

# **“EmpowerBiz - Elevating local business marketability through E-Commerce”**

## **An Engineering Project in Community Service**

**Phase – III Report**

*Submitted by*

**GHANSHYAM PATIL  
21BCE10868**

*in partial fulfillment of the requirements for the degree of  
Bachelor of Engineering and Technology*



**VIT Bhopal University**

**Bhopal  
Madhya Pradesh**

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### **Bonafide Certificate**

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This project report (Phase III) is submitted for the Project Viva-Voce examination held on 15.03.2024.

*N. Vignesh*

**Supervisor**

*Well-crafted Shilpgrah*

*Dei*  
*100401*  
**Comments & Signature (Reviewer 1)**

*M. M. C. maver*

**Comments & Signature (Reviewer 2)**



### Declaration of Originality

We, hereby declare that this report entitled "EmpowerBiz" represents our original work carried out for the EPICS project as a student of VIT Bhopal University and, to the best of our knowledge, it contains no material previously published or written by another person, nor any material presented for the award of any other degree or diploma of VIT Bhopal University or any other institution. Works of other authors cited in this report have been duly acknowledged under the section "References".

Date

*Vatsala*  
10/5/24  
VATSALA MISRA (21BEC10035)

*Soumyajit*  
10/5/24  
SOUMYAJIT SAHA (21BCE11355)

*Ekanish*  
EKANISH MITRA (21BAI10026)

*Kirti*  
KIRTI UPADHYAY (21BCE11601)

*Shashwat*  
SHASHWAT WAZALWAR (21BCE10441)

*Vartika*  
10.05.24  
VARTIKA SHARMA (21BEC10001)

*Ghanshyam*  
10/5/2024  
GHANSHYAM PATIL (21BCE10868)

*Palak*  
10/5/24  
PALAK SONI (21BEC10015)

*Pushkar Mondal*  
PUSHKAR MONDAL (21BCE11000)

*Pranav*  
PRANAV GUPTA (21MIM10026)



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## 1. INTRODUCTION

India is a talented, creative, and culturally varied nation, as is well known. We honor everything that brings people together, from science, technology, and education to dance, music, theater, and the arts. Local and small enterprises have traditionally had more power in our nation of creative thinkers and highly skilled artisans. However, the native passion and skill are practically forgotten due to the fast-paced lifestyle and increasing commercialization.

In the heart of India, where history and tradition converge, Madhya Pradesh stands as a testament to cultural richness and artistic heritage. The state is home to a myriad of local businesses and skilled artisans, each weaving tales of craftsmanship passed down through generations. Recognizing the untapped potential and a much-needed digital transformation, we are thrilled to announce the launch of a groundbreaking initiative – a website that aims to elevate the marketability of local businesses and artisans across Madhya Pradesh.

In an era where the digital landscape shapes economic landscapes, the launch of this website marks a pivotal moment in the journey of Madhya Pradesh's artisans and businesses. Our vision is to bridge the gap between traditional craftsmanship and the modern digital marketplace, fostering an environment where local enterprises can thrive and reach a global audience.

Our goal with this initiative is to make the rich history and culture of the state more accessible to the public through an e-commerce website. This initiative is not merely about the creation of a website; it is about providing a digital platform that empowers local businesses to harness the vast opportunities presented by the online world. By leveraging the power of the internet, we aim to showcase the unique products and talents that Madhya Pradesh has to offer, allowing artisans to connect with a diverse customer base and thereby significantly expanding their market reach.

The website will serve as a digital marketplace, seamlessly blending tradition with technology, offering a curated collection of authentic Madhya Pradesh products. From intricately handcrafted textiles to exquisite pottery, each item featured on the platform will tell a story of heritage, skill, and dedication. Furthermore, the website will incorporate user-friendly features, enabling artisans and businesses to manage their online presence, update product listings, and engage with customers effortlessly.

This report delves into the comprehensive strategies, methodologies, and the profound impact we anticipate this digital initiative will have on the marketability of local businesses and artisans in Madhya Pradesh. Through this transformative project we envision a future where tradition seamlessly integrates with technology, propelling Madhya Pradesh's artisans, and small businesses into a new era of prosperity and recognition.

## **1.1 Motivation**

The motivation driving this initiative stems from a deep-seated recognition of the overlooked talents and cultural richness of Madhya Pradesh's artisans. Despite their skill and heritage, these craftsmen often struggle to find visibility in the modern marketplace. Rapid commercialization and changing consumer trends further threaten their livelihoods. The initiative is fuelled by a passion to preserve the cultural heritage of Madhya Pradesh while empowering its artisans economically. By harnessing the power of digital platforms, the initiative seeks to provide these craftsmen with the tools and opportunities needed to thrive in the digital era.

## **1.2 Objective**

The primary objective of this initiative is to empower local artisans and businesses across Madhya Pradesh by enhancing their visibility and market reach through a digital platform. Through the website, artisans can showcase their products to a global audience, thereby expanding their customer base and driving economic growth in the region. Additionally, the initiative aims to facilitate seamless integration of tradition and technology, enabling artisans to leverage digital tools while preserving their cultural identity. By providing a user-friendly platform, the initiative strives to create opportunities for artisans to engage with customers, conduct business, and achieve greater recognition and success.

## **2. EXISTING WORK / LITERATURE REVIEW**

### **PAPER 1: SUGGESTIVE MEASURES TO EMPOWER THE ‘HEIRS OF HANDICRAFTS’**

In this paper researched by Amisha Shah and Rajiv Patel, professors in Gujarat Vidyapith, Gandhinagar the main objective is to study the socio-economic condition of rural handicraft artisans and to suggest appropriate measures to promote, revive and preserve various handicrafts of Surendernagar district. Surendernagar district is the area of research study which is based on the data collected from 400 rural artisans engaged in eight types of handicraft categories, i.e., Weaving and Tang Aliya; Patola; Stone Carving; Mud-work and Wood-work; Tie and Dye; Embroidery and Crochet-work; Bead-work and; Other Handicrafts. Along with them 40 experts such as Government officials, NGO workers, designers, handicraft experts and representatives of village/Taluka/district level institutions were also contacted and interviewed to have authenticated information in this field. The received data were processed through Excel and SPSS software. There are nearly 30% ‘Entrepreneurs’ and 70% ‘Workers’ involved in this research study. Among all ‘Artisans doing job-work from own place’ are 53%; ‘Artisans doing family businesses are 24%; ‘Artisans serving in handicraft unit’ are 17%; and ‘Artisans doing self-started business’ stand at nearly 6%; Average family size is 6 members and average number of handicraft artisans per family comes to 2. Literacy rate seems high, but the level of education is quite low; Nearly 99% of the families use mobile phones; while 31.5% families have smart phones too. But 85% of respondents have never used internet facilities till date. Rest of the artisans use the internet for entertainment and social communication purposes through social media like Facebook and WhatsApp. This awareness and consciousness should be inculcated from the childhood by introducing the subject ‘Handicraft’ in education system not only at primary but all the stages of education for the holistic development of the students.

### **PAPER 2: PROBLEMS OF HANDICRAFT ARTISANS: AN OVERVIEW**

The research work by Dr Manju Smita Dash\*, Prof Bidhu Bhusan Mishra Dept of Business Administration, Utkal University, Vani Vihar, Bhubaneswar-4, Odisha, INDIA has been done in the Odisha state. The study covers the rural artisans engaged in various selected handicraft items. 300 rural handicraft artisans were selected as respondents through stratified random sampling method, who were either self-employed or wage earners. In different functional areas such as production, marketing, finance, design and development and training, attempts were made to compile possible interventions as suggested by the government’s Directorate of Handicrafts and Cottage Industries in their various reports and by the artisans. There should be restrictions on machine produced patta painting in the market. Loan should be provided to the craftsmen. Thus, in this paper an attempt has been taken to study the weakness and challenges faced by the artisans of handicrafts.

### **PAPER 3: IMPACT OF E-COMMERCE ON SMES IN INDIA**

This paper by Ashish Vellody, partner in ITA-CIO advisory, KPMG, India and Kunal Bahl, co-founder, and CEO, Snapdeal provides an insight on the impacts of e-commerce. The e-commerce sector in India is projected to cross USD 80 billion by 2020 and USD 300 billion by 2030 and is already changing the way small and medium businesses operate in India the SME sector accounted for more than 17 percent of the GDP in 2014 while contributing to 45 per cent of the nation's industrial output and 40 per cent of the total exports. The SMEs in India add over 1.3 million jobs per year. By adopting e-commerce, SMEs shall achieve significant advantages such as increased revenues and margins, improved market reach,



access to new markets, cost savings in marketing and communication spend, customer acquisition and improved customer experience. SMEs that use the internet extensively tend to export approximately twice as much by export value when compared to SMEs using the internet sparingly. Although SMEs in India may or may not have online presence, 43 per cent of them participate in online sales in India. The Indian regulators, industry bodies and e-commerce players recognize the challenges faced by SMEs and are doing their bit in enabling thousands of SME sellers to explore a new channel for marketing, sales, and customer service. The Indian government's initiatives such as 'Make in India', 'Digital India' and 'Skill India' are all aimed at facilitating growth of SMEs in the country, and enable them to tap into the potential of e-commerce.

### 3. TOPIC OF THE WORK

#### a) System Architecture

The system architecture of an ecommerce website typically consists of several interconnected components that work together to facilitate various functionalities. Here is an overview of the key components and their roles:

1. Client-side Interface: This is the front-end part of the website that users interact with. It includes the user interface (UI) elements such as web pages, product listings, shopping cart, and checkout process. Technologies like HTML, CSS, and JavaScript are used to develop this part of the website.

2. Web Server: The web server hosts the website and handles HTTP requests from clients (web browsers). It serves static content like HTML pages, CSS stylesheets, and client-side scripts.

3. Application Server: The application server handles the business logic and dynamic content generation of the website. It executes server-side scripts, interacts with the database, and performs tasks such as processing orders, managing inventory, and handling user authentication.

4. Database Server: The database server stores and manages the website's data, including product information, customer profiles, orders, and transaction records. Commonly used database management systems (DBMS) for ecommerce websites include MySQL. The database server communicates with the application server to retrieve and store data as needed.

5. Payment Gateway: The payment gateway is a service that facilitates online payments by securely processing transactions between the customer, merchant, and financial institutions. It encrypts sensitive payment information, authorizes transactions, and facilitates fund transfers. Popular payment gateways include PayPal, Stripe, Square, and Authorize.Net. Integration with a payment gateway is essential for processing credit/debit card payments and other forms of online transactions.

#### b) Implementation:

Frontend: HTML, CSS, JavaScript

Backend: node.js, express.js, MongoDB, Bcrypt

DBMS: MongoDB

#### c) Working Principle:

The working principle of an ecommerce website involves a series of interconnected processes and interactions between various components to facilitate online buying and selling. Here is an overview of the key steps and principals involved in our website:

1. Product Management: The e-commerce website starts with product management, where sellers upload product information such as name, description, price, images, and specifications into the website's database. This information is displayed on the website for potential customers to browse and purchase.

2. User Interface: The user interface (UI) of the ecommerce website allows customers to browse products, search for specific items, view product details, add items to their shopping cart, and proceed to checkout. We aim for the UI to be intuitive, visually appealing, and optimized for both desktop and mobile devices to provide a seamless shopping experience.

3. Shopping Cart: When customers add items to their shopping cart, the ecommerce website stores this information temporarily. Customers can review their cart, modify quantities, remove items, and calculate the total cost before proceeding to checkout.

4. Checkout Process: The checkout process involves several steps where customers provide shipping information, select a payment method, and confirm their order. During checkout, the ecommerce website collects customer data securely and processes the payment transaction through a payment gateway.

5. Payment Processing: Payment processing is a critical component of ecommerce websites. Once customers submit their payment information, the website securely transmits this data to the payment gateway, which verifies the transaction with the customer's bank or financial institution. Upon successful authorization, the payment gateway processes the payment and notifies the ecommerce website.

6. Order Fulfilment: After receiving payment confirmation, the ecommerce website generates an order confirmation and sends it to the customer via email. The website also notifies the seller to fulfil the order by packaging the products, generating shipping labels, and arranging for delivery or pickup.

7. Review and Rating: After purchasing a product, customers can leave a review and rate their shopping experience. They can provide feedback on various aspects, including product quality, shipping speed, packaging, customer service, and overall satisfaction.

8. Inventory Management: To ensure seamless service, we aim to keep track of inventory levels to prevent overselling and stockouts. As orders are placed and fulfilled, the website updates inventory levels in real-time to reflect the availability of products.

9. Customer Support: Providing excellent customer support is essential for ecommerce websites to address customer inquiries, resolve issues, and ensure a positive shopping experience. This may involve offering live chat support, email assistance, a knowledge base, and a FAQ section to help customers navigate the website and resolve common problems. A chatbot is also implemented to ensure uninterrupted services 24x7.

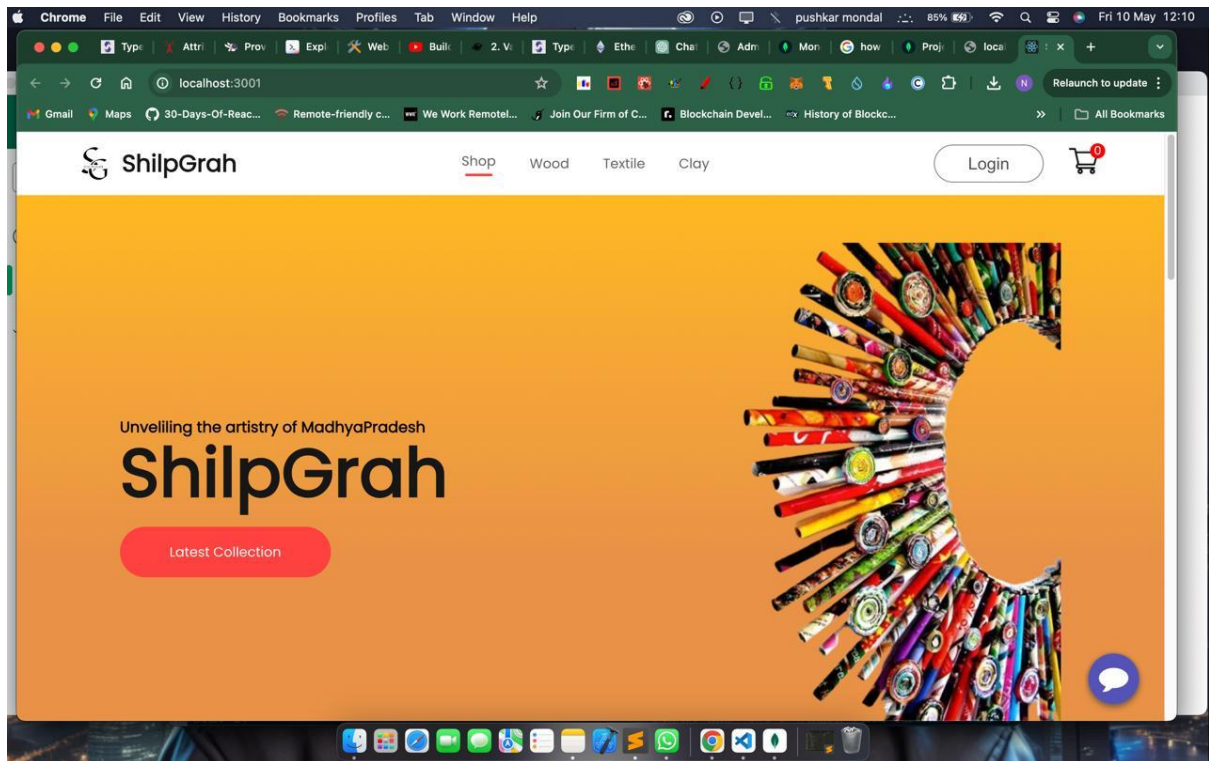


Fig 01. Landing Page

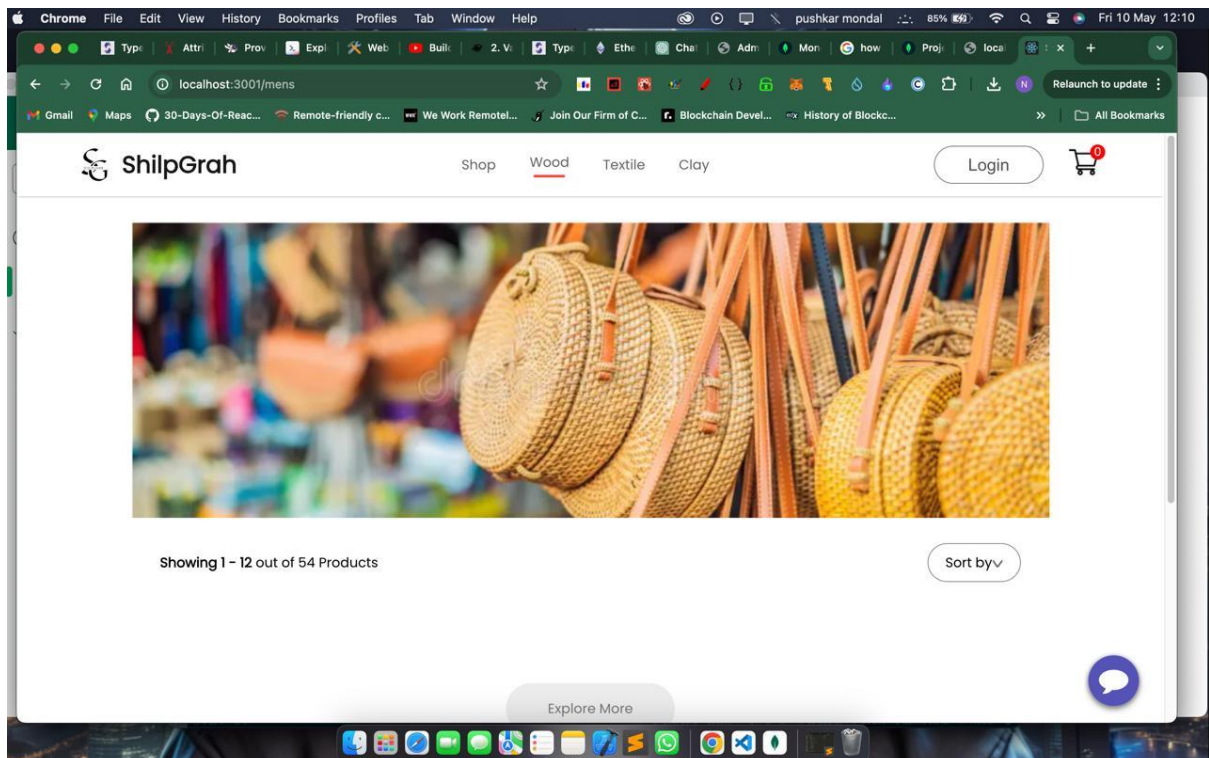


Fig 02. Tab For Wood Items

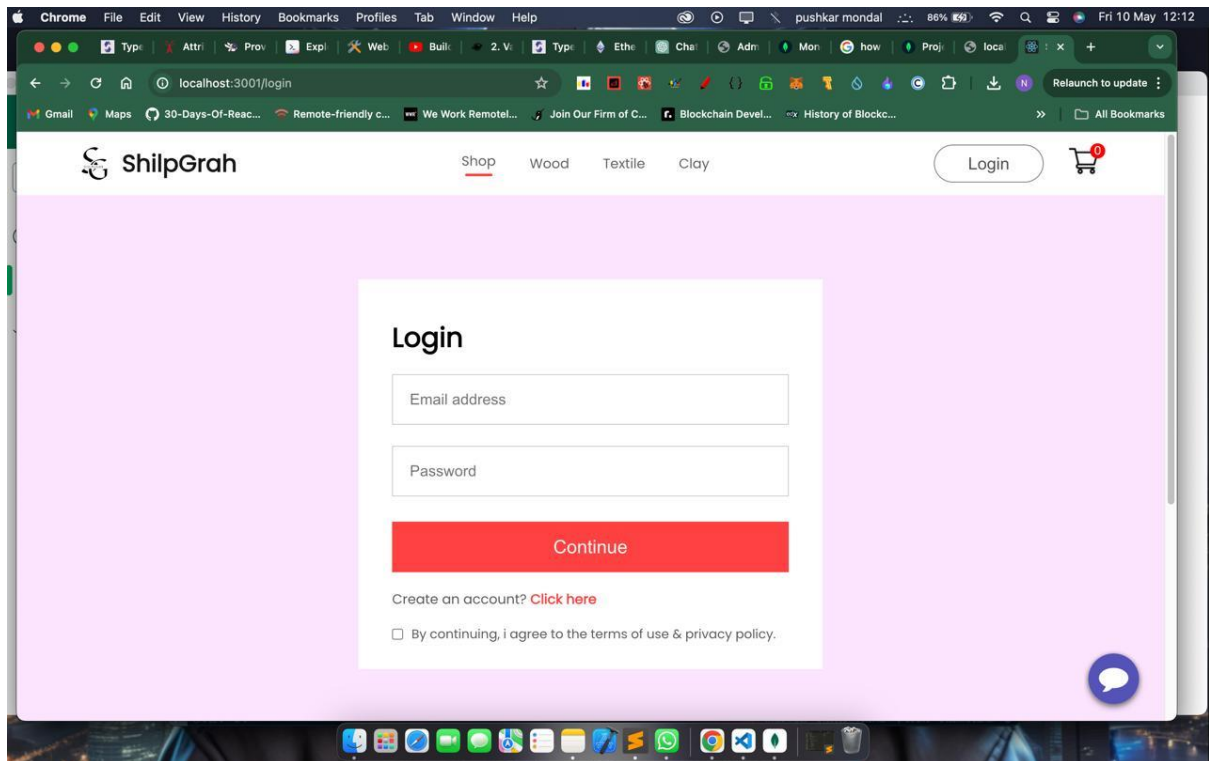


Fig 03. Login Page

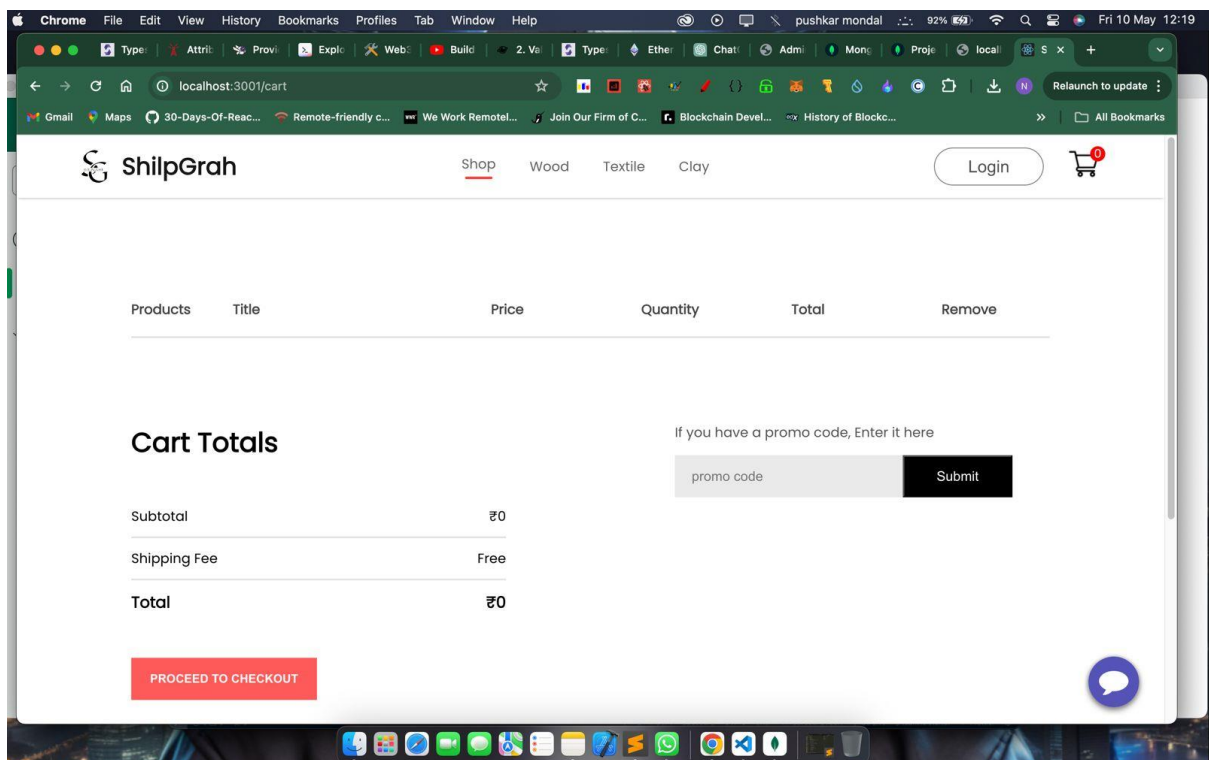


Fig 04. Checkout Page

## **d) Results and Discussion**

### **1. Facilitating Local Entrepreneurs:**

- EmpowerBiz serves as a gateway for local entrepreneurs to showcase their products on ShipGrah, reaching customers beyond geographical limitations.
- By providing a platform for local vendors, we contribute to the growth of small businesses and encourage economic sustainability within communities.

### **2. Expanding Market Reach:**

- Through ShilpGrah, vendors can tap into a larger customer base, transcending traditional brick-and-mortar limitations.
- EmpowerBiz's robust marketing strategies and user-friendly interface ensure that vendors can effectively showcase their products to a diverse audience.

### **3. Fostering Collaboration:**

- We prioritize collaboration with local vendors, offering support and guidance to optimize their presence on ShilpGrah.
- By nurturing a collaborative environment, EmpowerBiz fosters long-term partnerships with vendors, driving mutual growth and success.

### **4. Enhancing Visibility:**

- Our platform provides local vendors with a prominent online presence, allowing them to stand out in a competitive market.
- Through targeted marketing initiatives and SEO optimization, ShilpGrah ensures that vendors gain visibility and recognition among potential customers.

### **5. Empowering Entrepreneurial Spirit:**

- EmpowerBiz believes in the power of entrepreneurship to drive innovation and economic development.
- By empowering local vendors to showcase their creativity and talent, we contribute to the vibrant entrepreneurial ecosystem of our communities.

## **e) My Contribution**

### **I Ghanshyam Patil:**

Having wrapped up my frontend tasks, where I concentrated on crafting user interfaces and enhancing user experiences, I have also tackled backend responsibilities. Transitioning to backend development means I have dived into architecting server-side logic using MongoDB, Express.js, and Node.js for hosting a website as local. I distributed tasks among team members equally and managed the group's technical aspects. This shift has helped me to contribute to both the presentation and functionality layers of the website, ensuring a cohesive and dynamic user experience. My contributions epitomized technical proficiency, collaborative leadership, and dedication to project success. I am proud of our achievements and look forward to future endeavours.

## 4. CONCLUSION

In the culmination of this transformative project aimed at elevating the marketability of local businesses and artisans in Madhya Pradesh, we find ourselves at the threshold of a promising future where tradition meets innovation. The launch of the dedicated website signifies more than just a digital presence; it embodies a commitment to preserving and promoting the rich cultural heritage of Madhya Pradesh while providing a modern platform for economic growth.

Looking forward, we anticipate a ripple effect that extends far beyond the digital realm. The website serves as a catalyst for economic empowerment, fostering sustainable growth and creating new avenues for revenue generation. The increased visibility and accessibility provided by the online platform are poised to generate employment, stimulate local economies, and contribute to the overall development of the region.

The launch of this website is not merely a conclusion but a new beginning—a digital renaissance for Madhya Pradesh's businesses and artisans. As we celebrate this milestone, we remain committed to nurturing and sustaining the symbiotic relationship between tradition and technology, ensuring that the cultural tapestry of Madhya Pradesh continues to flourish on a global stage. This initiative is more than a project; it is a testament to the resilience, creativity, and limitless potential of Madhya Pradesh's local businesses and artisans.

## 5. REFERENCES

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2. PROBLEMS OF HANDICRAFT ARTISANS: AN OVERVIEW Dr Manju Smita Dash\*, Prof Bidhu Bhusan Mishra Dept of Business Administration, Utkal University, Vani Vihar, Bhubaneswar-4, Odisha, INDIA
3. IMPACT ON E-COMMERCE ON SMES IN INDIA, By Ashish Vellody, Partner in ITA-CIO Advisory, KPMG, INDIA and Kunal Bahl, Co-founder, and CEO, Snapdeal.
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## 6. BIODATA WITH PICTURE

### Ghanshyam Patil

Hey, I am a Ghanshyam Patil from Vadodara, Gujarat, with a Bachelor's degree in Computer Science and Engineering Core branch 3rd year student. My expertise lies in Python programming, where I have honed my skills to develop efficient and scalable solutions. Additionally, I am a Microsoft Certified Platform App Maker, demonstrating my commitment to staying at the forefront of technology. With a passion for innovation and a drive for excellence, I am poised to make meaningful contributions in the ever-evolving field of technology. I have also started learning a new course in MERN which helps me to do Full stack development.





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