



CAT201 : Integrated Software Development Workshop
Semester I, Academic Session : 2024/2025

Stationery E-Commerce Website (STATIOSHOP)

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1) Program Description

The Java GUI application serves as a desktop counterpart to our React-based StatioShop web application. The GUI provides users with a graphical interface to interact with the same backend services that power websites. The application maintains a consistent theme with the website, ensuring a unified experience across platforms.

The JavaScript-based GUI for the project is designed as a modern and responsive interface to enhance the user experience. It consists of a homepage, which serves as the central hub, and integrates key components: a Navbar, Main section, Product display, and a Footer.

The Navbar provides intuitive navigation, allowing users to access different sections of the website, including "Home," "Products," "About," and "Contact." It also features buttons for user actions like login, registration, and viewing the cart. These buttons update dynamically based on user interaction, such as the number of items in the cart.

The Product page dynamically fetches and displays product details using a combination of React hooks like `useState` and `useEffect`. When a product is selected, it loads detailed information, such as the title, image, category, description, rating, and price. A "Similar Products" section recommends other items in the same category, enhancing user engagement and promoting related products. A loading skeleton provides feedback during data fetching, ensuring smooth transitions.

The Footer offers contact information, links to social media platforms, and a newsletter subscription feature. It balances functionality with aesthetics by neatly organizing information into sections for better readability. The inclusion of a subscription form encourages users to stay updated with the latest promotions.

Throughout the GUI, the use of React components ensures modularity and reusability, while libraries like Redux manage state effectively, such as handling the cart. Integration of animations such as Marquee for scrolling products and responsive design principles ensures the interface is visually appealing and user-friendly on various devices.

The backend code for the **checkout**, **login**, and **register** functionalities is implemented in Java, leveraging robust frameworks like Spring Boot to ensure efficiency, security, and scalability. These services seamlessly integrate with the React-based GUI to provide a unified and smooth user experience across the application.

The **login** functionality authenticates users by verifying their credentials against stored records in a database. It uses secure practices such as password hashing (e.g., BCrypt) to ensure sensitive data is protected. Upon successful authentication, a JSON Web Token (JWT) is generated and returned to the frontend, allowing users to securely access restricted areas of the application without repeatedly entering their credentials.

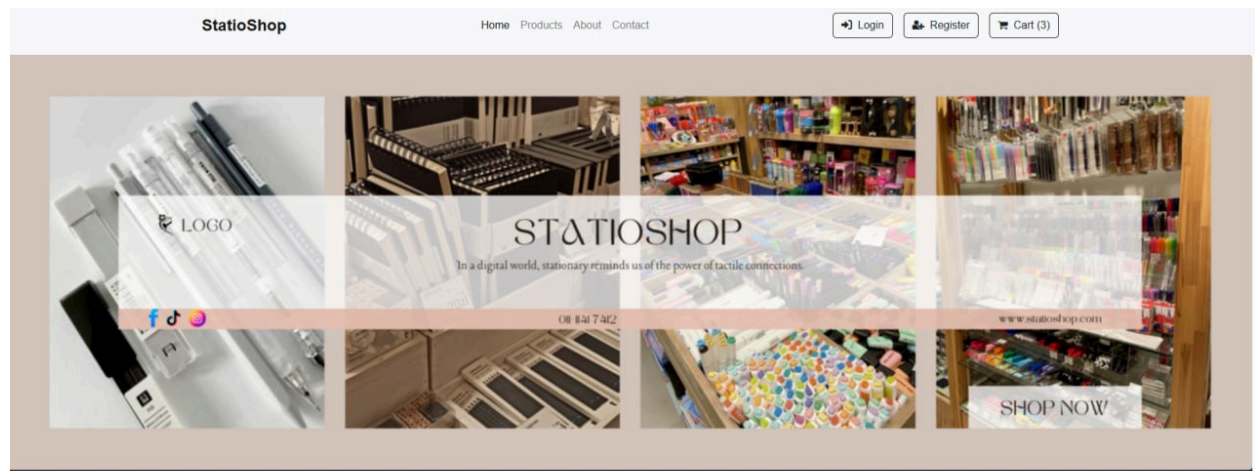
The **register** service enables new users to create accounts by submitting their details, such as name, email, password, and other required fields. Backend validation ensures the integrity of the input data, and duplicate entries are prevented using checks against the database. Passwords are securely hashed before storage, adhering to best practices for user security.

The **checkout** process facilitates secure order placements. It involves retrieving the user's cart details, calculating the total cost, and processing the payment (integrated with third-party payment gateways if required). Once the payment is confirmed, the backend records the order in the database, sends a confirmation response to the frontend, and optionally triggers email notifications with order details.

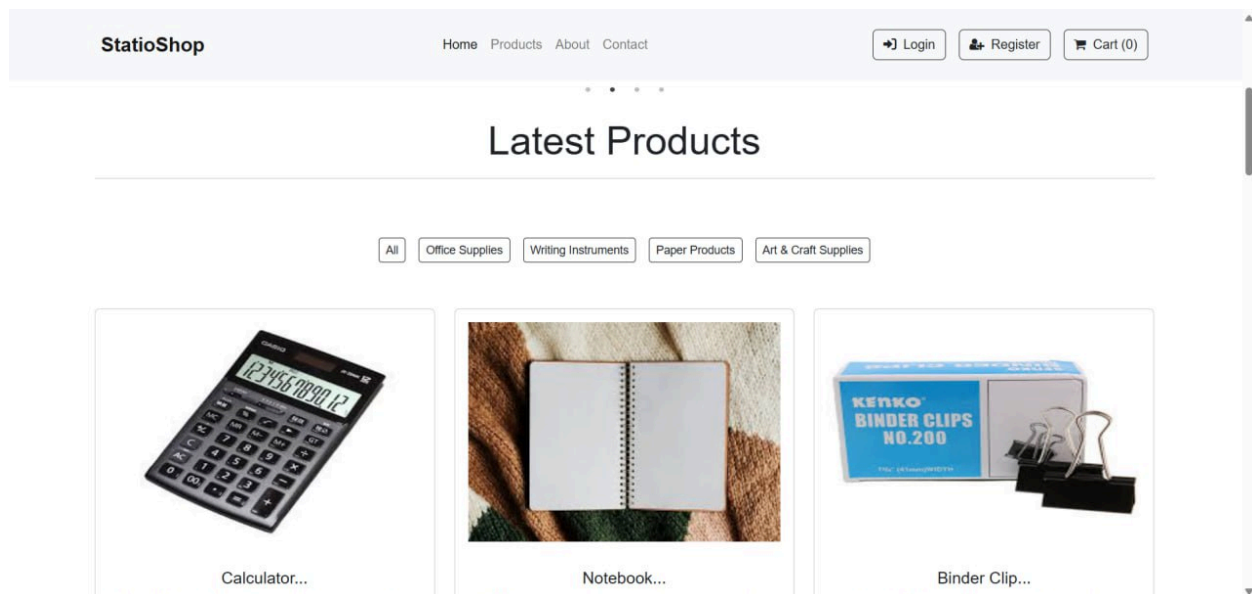
Throughout these functionalities, the backend ensures smooth communication with the frontend using RESTful APIs, and comprehensive error handling is implemented to provide meaningful feedback in case of issues. The combination of Java's strong concurrency handling and Spring Boot's microservice capabilities ensures the backend operates reliably, even under high loads.

2) Screen Shots

Home Page



Latest Products



Login and Register

Login

Email address

Password

New Here? [Register](#)

CONTACT INFO FOLLOW US

EMAIL:
STATIONSHOP33@GMAIL.COM
PHONE: [019-729-3628](tel:019-729-3628)

[FACEBOOK](#)
[TWITTER](#)
[INSTAGRAM](#)

STAY UPDATED

SUBSCRIBE TO OUR
NEWSLETTER FOR THE LATEST
UPDATES AND PROMOTIONS.

Register

Full Name

Email address

Password

Already has an account? [Login](#)

CONTACT INFO FOLLOW US

STAY UPDATED

Product by Categories

StatioShop

[Home](#) [Products](#) [About](#) [Contact](#)

Login

Register

Cart (0)

Latest Products


All

Office Supplies


Writing Instruments

Paper Products


Art & Craft Supplies



Calculator...



Notebook...



Binder Clip...

StatioShop

[Home](#) [Products](#) [About](#) [Contact](#)

Login

Register

Cart (0)


All

Office Supplies

Writing Instruments

Paper Products


Art & Craft Supplies



Calculator...

A scientific calculator with multiple functions, perfect for students and professionals....


RM 15.99



Binder Clip...

A pack of 12 sturdy binder clips for organizing documents....

RM 2.99



File...

A durable file for organizing important documents....

RM 3.99

About Us

StatioShop


[Home](#) [Products](#) [About](#) [Contact](#)

[Login](#) [Register](#) [Cart \(0\)](#)


About Us

Welcome to StatioShop, your one-stop destination for all your stationery needs! At StatioShop, we are passionate about bringing creativity and productivity to life with Founded with a vision to inspire learners, creators, and professionals alike, we offer everything from premium notebooks, pens, and art supplies to office essentials and unique gift items. Whether you're a student gearing up for success, an artist chasing inspiration, or a professional aiming for excellence, StatioShop has something special for you. Our carefully curated range of high-quality stationery products. Our mission is to combine functionality with style, making everyday tasks delightful and efficient. With a commitment to exceptional customer service and affordable pricing, we strive to be more than just a store — we want to be a part of your journey. Thank you for choosing StatioShop. Let's create, learn, and achieve together!


Our Products




Office Supplies



Writing Instruments



Paper products



Art&Craft Supplies

Contact Us

StatioShop

[Home](#) [Products](#) [About](#) [Contact](#)

[Login](#) [Register](#) [Cart \(0\)](#)

Contact Us

Name

Email

Message

Send

CONTACT INFO

EMAIL: STATIOSHOPS3@gmail.com

PHONE: [014-723-1018](tel:014-723-1018)

FOLLOW US

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STAY UPDATED

SUBSCRIBE TO OUR NEWSLETTER FOR THE LATEST UPDATES AND PROMOTIONS

Add to Cart

StatioShop

[Home](#) [Products](#) [About](#) [Contact](#)


Login

Register

Cart (3)

Cart

Item List




Notebook

-

2

+

2 x RM5.99




Calculator

-

1

+

1 x RM15.99



Binder Clip

-

1

+

1 x RM2.99

Order Summary

Products (4)

RM31

Shipping

RM10

Total amount

RM41

Go to checkout

Checkout

StatioShop

[Home](#) [Products](#) [About](#) [Contact](#)

Login

Register

Cart (3)

Checkout

Billing address

First name

Last name

Email

you@example.com

Address

1234 Main St

Address 2 (Optional)

Apartment or suite

Country

State

Zip

Choose...

Choose...

Payment

Name on card

Credit card number

Full name as displayed on card

Expiration

CVV

Continue to checkout

Order Summary

Products (4)

RM31

Shipping

RM10

Total amount

RM41

Member's Contribution

Name	Matric Number	Contribution
Vasanth Sekar	22301702	Home Page Navbar Images
Naveen Kumar Gunasekaran	22303989	Product Page Footer Product by category
Shubhanu Manikamagenthiran	22304186	User Registration and Login Its backend
Kagineswary Pubalan	22303311	Cart Page and AddtoCart System Its backend