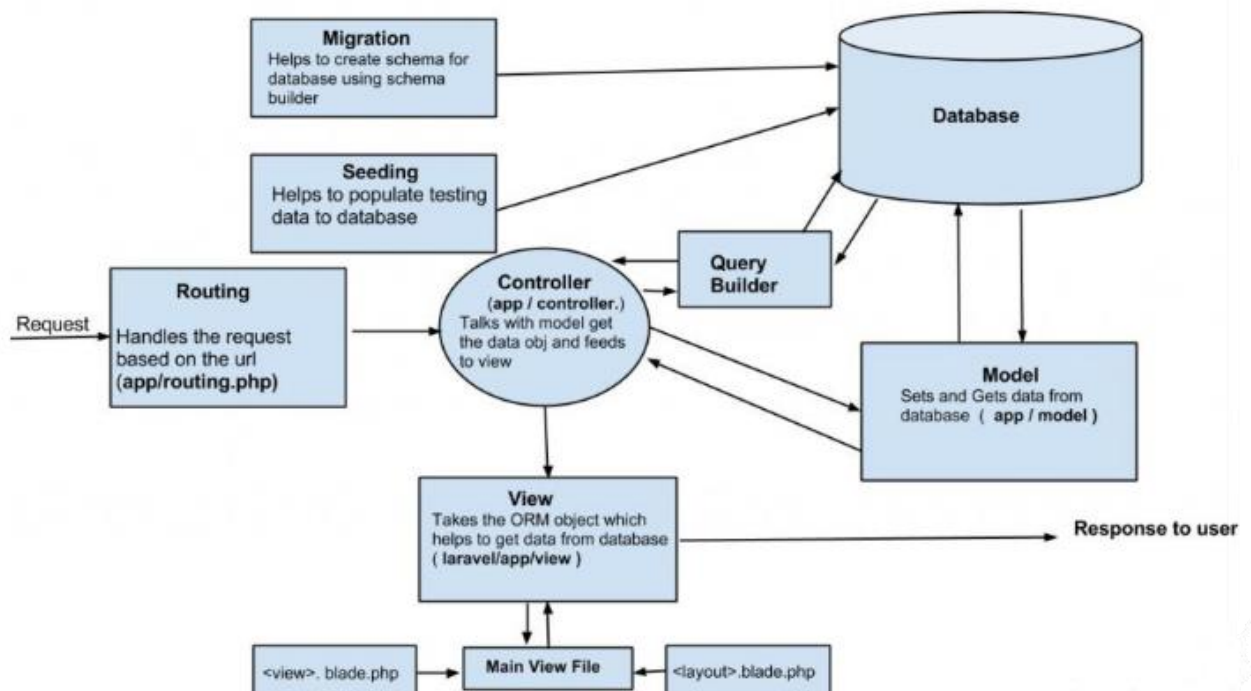
| | |
|--|-------|
| ✓ password can be updated | 0.35s |
| ✓ correct password must be provided to update password | 0.20s |

UML DIAGRAMS

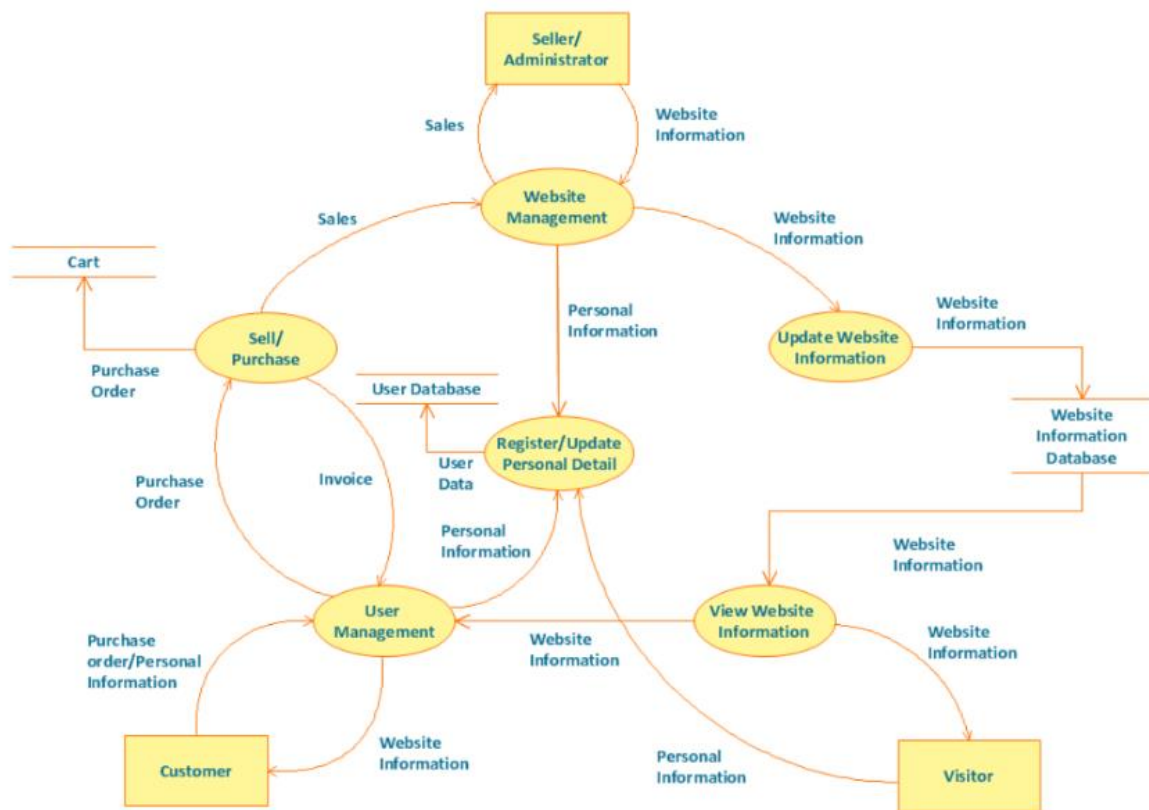
USE CASE DIAGRAM



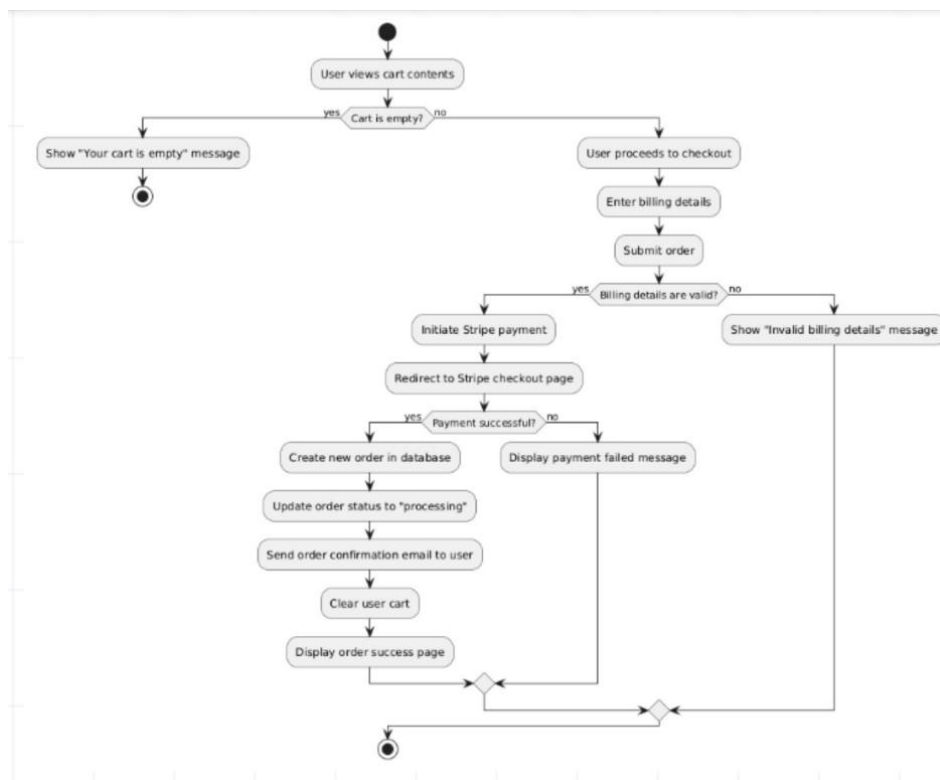
ARCHITECTURE DIAGRAM



DATA FLOW CHART




ACTIVITY DIAGRAM






VERSION CONTROL


GITHUB


Commits




 **main** ▼



 **All users** ▼  **All time** ▼


 Commits on Dec 29, 2024


Update README.md
 ZainabAthar authored 44 minutes ago



working code
 Ahmarkamran committed 4 hours ago


 9039b81  


 1b871f8 



 Commits on Dec 28, 2024


added tests for software construction
 Ahmarkamran committed yesterday


 1d3dc7f 



 Commits on Dec 26, 2024

strip method removed and mailing disabled
 Ahmarkamran committed 3 days ago

 3a20e62 


 Commits on Dec 24, 2024

images are visible
 ZainabAthar committed 5 days ago

 2a92828 

SCREENSHOTS

LOGIN/REGISTER




Email

Password

☐ Remember me

[Forgot your password?](#)



Name


Email


Password

Confirm Password

[Already registered?](#)

USER DASHBOARD



Log in [Register](#) 

CATEGORIES

- Shoes
- Bags

FILTER BY PRICE

Range: \$16 - \$300

[Apply Filter](#)

We found 4 items for you!




Floral Shoes
\$12.00
\$24.00




Sports Shoes
\$120.00
\$400.00



Leather Bag
\$50.00
\$70.00



Hi, Zainab Athar [My Account](#) 

Your Orders

| Products | Product Names | Status | Total | Order Date | Quantity | Actions |
|----------|---------------|--------|-------|------------|----------|---------|
|----------|---------------|--------|-------|------------|----------|---------|



Contact
Address: Rural Area X
Phone: +212 682860421
Email: rural-web@gmail.com



Hi, Zainab Athar [My Account](#)



Profile Information

Update your account's profile information and email address.

Name

Email

[Save](#)

Update Password

Ensure your account is using a long, random password to stay secure.

Current Password

ADMIN DASHBOARD

Shopi

Dashboard

CUSTOMERS

- Billing Details
- Users

SHOP

- Categories
- Order Items
- Orders
- Products

ZA

Welcome, Zainab Athar

Sign out

Billing details

Categories

Order items

Orders

Products

Users

Last 30 Days

Total Sales

Unshipped Orders

\$0

\$0

0

Total sales for the last 30 days

Total income from completed orders

Orders that have not been shipped yet

Shopi

Dashboard

CUSTOMERS

- Billing Details
- Users

SHOP

- Categories
- Order Items
- Orders
- Products

Billing Details / List

ZA

Billing Details

New billing detail

Export

Search

| <input type="checkbox"/> | User id | User | User | Phone | Billing address | City | Country | |
|--------------------------|---------|--------------|---------------------------------|---------------|-----------------|-------|---------|------|
| <input type="checkbox"/> | 2 | Zainab Athar | zathar.bese22seecs@seecs.edu.pk | +923225232169 | ABC | Pindi | PK | Edit |

Showing 1 result

10 per page

Shopi

Dashboard

CUSTOMERS

- Billing Details
- Users

SHOP

- Categories
- Order Items
- Orders
- Products

Users / List

ZA

Users

New user

Search

| <input type="checkbox"/> | Name | Email | Is admin | Created at | Updated at | |
|--------------------------|--------------|---------------------------------|-------------------------------------|--------------|--------------|------|
| <input type="checkbox"/> | ABC | ABC@gmail.com | <input checked="" type="checkbox"/> | Dec 29 07:34 | Dec 29 07:34 | Edit |
| <input type="checkbox"/> | Zainab Athar | zathar.bese22seecs@seecs.edu.pk | <input checked="" type="checkbox"/> | Dec 29 08:50 | Dec 29 08:50 | Edit |

Showing 1 to 2 of 2 results

10 per page

Shopi

Dashboard

CUSTOMERS

Billing Details

Users

SHOP

Categories

Order Items

Orders

Products

Categories / List

ZA

Categories

New category

Search

| <input type="checkbox"/> | Name | Created at | Updated at | |
|--------------------------|-------|------------------|------------------|---|
| <input type="checkbox"/> | Shoes | 29/12/2024 07:34 | 29/12/2024 07:34 | Edit Delete |
| <input type="checkbox"/> | Bags | 29/12/2024 07:34 | 29/12/2024 07:34 | Edit Delete |

Showing 1 to 2 of 2 results

10 per page

Shopi

Dashboard

CUSTOMERS

Billing Details

Users

SHOP

Categories

Order Items

Orders

Products

Order Items / List

ZA

Order Items

New order item

Export

Search

No records found

Shopi

Dashboard

CUSTOMERS

Billing Details

Users

SHOP

Categories

Order Items

Orders

Products

Products / List





ZA

Products

New product

Export

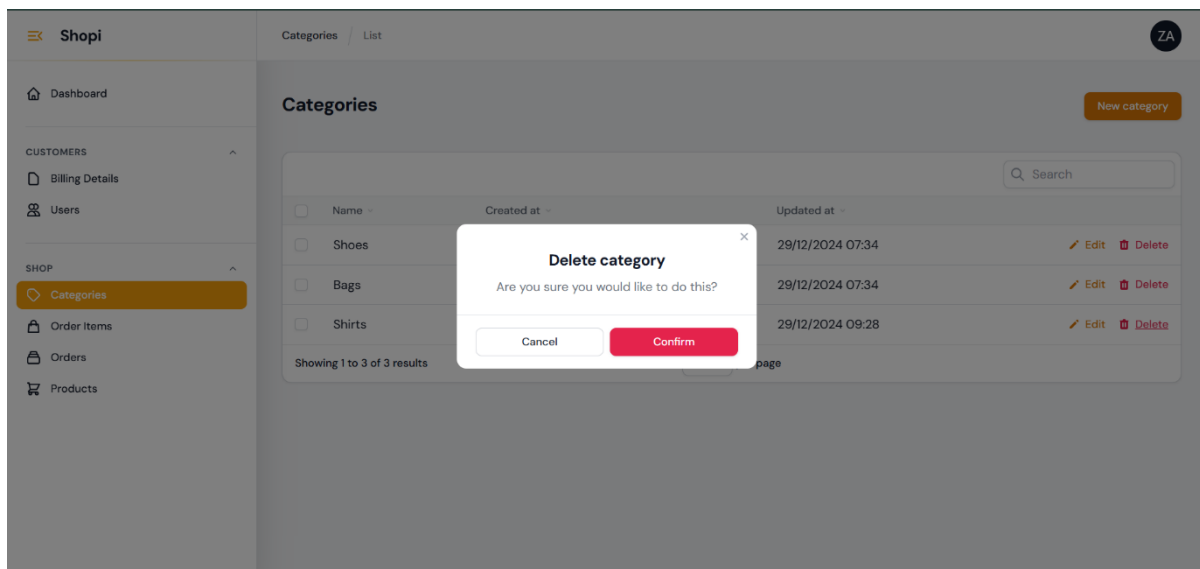
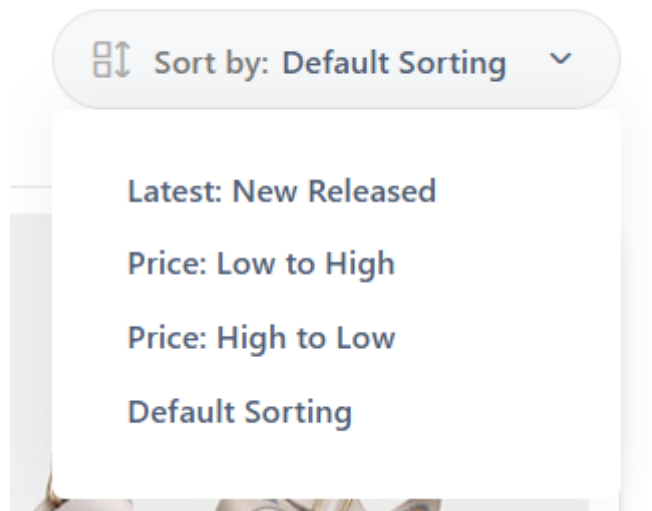
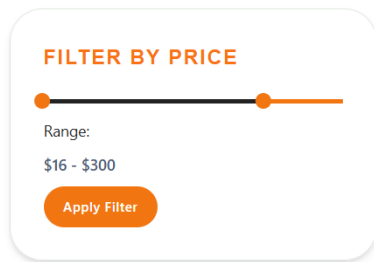
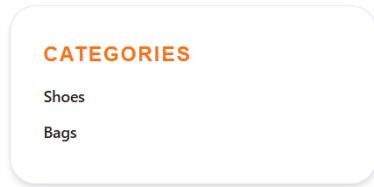
Search

| <input type="checkbox"/> | Image | Name | SKU | Price | Quantity | Created at | Updated at | |
|--------------------------|---|--------------|----------|----------|----------|--------------|--------------|---|
| <input type="checkbox"/> |  | Floral Shoes | SKU-1234 | \$12.00 | 34 | Dec 29 07:34 | Dec 29 07:34 | View Edit |
| <input type="checkbox"/> |  | Sports Shoes | SKU-2345 | \$120.00 | 34 | Dec 29 07:34 | Dec 29 07:34 | View Edit |
| <input type="checkbox"/> |  | Leather Bag | SKU-5678 | \$50.00 | 20 | Dec 29 07:34 | Dec 29 07:34 | View Edit |
| <input type="checkbox"/> |  | Bag | SKU-5678 | \$80.00 | 34 | Dec 29 07:34 | Dec 29 07:34 | View Edit |

Showing 1 to 4 of 4 results

10 per page

USER CONVENIENCE



USAGE

```
composer install
npm install
php artisan migrate --seed
npm run dev && php artisan serve
```

NOTE:

The images will be placed in .gitignore folder hence why might be inaccessible when cloned. New products can be uploaded and to view the images of the previously uploaded projects run **php artisan storage:link** and use images from public\storage\images\products\main_image.

WORK DISTRIBUTION

| | |
|--------------|--|
| Ahmar Kamran | Backend (controllers, middle wares, models etc) |
| Saif Sheikh | Frontend (blade template, Layouts, pages, views etc) |
| Zainab Athar | Migrations, Seeders, Testing |

GITHUB LINK

❖ <https://github.com/AhmarKamran09/web-project.git>