A PRELIMENERY REPORT ON

E-COMMERCE WEBSITE

SUBMITTED TO THE VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, PUNE
IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE

OF

BACHELOR OF TECHNOLOGY (COMPUTER ENGINEERING)

SUBMITTED BY

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DEPARTMENT OF COMPUTER ENGINEERING

BRACT'S
VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY

SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE – 411048, MAHARASHTRA (INDIA).

01. Introduction

1.1 Overview:

Our project entails the development of a dynamic e-commerce platform tailored to meet the needs of modern consumers in the electronics industry. Leveraging cutting-edge technologies, we aim to provide users with a seamless and secure online shopping experience. For example, our platform will offer a wide range of products including smartphones, laptops, cameras, and accessories, catering to the diverse needs of tech-savvy consumers.

1.2 Motivation:

The motivation behind our project stems from the increasing demand for electronics products in the e-commerce sector. For instance, according to a report by Statista, global e-commerce sales of electronics and media are projected to reach $707 billion by 2024, highlighting the immense market opportunity in this space.

1.3 Problem Definition and Objectives:

The primary challenge addressed by our project is the need for a robust e-commerce solution tailored specifically to the electronics niche. For example, many existing e-commerce platforms lack specialized features for electronics products, resulting in a suboptimal shopping experience for users. Our objectives include developing a feature-rich platform that offers secure payment processing, efficient order management, and personalized user experiences to enhance customer satisfaction and drive business growth.

1.4 Project Scope & Limitations:

The scope of our project encompasses the design, development, and implementation of the e-commerce platform, focusing on key functionalities such as user management, product catalog management, shopping cart functionality, and secure payment processing. While our platform offers a comprehensive set of features, limitations may include scalability challenges with increasing user traffic and potential constraints in integrating third-party services. For example, integrating real-time inventory data from multiple suppliers may pose challenges in terms of data synchronization and consistency.

1.5 Methodologies of Problem Solving:

To address the challenges identified, we adopted an agile development methodology, allowing for iterative development cycles and continuous feedback loops. Collaboration among team members, stakeholder involvement, and regular testing and validation were integral to our problem-solving approach. For instance, we conducted user testing sessions at regular intervals to gather feedback and iterate on design improvements, ensuring that the final product meets user expectations.

02. Literature Survey

Design: The design and user experience of ecommerce websites are critical factors in their success. Research has shown that user-friendly navigation, clear product descriptions, high-quality images, and easy checkout processes can improve user satisfaction and increase sales (Chen & Barnes, 2007). Aesthetics and visual appeal also play a role in attracting and retaining customers (Source, Perotti, & Widrick, 2005).

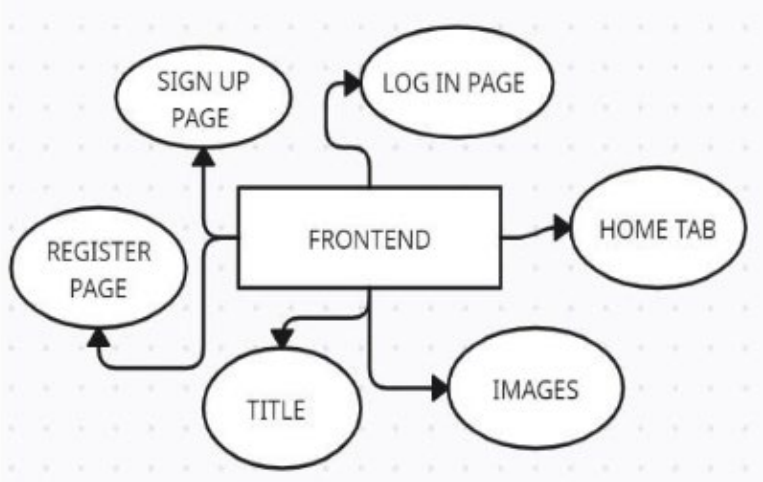
Security is a major concern for ecommerce websites, as they handle sensitive customer information such as credit card details and personal data. Studies have identified various security measures that can be implemented, including SSL/TLS encryption, HTTPS, two-factor authentication, and fraud detection tools (Deng & Lee, 2012). Trust and perceived security are also important factors in customer behavior and purchase decision-making (Yin, Wang, & Wang, 2018).

Studies have shown that user experience plays a critical role in ecommerce website success. A study by Liu et al. (2020) found that a clear and easy-to-use interface, intuitive navigation, and product search features were among the most important factors that influenced customer satisfaction. Similarly, a study by Abadzhiev et al. (2021) found that high-quality product images and detailed product descriptions were also important for customer satisfaction.

03. System Design

3.1 System Architecture:

Our system architecture is designed to ensure scalability, reliability, and security. For example, we adopted a microservices architecture to modularize our system components, allowing for independent deployment and scalability of each service. Components within each layer are interconnected to facilitate seamless communication and data flow across the system.



04. Project Implementation

4.1 Overview of Project Modules:

Our project consists of several interconnected modules, each serving a specific function within the e-commerce platform. For instance, the user management module handles user registration, login, and profile management functionalities, while the product catalog module manages product listings, categorization, and inventory updates.

4.2 Tools and Technologies Used:

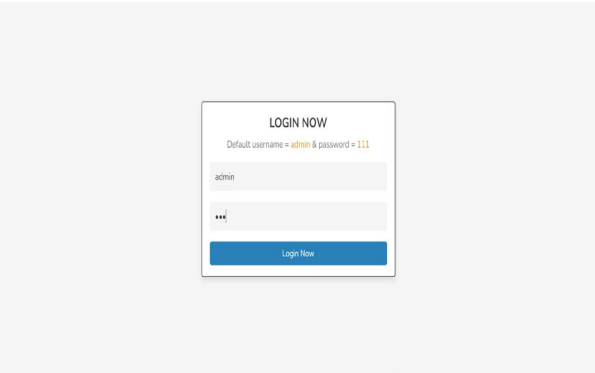
The project utilizes a technology stack comprising PHP for server-side scripting, MySQL for database management, HTML, CSS, and JavaScript for front-end development, and Razorpay for payment gateway integration. Additionally, we employed development frameworks such as Laravel for PHP and Bootstrap for front-end design to expedite development and ensure consistency and efficiency in coding practices.

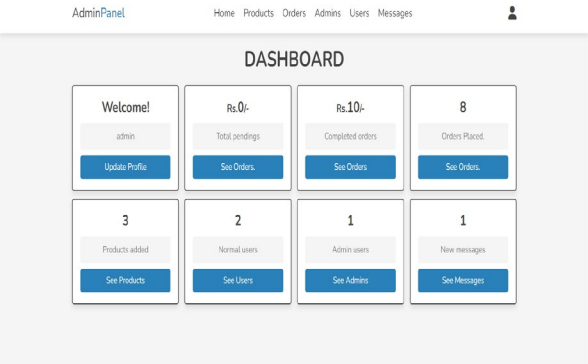
4.3 Algorithm Details:

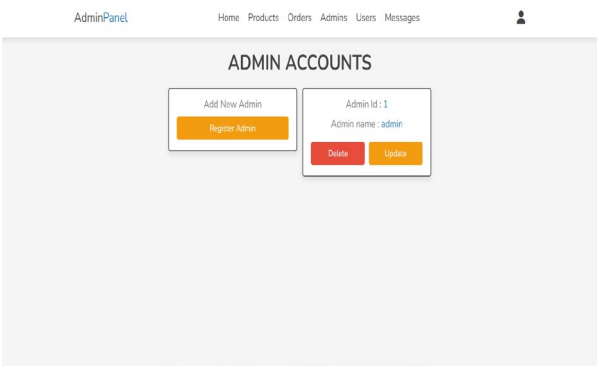
Custom algorithms and logic were implemented within the system to enhance functionality and optimize performance. For example, we developed a recommendation engine using collaborative filtering techniques to suggest relevant products to users based on their browsing history and purchase behavior. Additionally, fraud detection algorithms were implemented to identify and prevent fraudulent transactions in real-time.

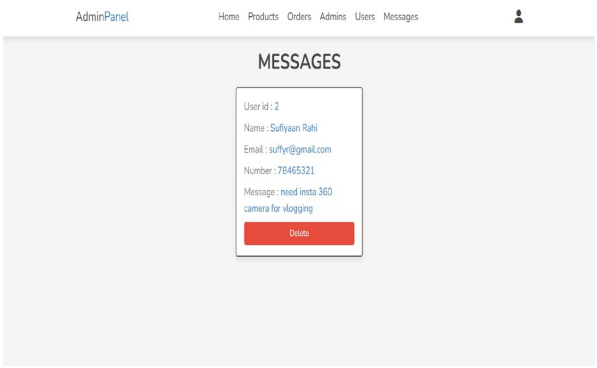
05. Results

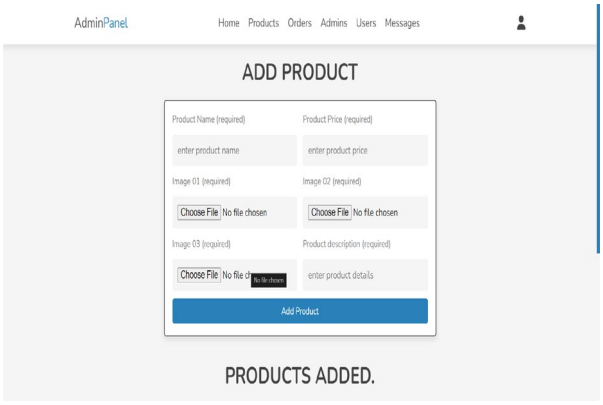
5.1 Screen Shots:

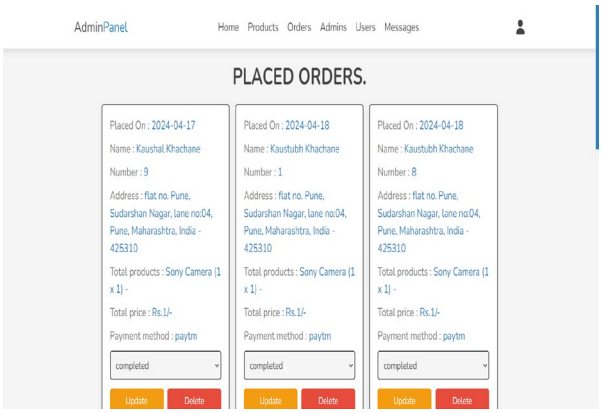


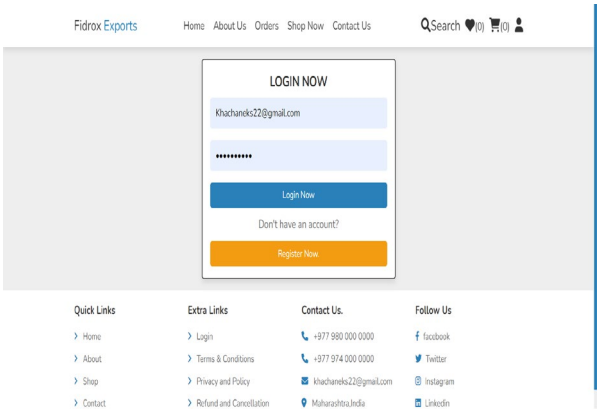



AdminPanel
Home Products Orders Admins Users Messages
ADMIN ACCOUNTS
Add New Admin
Register Admin
Admin Id : 1
Admin name : admin
Delete
Update


AdminPanel
Home Products Orders Admins Users Messages
MESSAGES
User id : 2
Name : Sufiyaan Rahi
Email : suffyr@gmail.com
Number : 78465321
Message : need insta 360 camera for vlogging
Delete


AdminPanel
Home Products Orders Admins Users Messages
ADD PRODUCT
Product Name (required)
enter product name
Product Price (required)
enter product price
Image 01 (required)
Choose File No file chosen
Image 02 (required)
Choose File No file chosen
Image 03 (required)
Choose File No file chosen
Product description (required)
enter product details
Add Product
PRODUCTS ADDED.


AdminPanel
Home Products Orders Admins Users Messages
PLACED ORDERS.
Placed On : 2024-04-17
Name : Kaushal Khachane
Number : 9
Address : flat no. Pune, Sudarshan Nagar, lane no:04, Pune, Maharashtra, India - 425310
Total products : Sony Camera (1 x 1) -
Total price : Rs.1/-
Payment method : paytm
completed
Update
Delete
Placed On : 2024-04-18
Name : Kaustubh Khachane
Number : 1
Address : flat no. Pune, Sudarshan Nagar, lane no:04, Pune, Maharashtra, India - 425310
Total products : Sony Camera (1 x 1) -
Total price : Rs.1/-
Payment method : paytm
completed
Update
Delete
Placed On : 2024-04-18
Name : Kaustubh Khachane
Number : 8
Address : flat no. Pune, Sudarshan Nagar, lane no:04, Pune, Maharashtra, India - 425310
Total products : Sony Camera (1 x 1) -
Total price : Rs.1/-
Payment method : paytm
completed
Update
Delete


Fidrox Exports
Home About Us Orders Shop Now Contact Us
Search (0) (0)
LOGIN NOW
Khachaneks22@gmail.com
Login Now
Don't have an account?
Register Now
Quick Links
Home
About
Shop
Contact
Extra Links
Login
Terms & Conditions
Privacy and Policy
Refund and Cancellation
Contact Us.
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+977 974 000 0000
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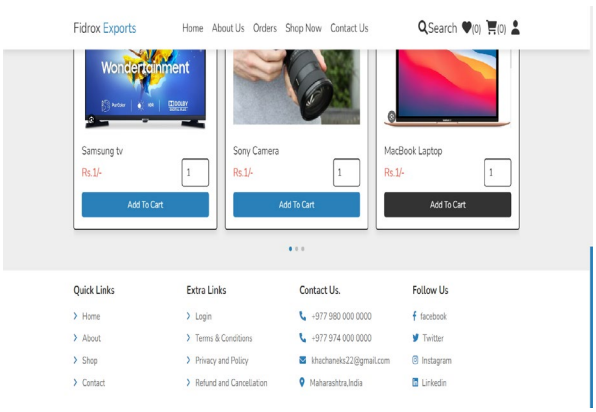
Fidrox Exports
Home About Us Orders Shop Now Contact Us
Search (0) (0)
Samsung tv
Rs.1/-
1
Add To Cart
Sony Camera
Rs.1/-
1
Add To Cart
MacBook Laptop
Rs.1/-
1
Add To Cart
Quick Links
Home
About
Shop
Contact
Extra Links
Login
Terms & Conditions
Privacy and Policy
Refund and Cancellation
Contact Us.
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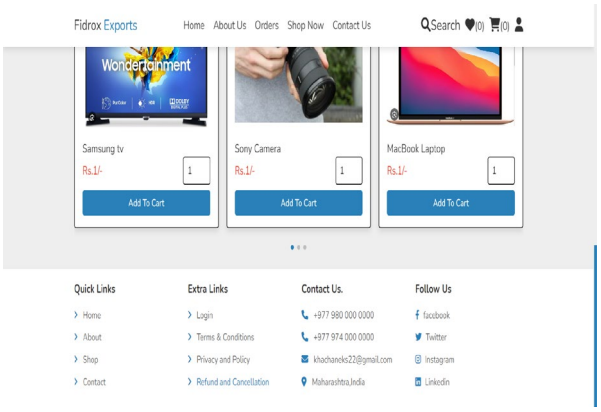
Fidrox Exports
Home About Us Orders Shop Now Contact Us
Search (0) (0)
Samsung tv
Rs.1/-
1
Add To Cart
Sony Camera
Rs.1/-
1
Add To Cart
MacBook Laptop
Rs.1/-
1
Add To Cart
Quick Links
Home
About
Shop
Contact
Extra Links
Login
Terms & Conditions
Privacy and Policy
Refund and Cancellation
Contact Us.
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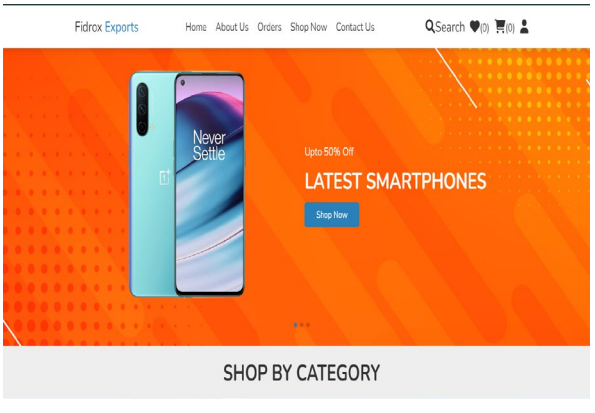
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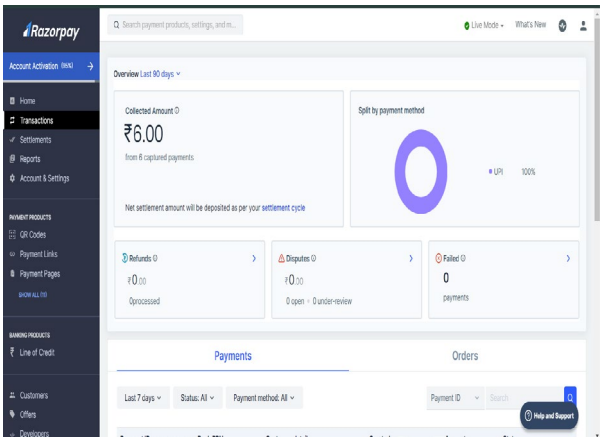
Home About Us Orders Shop Now Contact Us
Search (0) (0)
Never Settle
Upto 50% Off
LATEST SMARTPHONES
Shop Now
SHOP BY CATEGORY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Home
Transactions
Settlements
Reports
Account & Settings
QR Codes
Payment Links
Payment Pages
Line of Credit
Customers
Offers
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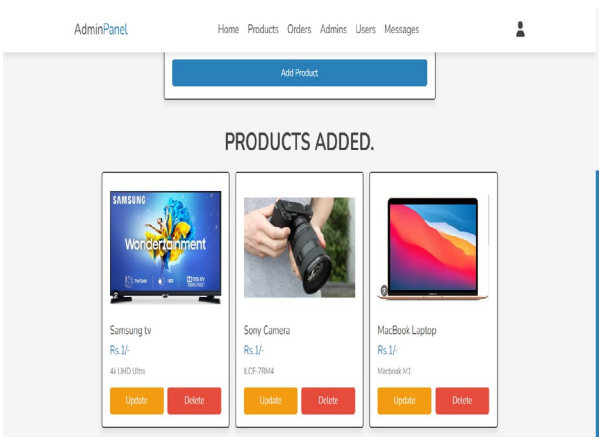
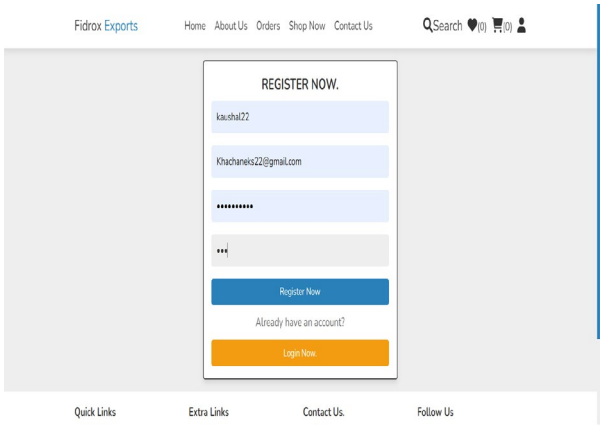
UPI 100%
Refunds
Disputes
Failed
0
payments
Payments
Orders
Help and Support


AdminPanel
Home Products Orders Admins Users Messages
Add Product
PRODUCTS ADDED.
Samsung tv
Rs.1/-
Update
Delete
Sony Camera
Rs.1/-
Update
Delete
MacBook Laptop
Rs.1/-
Update
Delete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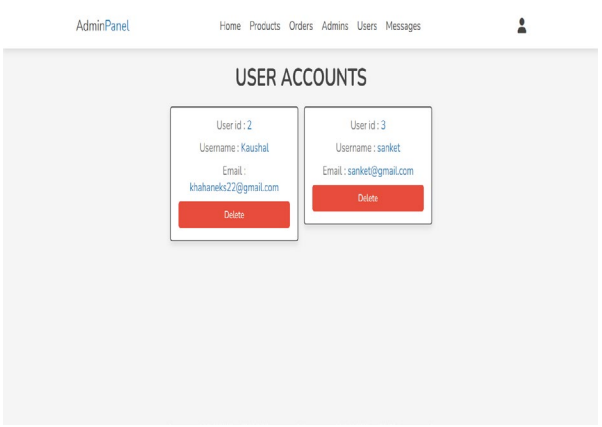
Khachaneks22@gmail.com
Register Now
Already have an account?
Login Now
Quick Links
Extra Links
Contact Us.
Follow Us


AdminPanel
Home Products Orders Admins Users Messages
USER ACCOUNTS
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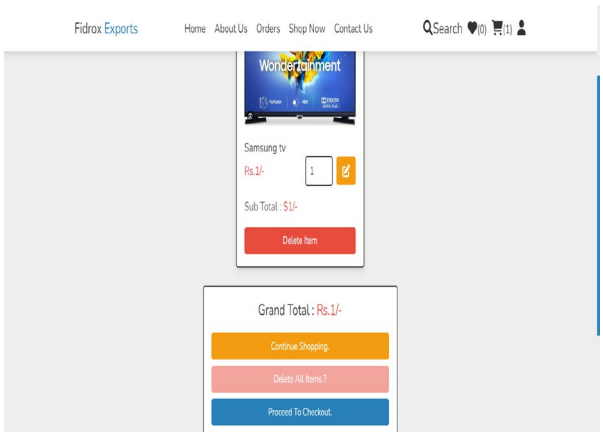
Email : khahaneks22@gmail.com
Delete
User id : 3
Username : sanket
Email : sanket@gmail.com
Delete


Fidrox Exports
Home About Us Orders Shop Now Contact Us
Search
Samsung tv
Rs.1/-
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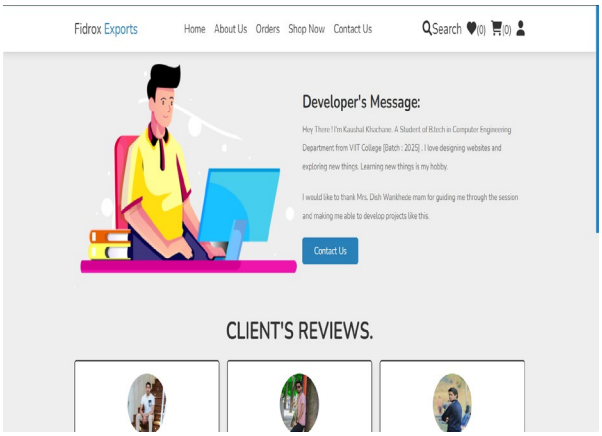
Delete Item
Grand Total : Rs.1/-
Continue Shopping
Delete All Items?
Proceed To Checkout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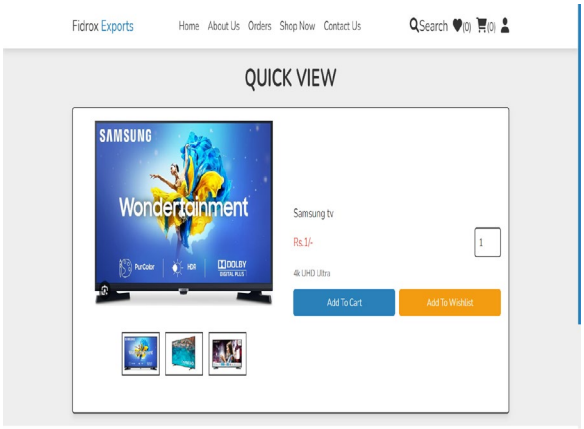
Home About Us Orders Shop Now Contact Us
Search
Developer's Message:
Contact Us
CLIENT'S REVIEWS.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Home
About Us
Orders
Shop Now
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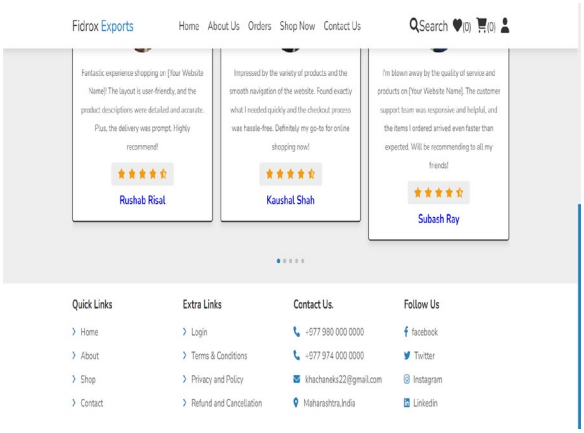
Add To Wishlist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Home
About Us
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Shop Now
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Kaushal Shah
Subash Ray
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Contact
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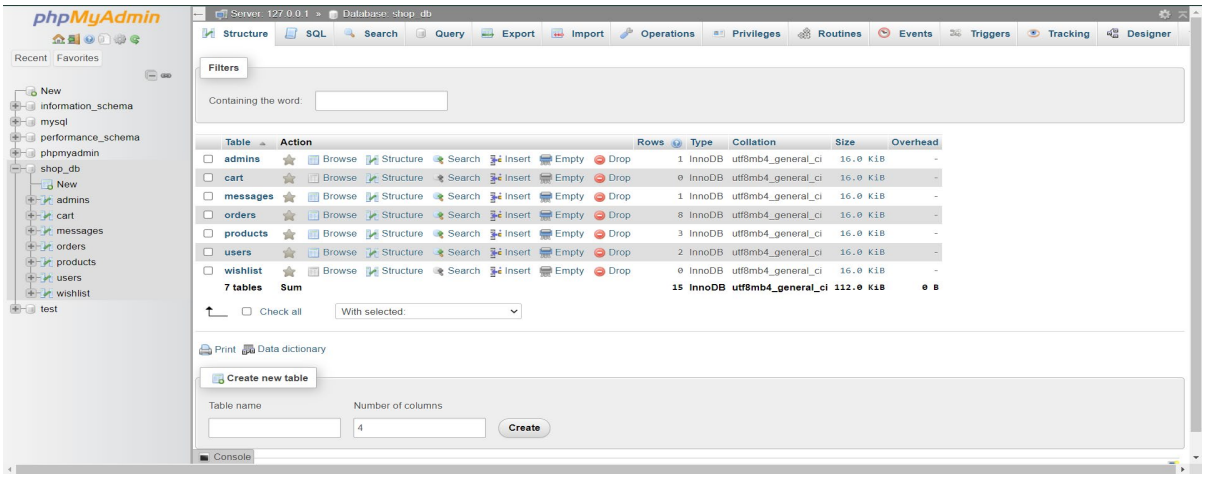
phpMyAdmin
Server: 127.0.0.1 » Database: shop_db
Structure
SQL
Search
Query
Export
Import
Operations
Privileges
Routines
Events
Triggers
Tracking
Designer
Filters
Containing the word:
Table
Action
Rows
Type
Collation
Size
Overhead
admins
cart
messages
orders
products
users
wishlist
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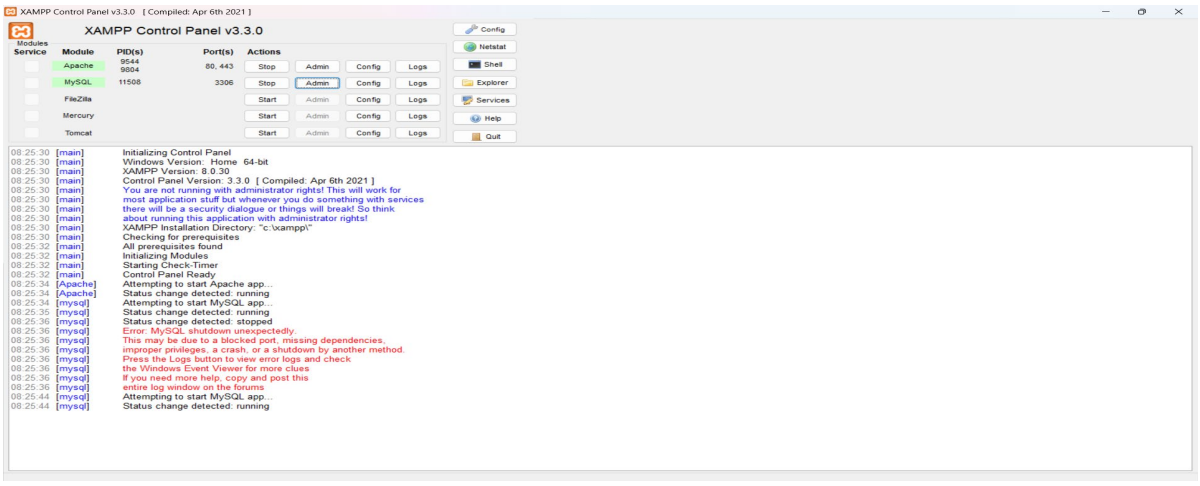
With selected:
Print
Data dictionary
Create new table
Table name
Number of columns
Create
Console


XAMPP Control Panel v3.3.0 [Compiled: Apr 6th 2021]
XAMPP Control Panel v3.3.0
Modules
Service
Module
PID(s)
Port(s)
Actions
Apache
MySQL
FileZilla
Mercury
Tomcat
Config
Netstat
Shell
Explorer
Services
Help
Quit
Initializing Control Panel
Windows Version: Home 64-bit
XAMPP Version: 8.0.30
Control Panel Version: 3.3.0 [Compiled: Apr 6th 2021]
You are not running with administrator rights! This will work for
most application stuff but whenever you do something with services
there will be a security dialogue or things will break! So think
about running this application with administrator rights!
XAMPP Installation Directory: "c:\xampp\"
Checking for prerequisites
All prerequisites found
Initializing Modules
Starting Check-Timer
Control Panel Ready
Attempting to start Apache app...
Status change detected: running
Attempting to start MySQL app...
Status change detected: stopped
Error: MySQL shutdown unexpectedly.
This may be due to a blocked port, missing dependencies,
improper privileges, a crash, or a shutdown by another method.
Press the Logs button to view error logs and check
the Windows Event Viewer for more clues
If you need more help, copy and post this
entire log window on the forums
Attempting to start MySQL app...
Status change detected: running

06. Conclusions

6.1 Conclusion:

In conclusion, our dynamic e-commerce platform represents a significant step forward in catering to the needs of modern consumers. With a robust technology stack comprising PHP, MySQL, and Razorpay, we've ensured a seamless and secure shopping experience. The user-friendly interface enhances engagement, while comprehensive features empower users to navigate, explore, and transact with ease. Additionally, the admin panel provides efficient tools for order management, user administration, and catalog maintenance. Overall, our platform is poised to revolutionize online shopping by combining convenience, security, and functionality.

6.2 Future Work:

Looking ahead, there are several avenues for growth and enhancement in our e-commerce platform.

We can explore the integration of artificial intelligence and machine learning algorithms to personalize user experiences further, recommend products based on past behavior, and optimize inventory management.

Additionally, expanding our payment gateway options to include more diverse and globally recognized providers can broaden our reach and cater to a wider audience.

Furthermore, enhancing mobile responsiveness and developing dedicated mobile applications can tap into the growing trend of mobile shopping.

Lastly, leveraging data analytics for insights into consumer behavior and market trends can drive strategic decision-making and foster continuous improvement.

With these future endeavors, we aim to stay at the forefront of innovation and continue providing exceptional value to our users.

6.3 Applications:

Electronics Retail: The primary application of our e-commerce platform is in the electronics retail sector. Businesses specializing in electronics products, such as smartphones, laptops, cameras, and accessories, can utilize our platform to establish or enhance their online presence. For example, a consumer electronics retailer can use our platform to showcase their product catalog, facilitate online purchases, and streamline order management processes.

Consumer Goods: Beyond electronics, our e-commerce platform can also be applied to other consumer goods industries. Businesses selling a wide range of products, such as home appliances, gadgets, and personal care items, can leverage our platform to reach a broader audience and drive sales. For instance, a home appliance retailer can use our

platform to offer convenient online shopping experiences for customers looking to purchase kitchen appliances, vacuum cleaners, or air purifiers.

Business-to-Business (B2B) Transactions: Our e-commerce platform can also cater to business-to-business (B2B) transactions, enabling companies to procure electronic components, equipment, and supplies online. For example, a technology firm sourcing components for product manufacturing can use our platform to discover suppliers, compare product offerings, and place bulk orders seamlessly.

Marketplace Platforms: Our e-commerce platform can serve as the foundation for marketplace platforms, where multiple sellers can list their electronics products for sale. For example, an online marketplace specializing in refurbished electronics or niche electronic accessories can use our platform to host multiple sellers, manage product listings, and facilitate transactions between buyers and sellers.

Subscription Services: Additionally, our e-commerce platform can support subscription-based services in the electronics industry. For example, a subscription box service offering curated selections of electronic gadgets and accessories can use our platform to manage subscriber accounts, process recurring payments, and handle order fulfillment.

Cross-Border Trade: With its scalable architecture and support for multiple payment gateways, our e-commerce platform is well-suited for facilitating cross-border trade in the electronics industry. Businesses looking to expand their reach internationally can use our platform to sell their products to customers in different countries, leveraging features such as multi-currency support and international shipping options.

07. References:

[1] “Ecommerce Website Design: 7 Essential Pages & Features" by Lindsay Kolowich, published on Hubspot - This article provides an overview of the essential pages and features that an ecommerce website should have to provide a great user experience.

[2] "The Ultimate Guide to eCommerce Website Design" by Brian Jackson, published on Kinsta – This comprehensive guide covers everything from the basics of ecommerce website design to advanced optimization techniques for improving conversions.

[3] “10 Expert Tips for Building a Better eCommerce Website" by Megan Marrs, published on WordStream - This article provides insights and advice from ecommerce experts on how to build a better ecommerce website that drives more sales and revenue.

[4] “The Psychology Behind Ecommerce Website Design: How to Use It to Your Advantage" by Syed Balkhi, published on OptinMonster - This article explores the psychology behind ecommerce website design and how to use it to influence consumer behavior and increase sales

[5] “Ecommerce SEO: How to Optimize Your Online Store for Search Engines" by Neil Patel, published on NeilPatel.com - This in-depth guide covers the best practices for optimizing an ecommerce website for search engines to drive organic traffic and increase sales.