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E-Commerce Website for Artisans

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Abstract: ***The rise of e-commerce has been a game-changer for many industries, including the art world. The eCommerce industry has experienced significant growth in recent years, and online platforms have given artists a global audience to showcase and sell their artwork. The proposed eCommerce website will provide artists with an easy-to-use platform to sell their artwork and provide buyers with a convenient way to discover and purchase art. This research paper discusses the development of an eCommerce website for artists using the MERN stack. The MERN stack, which includes MongoDB, Express, React, and Node, will be used to develop the website. This application will be fully functional with different views for user, seller and admin and it will also be integrated with payment gateway for checkout. Artpiece website aims to help creative entrepreneurs of handloom and handicraft sector.***

Keywords: JavaScript, Framework, Library, Performance Analysis, React.js, MongoDB, Node.js, Express.js

I. INTRODUCTION

In recent years, eCommerce websites have become the norm for many industries, including art. Artisans are individuals who create handmade products, such as art, crafts, and jewelry. They often face challenges in selling their products due to the lack of exposure and marketing opportunities. E-commerce provides a solution to these challenges by offering a platform for artisans to showcase and sell their products online. Online platforms have given artists an opportunity to showcase and sell their artwork to a global audience, creating new revenue streams and expanding their reach. In this paper, we will discuss the development of an eCommerce website for artists using the MERN (MongoDB, Express, React, and Node) stack. The website will offer an easy-to-use platform for artists to sell their artwork online and will provide buyers with a convenient way to discover and purchase art.

II. PROBLEM STATEMENT

The artisans who make handmade products often find it difficult to sell their products online due to the lack of technical expertise and resources. There is a need for a platform that enables artisans to showcase and sell their products online, without having to worry about the technical details of setting up an e-commerce website. Providing a common platform to all artist to make, market and sell high quality handicrafts and goods.

III. TECHNOLOGY

A. MERN Stack

MERN stack is an acronym for four popular technologies - MongoDB, Express, React, and Node. MERN stack is widely used for developing web applications and provides a robust and scalable environment for building web applications.

MongoDB is a NoSQL database that is designed to store data in JSON-like documents. MongoDB is widely used for building scalable and flexible databases, making it ideal for web applications.

Express is a popular web application framework for Node.js that provides a robust set of features for building web applications. Express simplifies the development of web applications by providing a variety of tools and features, such as middleware, routing, and templating engines. React is a JavaScript library for building user interfaces. React provides a component-based architecture that makes it easy to build reusable UI components, which can be used across different parts of the application.

NodeJs is a JavaScript runtime built on the Chrome V8 JavaScript engine.. NodeJs provides a variety of features that simplify the development of web applications, such as a built-in HTTP server and a module system for managing dependencies.

B. Advantages of MERN

1) Full-stack javascript
2) Fast development
3) Scalability
4) Community support

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IV. PROJECT IMPORTANCE

Ecommerce is one of the largest factors of economy growth, it connects businesses with customers in fast, easy and secure way. Here we build an e-commerce website for artisans using the MERN stack. The website will allow artisans to create an account and upload their products to the platform. The website will also allow customers to browse and purchase products from different artisans.

A. *Features*

1) *User Authentication:* The website will allow artisans to create an account and login to the platform. Customers can also create an account to track their orders and receive updates on new products.
2) *Product Management:* Artisans can upload and manage their products on the platform. They can add descriptions, prices, and images for their products.
3) *Product Search and Filtering:* Customers can browse and search for products based on keywords, categories, and price range.
4) *Cart and Checkout:* Customers can add products to their cart and checkout using a secure payment gateway.
5) *Order Tracking:* Customers can track the status of their orders and receive updates on their delivery.
6) *Shopping Cart:* The shopping cart should allow customers to add multiple items to their cart and proceed to checkout when ready
7) *Reviews and Ratings:* Customers can leave reviews and ratings for the products they purchase, which can help other customers make informed decisions.

V. SYSTEM ARCHITECTURE

The System Architecture is divided into 3 sections: Backend, Database and Frontend.

1) *Backend*: For backend part we have used NodeJS a JavaScript runtime environment with Express framework which provide APIs.
2) *Database*: For the database we have used the MongoDB store the user details, product details and order details. MongoDB is a popular NoSQL document-oriented database that stores data in a flexible, JSON-like format called BSON.
3) *Frontend* : For the Frontend we have used ReactJS.

For designing part html, CSS, JavaScript are used.

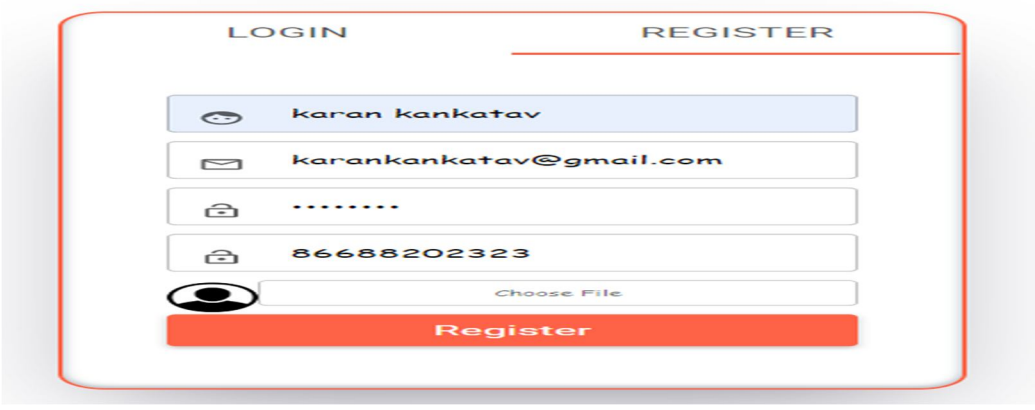
a) *HTML:* HTML stands for Hyper Text Markup Language. It is used to create webpages.Html has elements which tells the browser how to display the content.
b) *CSS:* CSS is the language we use to style an HTML document.CSS describes how the html elements should be displayed
c) *JavaScript*: Is used to program the behaviour of web pages.

For the database we have used the MongoDB store the user details, product details and order details .

VI. METHODLOGY

This e-commerce website is more helpful to the people wanted to buy the products and it is also beneficial to the sellers of handicrafts.

Fig. 1 The user needs to register to the website by filling the required information like first name, last name, username, email address, mobile number, and password.



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Fig. 2 Go to the login page. If the user is already a member, he can directly login using the credentials.

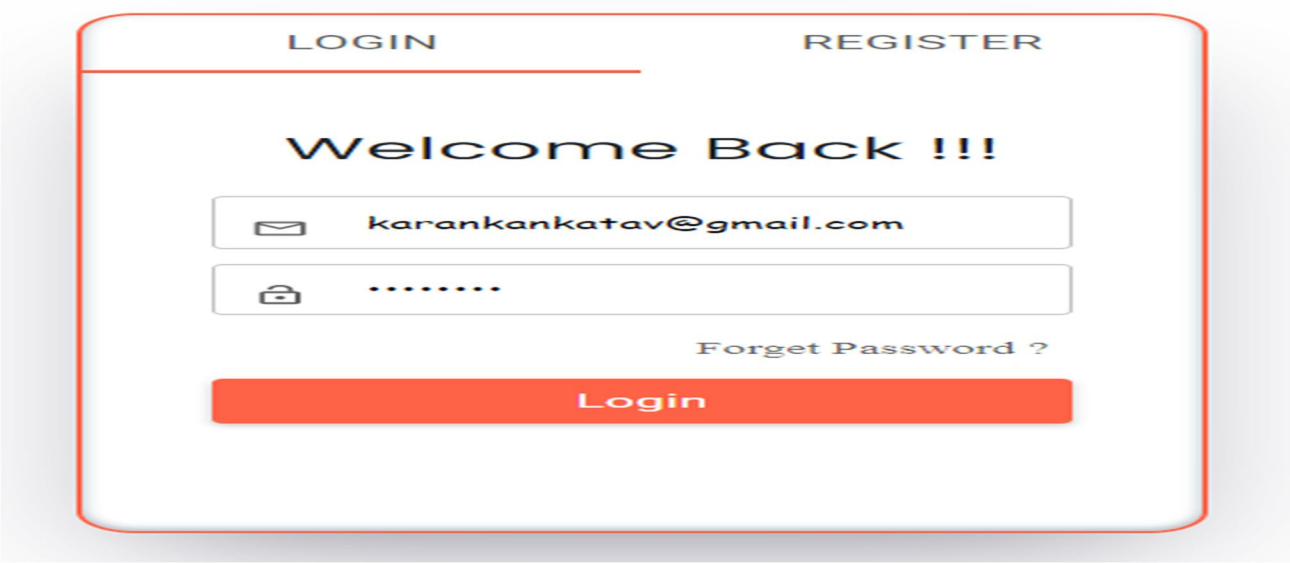


Fig. 3 After logging in user can see the profile page where he or she can find all the details of the account.

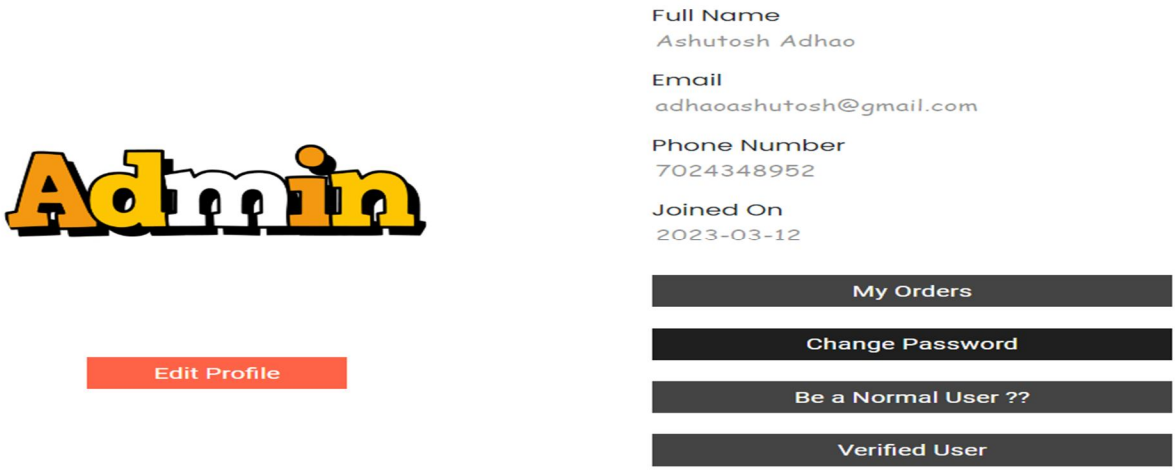
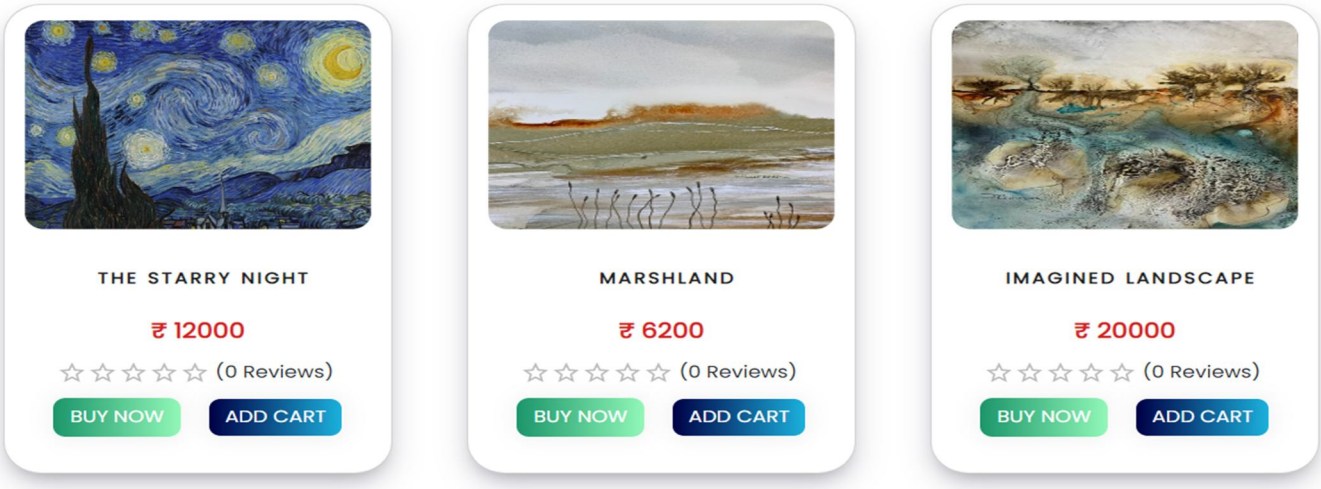


Fig. 4 After logging in user can see the home page where he or she can find the handicraft products to buy.



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Fig. 5 User can select the products he or she wants to buy and then they can add it to the cart. They can also give reviews or feedback.

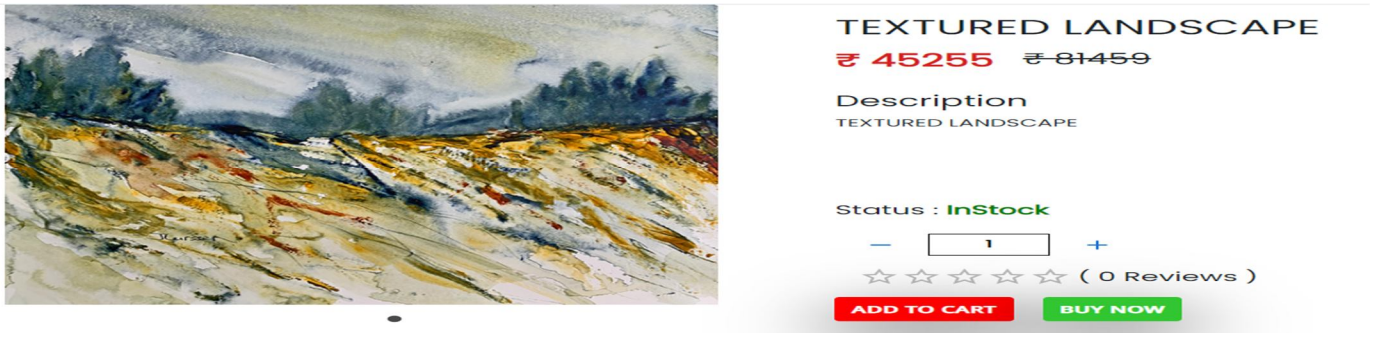


Fig. 6 User can view the feedback provided by other users.

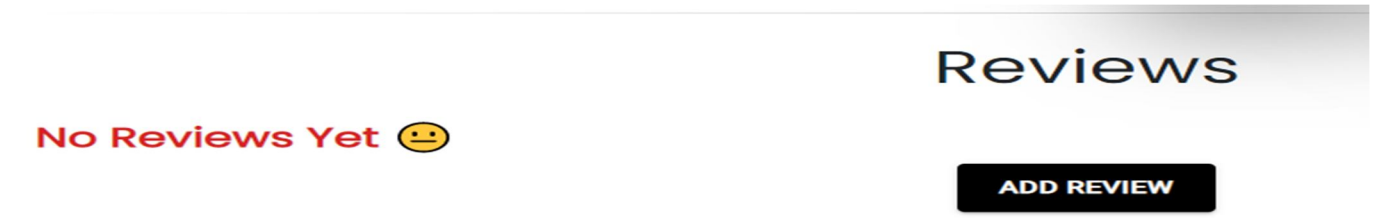
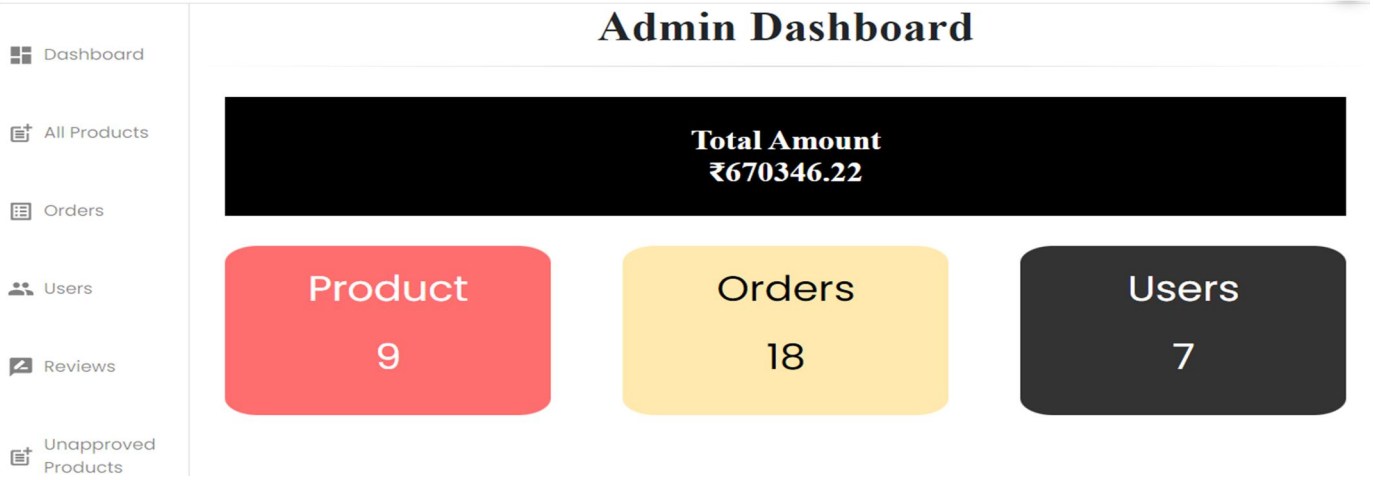


Fig. 7 After buying the product user can checkout.



Fig. 8 Admin can login and upload the Handicraft products when required or when new products are available.



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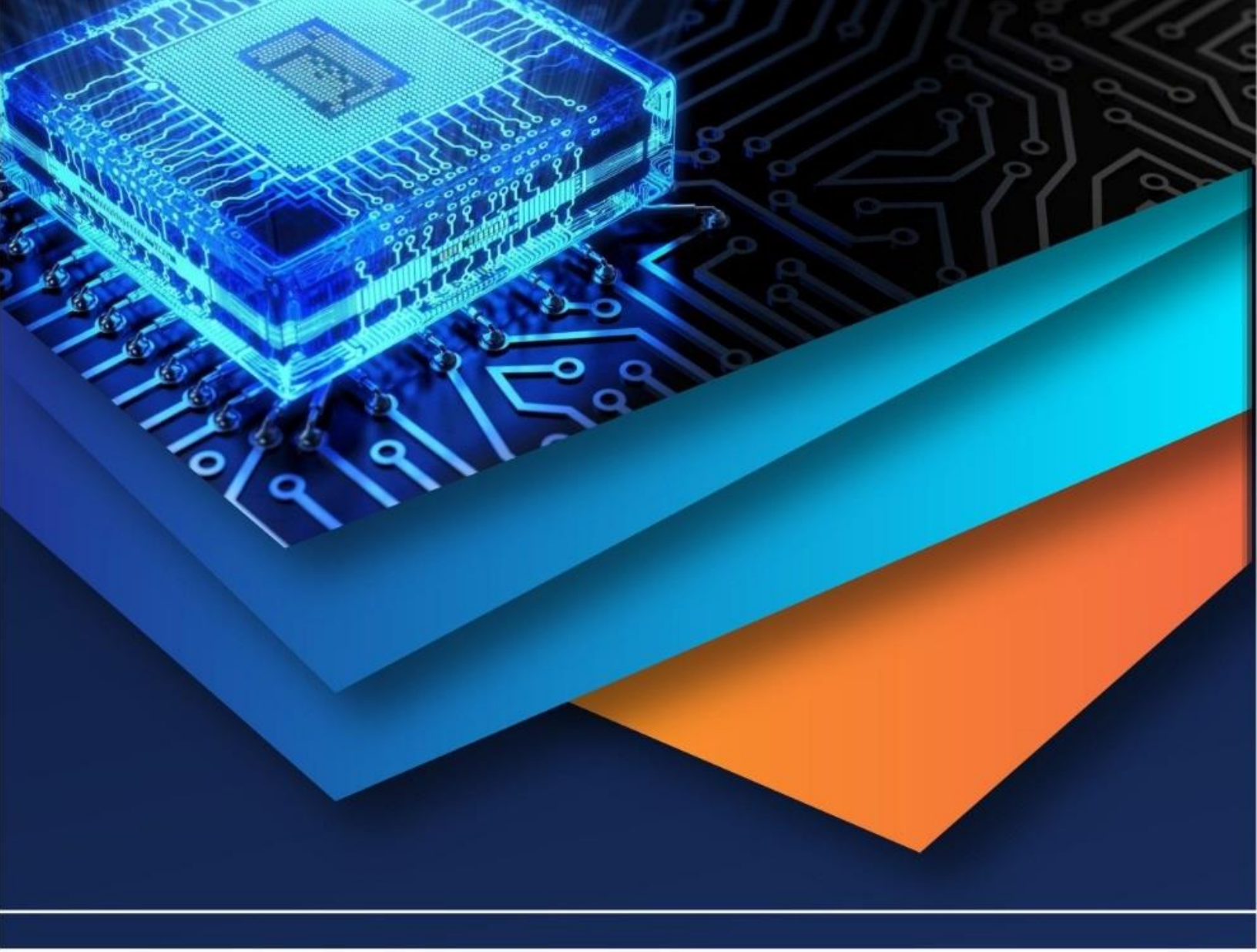
VII. CONCLUSION

By building an eCommerce website for artists using the MERN stack can be a great option for those looking to create a high-quality, scalable, and efficient platform. This solution can help artisans to reach a wider audience and increase their sales, while also providing customers with a convenient and secure platform to purchase handmade products. The MERN stack provides a comprehensive solution for building both the front-end and back-end of an eCommerce website.

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