CRAFTS-CONNECT – EMPOWERING RURAL ARTISANS AND PRESERVING CULTURAL HERITAGE

A PROJECT REPORT

Submitted by

RESHMA R   **2116210701212**

SANJAY S   **2116210701231**

SHRIRAM KUMAR A N   **2116210701247**

SOWMIYA S   **2116210701255**

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CHENNAI - 602105

BONAFIDE CERTIFICATE

Certified that this project report **"CRAFTS-CONNECT – EMPOWERING RURAL ARTISANS AND PRESERVING CULTURAL HERITAGE"** is the bona-fide work of **"RESHMA R (210701212), SANJAY S (210701231), SHRIRAM KUMAR A N (210701247), SOWMIYA S (210701255)"** who carried out the project work under my supervision.

Mr. K. Vijay, B.Tech., M.E.,

SUPERVISOR

Assistant Professor (SG)

Department of Computer Science and Engineering

Rajalakshmi Engineering College

Chennai - 602105

Submitted to Project Viva-Voce Examination held on _____.

Internal Examiner   External Examiner

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ABSTRACT

As a land rich in cultural heritage spanning centuries, India has long nurtured the artistry and craftsmanship of skilled artisans. Their mastery has been the lifeblood of the nation's traditions, passed down through generations. Crafts-Connect is a digital marketplace that seeks to revitalize this legacy by empowering rural artisans. Our platform serves a dual purpose: economic empowerment and cultural preservation. By showcasing unique handcrafted products to a global audience, we provide artisans a platform to increase their income and fight poverty in a sustainable way. This not only bolsters rural business opportunities but also breathes new life into traditional practices that might otherwise fade with time. Crafts-Connect goes beyond simple sales. We offer skill development programs to help artisans hone their talents and ensure the longevity of their craft. We also promote eco-friendly practices and community engagement, fostering a respect for the traditional methods that define these time-honoured skills. The platform fosters a direct connection between artisans and consumers, creating a space for valuable exchange. This two-way communication allows artisans to receive feedback on their work and fulfil customized product requests, gaining valuable design insights and market knowledge. By fostering a direct connection between artisans and consumers, Crafts-Connect facilitates a meaningful interaction. This two-way communication allows artisans to receive valuable feedback on their work and fulfil customized product requests. This interaction equips them with design insights and market knowledge, empowering them to further refine their craft. Ultimately, Crafts-Connect strives to be a catalyst for positive social impact. By supporting both India's cultural heritage and the livelihoods of its rural artisans, we aim to build a sustainable future through an innovative digital model.

ACKNOWLEDGMENT

First, we thank the almighty god for the successful completion of the project. Our sincere thanks to our chairman **Mr. S. Meganathan B.E., F.I.E.,** for his sincere endeavour in educating us in his premier institution. We would like to express our deep gratitude to our beloved Chairperson **Dr. Thangam Meganathan Ph.D.,** for her enthusiastic motivation which inspired us a lot in completing this project and Vice Chairman **Mr. Abhay Shankar Meganathan B.E., M.S.,** for providing us with the requisite infrastructure.

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RESHMA R
SANJAY S
SHRIRAM KUMAR A N
SOWMIYA S

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CHAPTER - 1
INTRODUCTION

1.1 INTRODUCTION

Crafts-Connect is an innovative web platform that serves as a vibrant community where artisans and users come together to celebrate the artistry of traditional crafts. Our platform serves as a digital tapestry, weaving together the threads of tradition and innovation. Through our platform, artisans have the opportunity to not only showcase their products but also tell the stories behind their creations, providing users with a deeper understanding of the cultural significance woven into each piece. Here, artisans are not merely sellers but storytellers, sharing the rich narratives behind each intricately crafted piece. Users are invited to explore not just products, but the heritage and craftsmanship that breathe life into them. Moreover, we believe in fostering connections beyond transactions.

1.2 SCOPE OF THE WORK

Our platform encourages interaction between artisans and users, allowing for feedback and custom orders. This interactive approach not only enriches the shopping experience but also strengthens the bond between creators and consumers. At Crafts-Connect, we're committed to more than just commerce; we're dedicated to preserving heritage, empowering artisans, and fostering a sense of community. We bridge the gap between tradition and modernity, creating a space where the past thrives in the present, and where every purchase makes a meaningful difference in the lives of artisans and their communities.

1.3 PROBLEM STATEMENT

Consumers face many problems in understanding the cultural background and features of the product. The consumer needs an elaborative explanation about the product which is offered by the chatbot. Our platform, "Crafts-Connect" acts

as a communication medium between the artisans and consumers. Crafts-Connect innovates with chatbots and language translation, enhancing artisan-customer communication. Our inclusive platform breaks barriers, enriches experiences, and empowers artisans to connect globally. Our platform provides an intuitive user-friendly interface for the artisans to showcase their products at fair prices and allows the consumers to browse the platform with ease and also interact with the artisans through chatbot.

1.4 AIM AND OBJECTIVES OF THE PROJECT

Crafts-Connect is a transformative platform that empowers rural artisans. By providing access to a global market, it enhances their livelihoods and breaks the cycle of poverty. Additionally, it preserves ancient crafting techniques, fostering cultural pride and continuity. Through eco-friendly practices, it promotes environmental conservation, ensuring a sustainable future for artisans and their communities. Moreover, Crafts-Connect revitalizes forgotten skills, strengthens local economies, and encourages cross-cultural understanding. This initiative not only enriches the lives of the artisans but also weaves a tapestry of global connections, celebrating the shared human spirit through the beauty of craftsmanship.

CHAPTER - 2
LITERATURE SURVEY

1. Platform-based product development in the process industry "Andersen, R., Brunoe, T. D. and Nielsen, K. (2023) 'Platform-based product development in the process industry: a systematic literature review', International Journal of Production Research, 61(5), pp. 1696–1719. doi: 10.1080/00207543.2022.2044085."

Platform-based product development, prevalent in discrete manufacturing, has limited research in process manufacturing. This study systematically reviewed literature to define key platform terms, identify drivers, methods, and industry examples in process industries. Cost reduction and productivity emerged as primary drivers, while reduced development time was less emphasized. Existing literature focuses more on product design and development than markets, manufacturing, and supply chains. Few formal industry cases were found, despite multiple informal descriptions.

2. Heritage Design: Developing Products Based on Traditional Knowledge and Creating an Artisan Community in Nakhon Pathom Province "Tonthongkam, K., Arayajaru, S., Boonsringam, N., Phonsongkroh, N. and Phusri, N., 2023. Heritage Design: Developing Products Based on Traditional Knowledge and Creating an Artisan Community in Nakhon Pathom Province. The International Journal of Designed Objects, 18(1), p.61."

This qualitative study aims to strengthen community identity in Nakhon Pathom Province, Thailand, by designing symbols embodying the artisan community's spirit. Using a participatory action research model, the study involved two data collection phases: a documentary review on cultural capital and craftsmanship, and co-creating product designs with artisans from four

local communities. Local stakeholders emphasized the importance of their participation to maintain cultural authenticity and ownership, ensuring culturally appropriate designs and meaningful engagement in the research process.

3. Developing sustainable heritage-based livelihoods: an initial study of artisans and their crafts in Viljandi County, Estonia "Parts, P.-K. et al. (2011) 'Developing sustainable heritage-based livelihoods: an initial study of artisans and their crafts in Viljandi County, Estonia', International Journal of Heritage Studies, 17(5), pp. 401–425. doi: 10.1080/13527258.2011.589199."

This paper explores traditional woodworking and building crafts as local resources in Estonia's transition from socialism to a market-based economy. Using an applied anthropological approach, it integrates the preservation of intangible cultural heritage with sustainable heritage-based livelihoods. It begins with a theoretical discussion on skills as tacit knowledge, followed by the methodology and procedures for documenting artisans' skills. Based on 2008 fieldwork in Viljandi County, the study examines artisans' relationships with their communities, economic sustainability, intergenerational skill transmission, changes in artisan-customer dynamics, and implications for craft-related institutions and policies.

4. Access to E-commerce in the ethical trade arena: a case study of Artisans in Kenya "MacDonald, M., 2012. Access to E-commerce in the ethical trade arena: a case study of Artisans in Kenya (Doctoral dissertation, University of Nairobi, Kenya)."

This study explores the impact of e-commerce on Kenyan artisan groups—Malo Designs, Bombolulu Workshops, and Jorova Craft—selling via an ethical trade

website. Despite access to global markets, artisans still rely heavily on Western wholesale buyers due to limited technology and resources. The study recommends Kenyan government policies to enhance education, training, and IT access, enabling artisans to fully leverage e-commerce opportunities.

5. Investigating Omani Artisans' Skills in Marketing their Creative Manufactured Goods "Almamari, B., 2020. Investigating Omani Artisans' Skills in Marketing their Creative Manufactured Goods. Saudi Journal of Humanities and Social Sciences, 5(9), pp.466-469."

The creative industries, crucial to global economies, rely on resilient micro, small, and medium enterprises. Despite their high-quality products, these industries face significant fragility due to the unique nature of their consumer base. This study examines these challenges, aiming to propose solutions and enhance understanding of the creative sector. It will develop a checklist to improve the operational mechanisms of small arts-related creative enterprises.

6. Promotion Project for Communication between Artisans and Consumers Supported by Media Technology "Izuhara, R., Yokokawa, S. and Suzuki, S., 2011. Promotion project for communication between artisans and consumers supported by media technology. In Human-Computer Interaction. Users and Applications: 14th International Conference, HCI International 2011, Orlando, FL, USA, July 9-14, 2011, Proceedings, Part IV 14 (pp. 237-244). Springer Berlin Heidelberg."

This project uses advanced media technologies like Augmented Reality (AR) and projection mapping to enhance interaction between artisans and consumers. By creating immersive experiences that showcase artisans' skills and unique products, it boosts the visibility and appeal of handcrafted items.

This approach fosters cultural heritage appreciation and supports local economies, bridging the gap between traditional craftsmanship and modern consumers, and fostering a vibrant, connected community.

7. E-Commerce for the Preservation of Traditional Thai Craftsmanship "Mutchima, P., Phiwma, N. and Valeepitakdej, V., 2019, October. E-Commerce for the Preservation of Traditional Thai Craftsmanship. In 2019 4th International Conference on Information Technology (InCIT) (pp. 114-119). IEEE."

The role of e-commerce in preserving traditional Thai craftsmanship addresses cultural differences and sustains Thai crafts and pottery. By leveraging digital platforms, the initiative creates a broader market, ensuring economic viability and relevance. This approach provides artisans with new revenue streams while preserving cultural heritage. Bridging tradition and modernity, it allows global audience reach, maintaining craft authenticity. The project emphasizes cultural preservation through digital transformation, celebrating and sustaining traditional Thai craftsmanship for future generations.

8. Problems and Challenges faced by Handicraft Artisans "Shah, A. and Patel, R., 2017. Problems and challenges faced by handicraft artisans. Voice of Research, 6(1), pp.57-61."

Handicraft artisans, particularly in hand embroidery, beadwork, wool, and coir work, face significant challenges. Artisans linked to the Self Employed Women's Association struggle with inadequate market access, financial resources, and modern tools. The traditional nature of their crafts often clashes with contemporary market demands, complicating competition. Despite these hurdles, their dedication to preserving their crafts highlights the need for supportive measures to bridge traditional craftsmanship and modern market needs, ensuring the survival of these cultural expressions.

9. Designing for Revitalization of Communities through New Business Models for Traditional Arts and Crafts

"Huang, T. and Anderson, E., 2019. Designing for revitalization of communities through new business models for traditional arts and crafts. Art and Design Review, 7(04), p.225."

This paper explores how design can revitalize rural and marginalized communities where traditional arts and craft businesses are prevalent. It contends that these businesses must establish a symbiotic relationship with local communities to ensure mutual survival and prosperity. The paper aims to show that designers can collaborate with traditional arts and crafts businesses to better convey their stories and seek new business opportunities, fostering sustainable development for both. Using ethnographic research and a participatory design process, the research team collaborated with traditional arts and crafts business owners in three communities, resulting in several innovative design concepts. The paper concludes with recommendations for designers interested in bridging the gap between business and traditional arts and design.

10. Trademarks of Tradition: Artisan Labor, Development and Place Making in Rural India

"Halbe, A., 2023. Trademarks of Tradition: Artisan Labor, Development and Place Making in Rural India. University of California, Los Angeles."

Artisanal crafted goods like beer, cheese or textiles signify sustainable, local, and handmade production in global markets. Constituting alternatives to mass culture and mass production, these goods allow producers and consumers to see themselves as engaging ethical and authentic ways of living in our contemporary world. Kachchh is renowned for its craft traditions of weaving, block printing, embroidery, leatherwork and pottery that are still practiced as a primary means of livelihood by many Kachchhi artisan communities.

Ranging from high design to tourist trinkets, Kachchhi artisanal production circulates in both high and low-end artisanal markets. In a country where 25% of the rural population is poor, traditional artisanal production becomes an important site of rural economic revitalization. In India, artisanal production is the second largest contributor to the rural economy, after agriculture.

11. Handmade in India: Traditional Craft Skills in a Changing World "Liebl, M. and Roy, T., 2004. Handmade in India: Traditional craft skills in a changing world. Poor people's knowledge: Promoting intellectual property in developing countries, pp.53-74."

Promoting Intellectual Property in Developing Countries, the study underscores the importance of policing "biopiracy" and defending "traditional knowledge" against misappropriation by industrialized nations. It highlights the urgent need to protect cultural heritage, focusing particularly on the continuity of 'Yekuana' cultural practices. These traditional skills are at risk due to globalization and commercial exploitation, making it imperative to establish stronger intellectual property rights and community-based initiatives. Such measures not only safeguard the authenticity and integrity of these crafts but also empower local artisans, ensuring their cultural expressions and livelihoods are preserved for future generations.

12. Digital Manufacturing of Indian Traditional Handicrafts "Gulati, V. and Mathur, S., 2017. Digital manufacturing of Indian traditional handicrafts. International Journal of Computer Applications, 164(11), pp.1-4."

In the design world, the driving force of computation tools of modern computer is moving towards to expertise craftwork and customization offers new paradigms for modelling and manufacturing of traditional artifacts. Craft-specific CAD tools present new opportunities for novice user to participate in

design process. Computational tools in conjugation with digital manufacturing are turning towards to become an integral element of professional art and design, as these are compatible with traditional crafts. The hybrid integration of design tools, digital manufacturing and traditional techniques of crafts reflect a new way for both traditional handicrafts as well as contemporary issues. This integration of design tools with the traditional crafts has a greater potential for craft work and enhance creativity of craftsman in future.

13. The Role of the Traditional Crafts as Intangible Heritage on the Global Tourist Market
    "Curkovic, M.D., 2021. The role of the traditional crafts as intangible heritage on the global tourist market. In SHS Web of Conferences (Vol. 92, p. 06005). EDP Sciences."

The aim of the paper was to analyse importance and types of traditional crafts as much as to explore the attitudes of local residents in the area of Dubrovnik towards the possibilities of developing new tourism products forms based on the traditional crafts. For the purpose of the paper the secondary and primary data have been used. The empirical research has been conducted using the structured interview method. The sample has consisted of 48 employees. The respondents were residents, employed by companies in Dubrovnik. The results of primary and secondary researches have been considered together regarding the elements of cultural motivation.

14. Strategies for Development of Handicraft Sector (Small Industries) in India
    "Yadav, U.S., Tripathi, R. and Tripathi, M.A., 2020. Strategies for development of handicraft sector (small industries) in India. SEDME (Small Enterprises Development, Management & Extension Journal), 47(3), pp.175-193."

Handicrafts products are made by hand, often with the use of simple tools and generally artistic and traditional. It is sometimes in the current scenario called 'Handomen' craft (women handicraft) because most of the handicraft products are related to women artisans, and women have an apex role in the handicraft products of the rich Indian cultural heritage of the country. Indian handicraft industry is a decentralised, unorganised, labour-intensive cottage industry. However, it now faces several problems, and significant competition from machine-made and electronic products, and technology and artificial intelligence, and there is an increasing state of unemployment and jobless growth. For the welfare of Artisans especially women and their social and economic justice there is requirement of strong strategies for uplifting the standards of their life.

15. Globalization of Indian Handicrafts: A Human Development Approach "Jena, P.K., 2008. Globalization of Indian handicrafts: A human development approach. Orissa review, 65, pp.19-25."

This paper explores how globalization has impacted the quality of life in India, particularly for rural artisans. While some argue globalization improves economic growth, others fear it widens inequality. Focusing on human development indicators like education, health, and standard of living, this research examines how globalization affects traditional handicrafts and the lives of the artists who sustain this cultural identity.

CHAPTER - 3
EXISTING SYSTEM

Existing solutions for supporting rural artisans and marketing traditional products include general e-commerce platforms, specialized marketplaces, social enterprise initiatives, government programs, and nonprofit organizations. However, they may not fully address the unique needs of rural artisans or provide comprehensive solutions for economic sustainability and cultural heritage preservation. A new platform could integrate elements of these existing systems while innovating to provide tailored support and a holistic approach to rural artisan development.

The currently existing systems for our problem statement are websites like:

- Etsy: While not exclusively for traditional crafts, Etsy hosts a wide range of handmade and vintage items, including traditional crafts from around the world

- Amazon Karigar: Amazon's platform specifically for artisans to sell their handmade goods, including traditional crafts.

- eBay: eBay features a section for handmade and artisanal products, where traditional crafts can often be found.

- Novica: Novica specializes in connecting artisans from around the world with customers, offering a wide selection of traditional crafts.

- UncommonGoods: UncommonGoods features unique and handcrafted items, including traditional crafts, from artisans around the world.

CHAPTER - 4
SYSTEM DESIGN
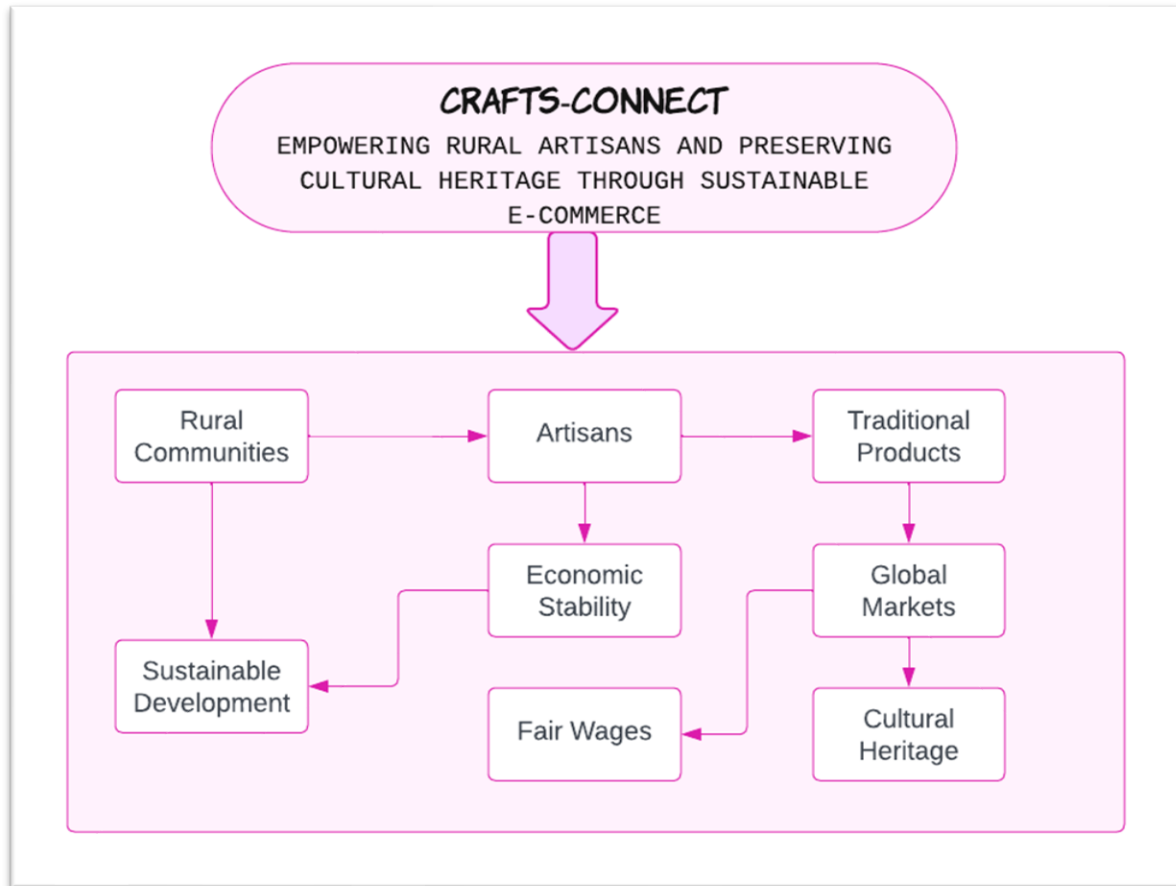
4.1 SYSTEM ARCHITECTURE

Fig 4.1: Architecture Diagram of Crafts-Connect

"CRAFTS-CONNECT" presents a forward-thinking system architecture designed to connect artisans in rural communities with the global e-commerce marketplace. The platform provides a sustainable online channel for artisans to sell their traditional craft products directly to consumers worldwide. At its core, the architecture depicted in Figure 4.1 aims to economically empower rural artisans through fair wages and stable incomes generated from sales facilitated by the system. In addition to its economic goals, this important initiative plays a vital role in preserving cultural heritage by helping to ensure the continuity of unique artisanal skills and designs.

By supporting sustainable development in rural areas, "CRAFTS-CONNECT" creates a holistic ecosystem where artisans and their communities benefit substantially from access to global consumers. In turn, people all over the world can enjoy authentic cultural crafts through the online marketplace.

By leveraging advanced technology, "CRAFTS-CONNECT" aims to foster a mutually-beneficial relationship between rural artisans and a worldwide base of consumers. If successful, the system architecture will empower artisans while preserving cultural traditions for generations to come. It presents an innovative vision for connecting people across barriers to support sustainable development globally.

4.2 HARDWARE SPECIFICATIONS

- Processor   :   Pentium IV Or Higher
- Memory Size: 128GB(Minimum)
- HDD :   40GB(Minimum)

4.3 SOFTWARE SPECIFICATIONS

- Operating System :   WINDOWS 7 AND PLUS
- Front–End   :   React JS
- Back– End   :   Node JS, MongoDB

CHAPTER - 5
PROPOSED SYSTEM

'Crafts-Connect', our proposed platform, seeks to revolutionize the traditional craft industry by providing a global marketplace for rural artisans and pottery makers. Through Crafts-Connect, artisans can showcase their unique products to a global audience, ensuring economic sustainability. By encouraging community engagement and celebrating traditional craftsmanship, Crafts-Connect preserves cultural heritage. This platform seeks to be a catalyst for positive change in the traditional craft industry, connecting artisans with opportunities and consumers with authentic, culturally rich products.

It is a platform that values the preservation of cultural heritage by featuring traditional products that reflect the rich history and craftsmanship of India's diverse communities. It upholds the highest international standards to ensure that our consumers can trust in the quality and integrity of our products. Our platform strongly supports fair trade principles, which ensures that artisans receive fair compensation for their labor and craftsmanship. By promoting fair trade practices, we help to create a sustainable future for both the artisans and their communities. This platform acts as a support for rural communities to enhance their economic income and thereby preserving the cultural heritage. It is an innovative digital platform that seamlessly combines tradition with modern commerce. Our mission is to preserve traditional crafts and support rural artisans. By connecting artisans to global markets, we ensure fair wages and economic stability. Through community engagement, we promote and safeguard cultural heritage. Our platform, allows the artisans and consumers to connect and communicate with each other using the chatbot facility which comes with language translation, so that there will be no language barriers between artisans and consumers and thus leading to effective communication. This not only preserves cultural heritage but also promotes it.
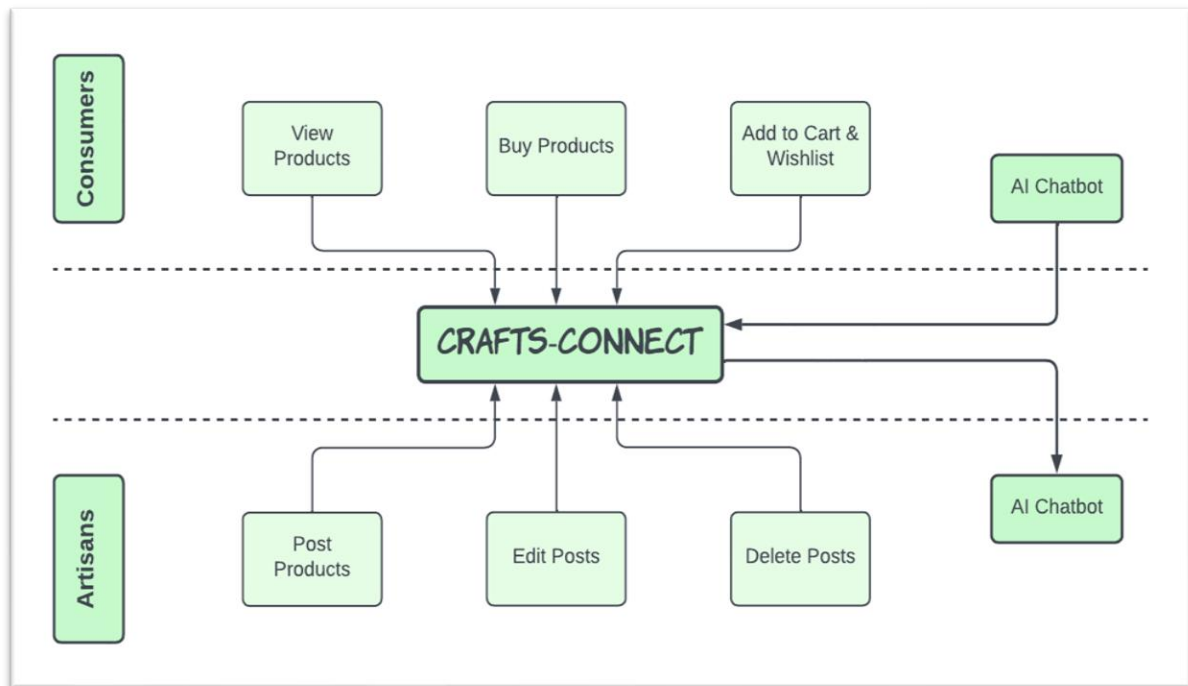
CHAPTER - 6

MODULE DESCRIPTION

Fig 6.1: Module Representation of Crafts-Connect

Crafts-Connect is a traditional platform for the artisans to showcase their products for the consumers. The artisans post their handmade products by providing the details and pictures of the product. The above figure 6.1 represents the module representation of the system and those modules are listed and briefed below.

MODULES:

1. Sign up and Login
2. User
3. Artisan
4. Products
5. Search and Filter
6. Cart

6.1 SIGN UP AND LOGIN

The user or artisans can register themselves to become a legitimate user of the system using this module. This page is essential since it authenticates the security of the user. After registering with the website, the user will get navigated to their respective home page based on the user type they have opted for when they registered.

Below Figures 6.2 and 6.3 depicts the signup and login pages of the system respectively, each containing a form for further proceedings which when submitted leads to the home pages of user and artisan modules that is Figure 6.4 and 6.5 respectively.
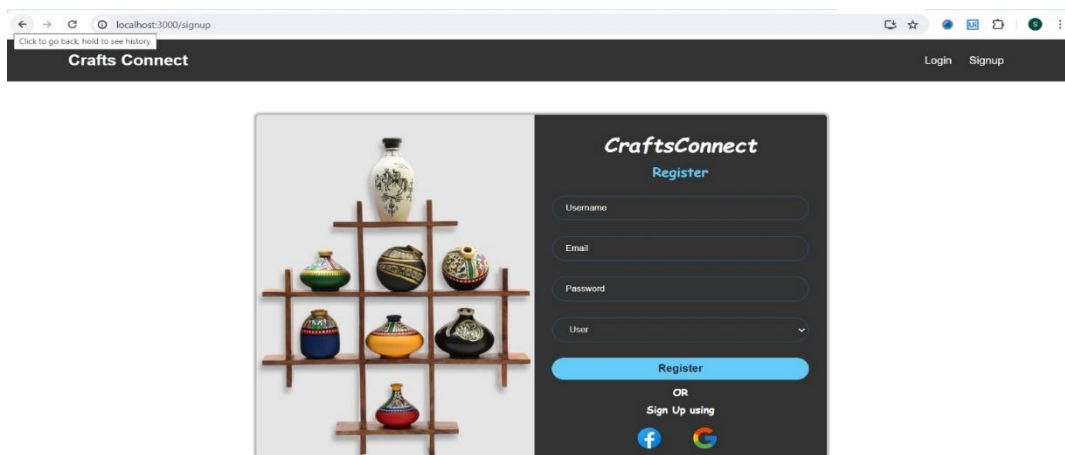
Fig 6.2: Signup page
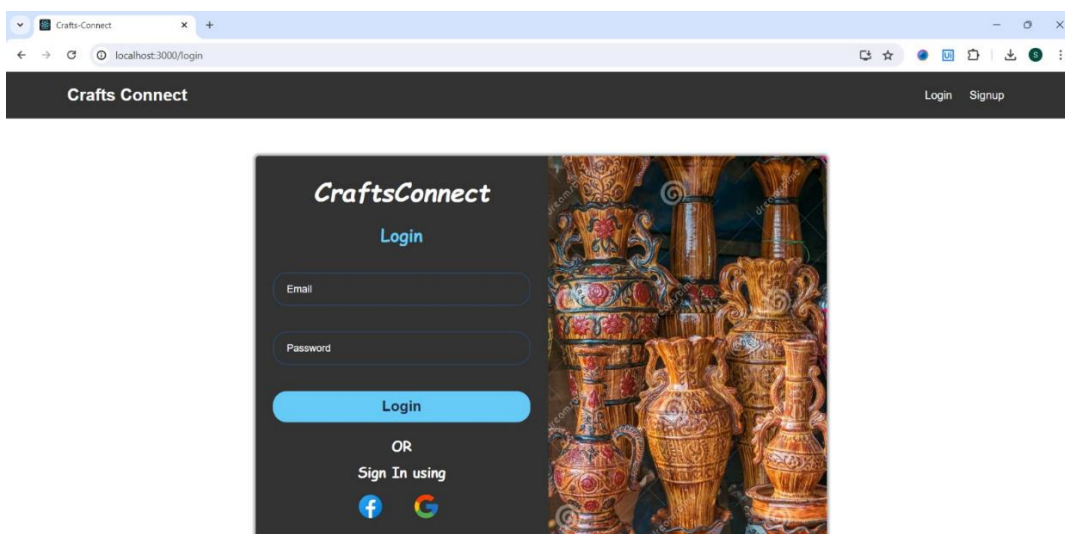
Fig 6.3: Login page

6.2 USER MODULE

After a successful login / sign up by the registered user the following pages depicted in Figure 6.4 will be displayed which contains the products available in a carousal and when the user clicks the catalog option present in the navigation bar, they will be taken to the products page. In the user module, users can perform operations like view products, add products to the cart and buy products.
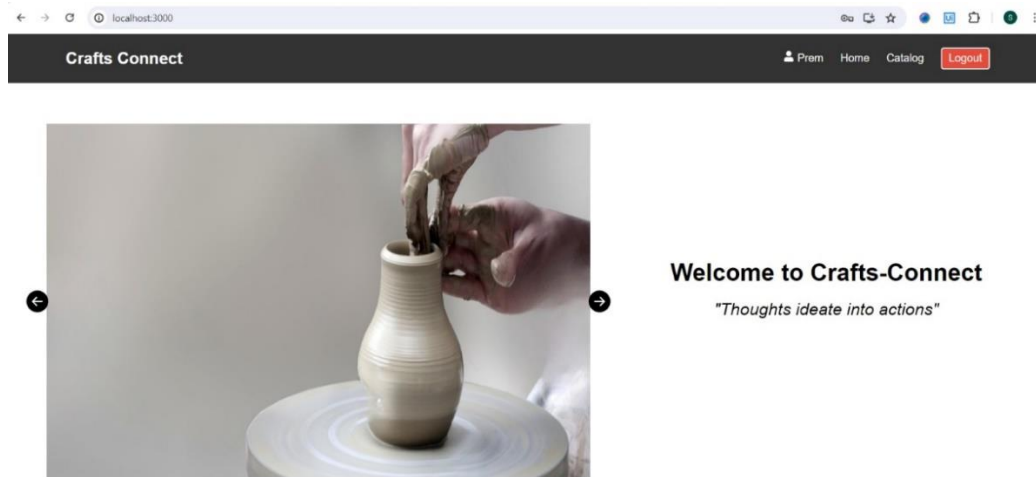

Fig 6.4: User page

6.3 ARTISAN MODULE

After a successful login or sign-up, the registered artisan will be directed to this page which is depicted in Figure 6.5. In this module, they can perform operations like post their handmade products, edit those posts and delete the products if necessary.
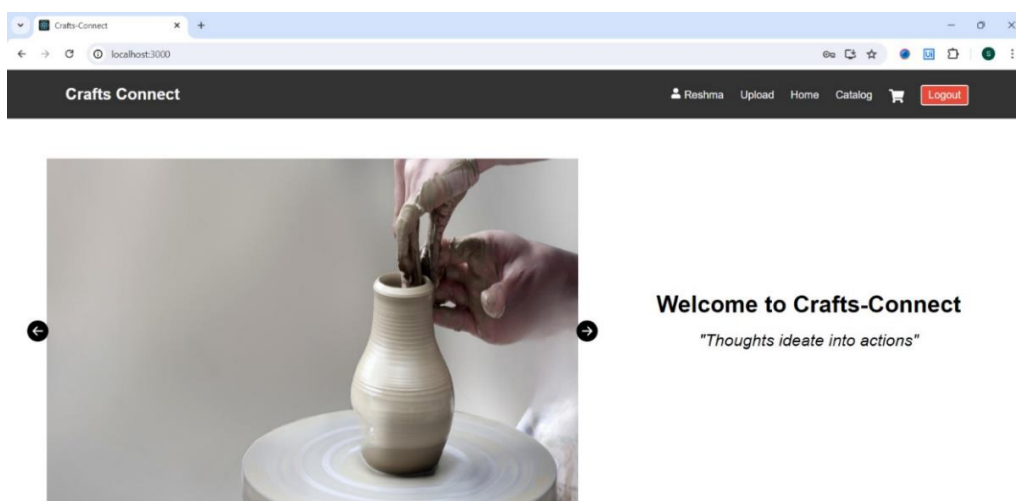
Fig 6.5: Artisan page

6.4 PRODUCTS

Here the products which were posted by all the artisans will be displayed to the users like in the Figure 6.6 when they click the catalog option in the navigation bar of Figures 6.4 and 6.5. It will display each product along with its name, type, cost, description, etc., By clicking on a product, the user will be redirected to a page which showcases the detailed information about that product in user module i.e. Figure 8.1.6.
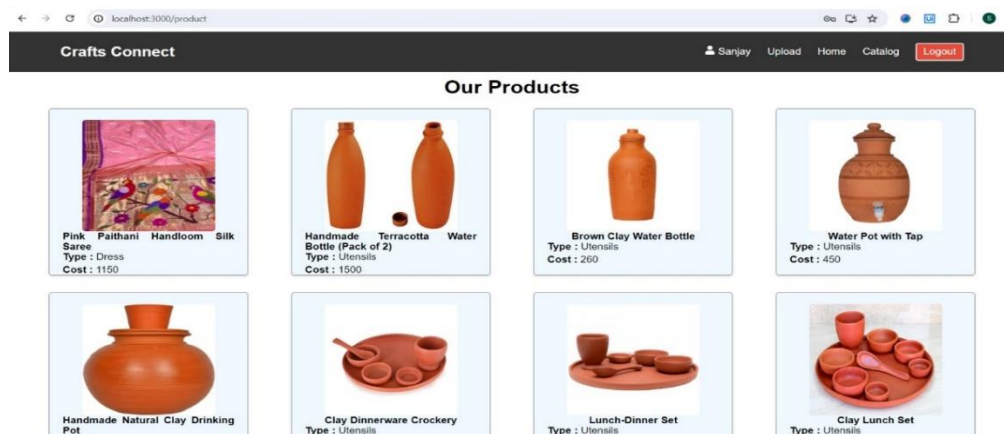

Fig 6.6: Products page

6.5 SEARCH

The search option is available for the users to look for their desired products by entering a keyword or name related to the product. This feature accurately matches the names with the relevant tags and displays them. An example is given in the below Figure 6.7 which depicts the search results of the user for the word 'bowl'.
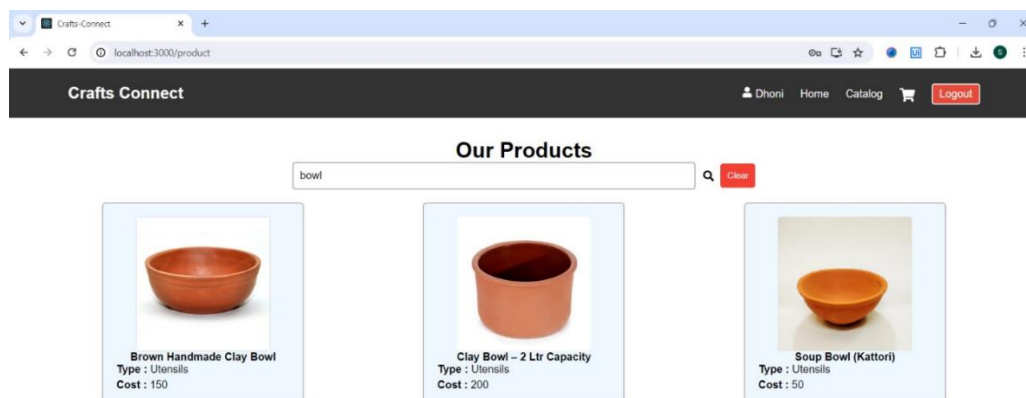

Fig 6.7: Search Page

6.6 CART

The user can add their desired products to the cart which acts as a container for the user to store their products. From the cart the user may checkout their product at any time. There is also a feature for the user to remove the items from the cart.

Fig 6.8: Cart Page

Above Figure 6.8 represents the cart page of the system where the products selected by the user are displayed on the left with a delete button on the right which can be used to remove that product from the cart. This also displays the total amount along with the 'Checkout' button which upon clicking shows a message 'Thank you for shopping' which is depicted in Figure 8.1.8.

CHAPTER - 7

SAMPLE CODING

#App.js

```jsx
import { BrowserRouter , Routes , Route, Navigate } from 'react-router-dom'
import { useAuthContext } from './hooks/useAuthContext'

import Login from './pages/Login';
import SignUp from './pages/SignUp';
import Home from './pages/Home';
import Navbar from './components/Navbar';
import ArtisanUpload from './pages/ArtisanUpload';
import Products from './pages/Products';
import SingleProduct from './components/SingleProduct';
import Cart from './pages/Cart';

function App() {

  const {user} = useAuthContext()

  return (
      <BrowserRouter>
      <Navbar/>
      <div className="pages">
        <Routes>
          <Route
            exact
            path='/'
            element = {user ? <Home/> : <Navigate to="/login" />}
          />
          <Route
            path='/login'
            element = {!user ? <Login/> : <Navigate to="/" />}
          />
            <Route
            path='/signup'
            element = {!user ? <SignUp/> : <Navigate to="/" />}
          />
          <Route
            path='/upload'
            element = {user ? <ArtisanUpload/> : <Navigate to="/" />}
          />
          <Route
            path='/product'
            element = {user ? <Products/> : <Navigate to="/" />}
          />
```

```jsx
                <Route
                  path='/cart'
                  element = {user ? <Cart/> : <Navigate to="/" />}
                />
                <Route
                  path='/product/:id'
                  element = {user ? <SingleProduct/> : <Navigate to="/" />}
                />
            </Routes>
        </div>

        </BrowserRouter>
    );
}


export default App;
```

#server.js

```js
require('dotenv').config()
const express = require('express')
const mongoose = require('mongoose')

const userRouter = require('./routes/user')
const productRouter = require('./routes/products')
const cartController = require('./routes/cart')
const app = express()

app.use(express.json({limit : '20mb'}))


mongoose.connect(process.env.MONGO_CONN)
    .then(() => {
        console.log("Database connected")
        app.listen(process.env.PORT ,() => {
            console.log("Server Listening on",process.env.PORT)
        })
    })
    .catch(error => {
        console.log("Database not connected ",error)
    })

//Routes
app.use('/api/user' , userRouter)
app.use('/api/products' , productRouter)
app.use('/api/cart' , cartController)
```

#productModel.js

```javascript
const mongoose = require('mongoose')
const Schema = mongoose.Schema

const productSchema = new Schema({

    productName:{
        type : String,
        required : true
    },
    productType:{
        type: String,
        required : true
    },
    description:{
        type : String,
        required : true
    },
    cost : {
        type : Number,
        require:true
    },
    quantity : {
        type : Number,
        require:true
    },
    tags:{
        type : String,
        required : true
    },
    productImage:{
        type : String,
        required : true
    },
    user_id : {
        type:String,
        required : true
    },
    inCart : {
        type : Boolean,
        default : false
    }
} , {timestamps : true})

module.exports = mongoose.model('Product', productSchema)
```

CHAPTER – 8

SCREEN SHOTS

8.1 USER:

The Figure 8.1.1 provides the way for the user to sign-up in the platform by providing the username, email address, password, and drop-down selection box with the terms "user" and "artisan" to indicate the kind of user registering with the system or if they are already an user, they can directly login to the system.
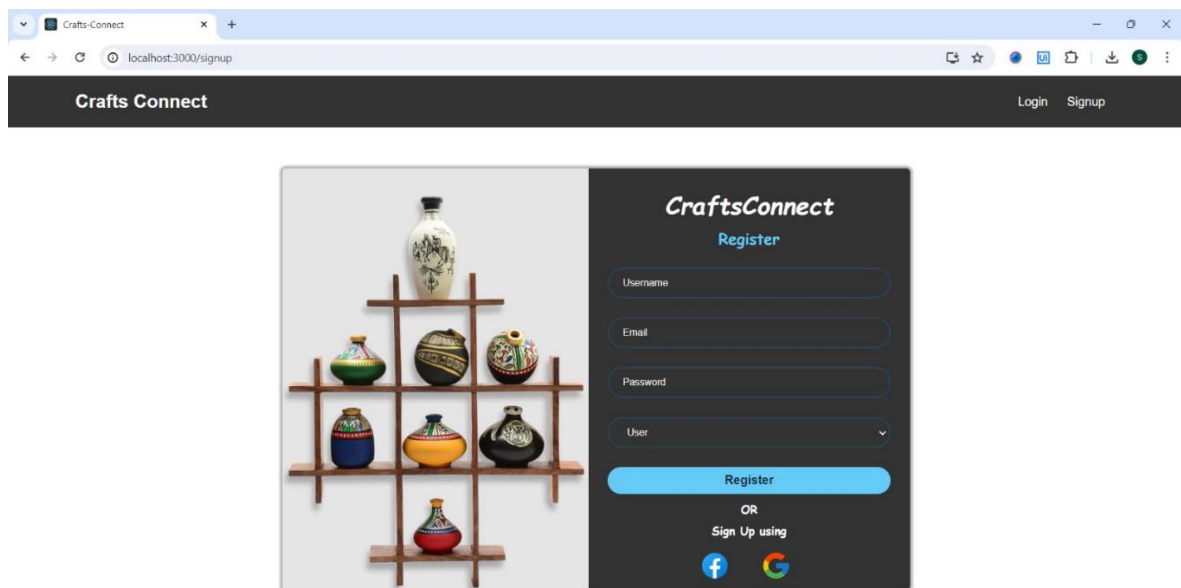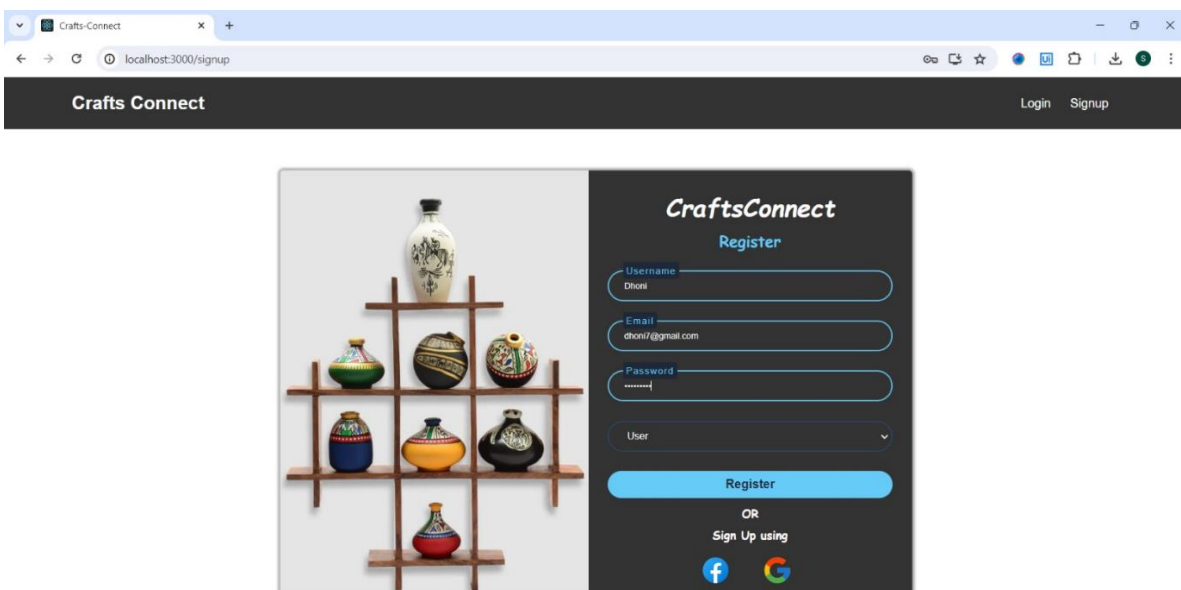

Fig 8.1.1: Signup Page

Fig 8.1.2: Signup Details

After registering as an authorized user, they will be navigated to the Figure 8.1.3 which is the home page for the platform.
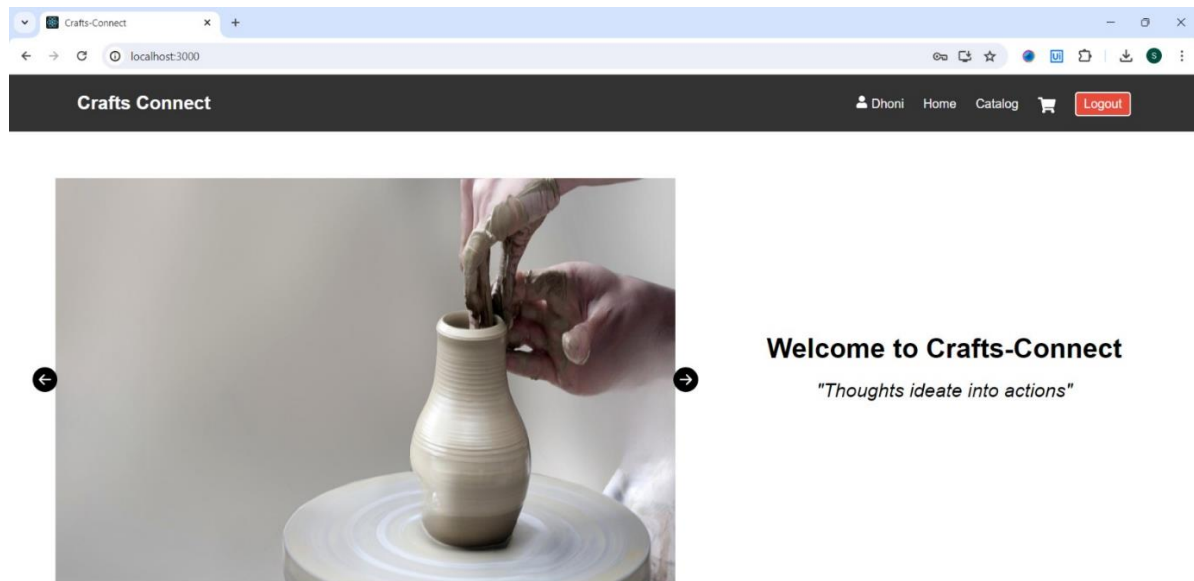
Fig 8.1.3: User Home Page

In the Figure 8.1.3 Home page, when the user presses the 'Catalogue' in the navigation bar, they can view all the products along with the product details which is depicted in the Figure 8.1.4.
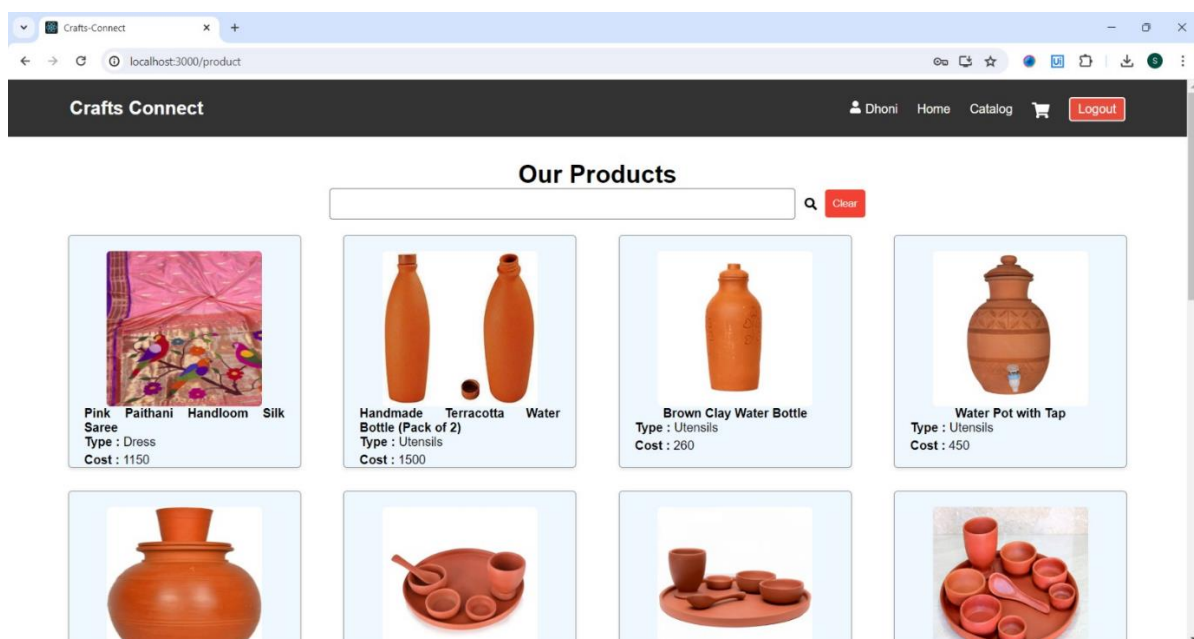

Fig 8.1.4: Products Page

Also they can search for a particular product by entering the name of the product in the search bar which is shown in Figure 8.1.5. The name in the search bar is then matched with the names of the products as well as their tags for better seeking.
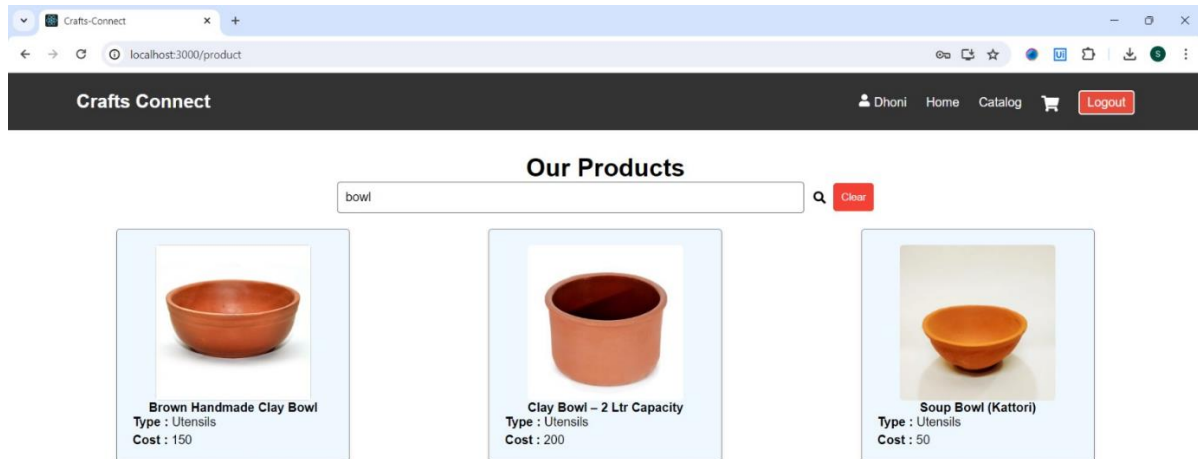

Fig 8.1.5: Search Page

When the user clicks on a product, they can view the entire description of the product which is shown clearly in the Figure 8.1.6. Also, there is a 'Buy' button which adds the product to the user's cart which is depicted in Figure 8.1.7.
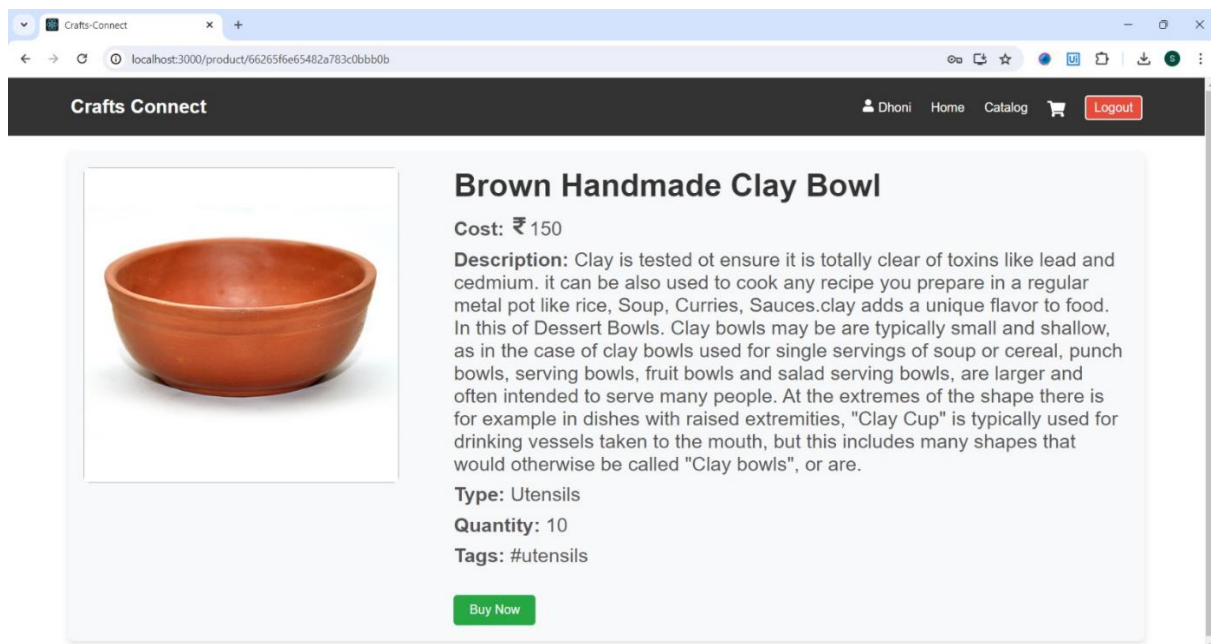

Fig 8.1.6: Detailed Product Page

Fig 8.1.7: Cart Page

The cart page shows the products that were added to the cart by the user. This page has two options. The first is that the user can check out their product at any time as shown in the Figure 8.1.8. The other is that they can remove the product if they want to.
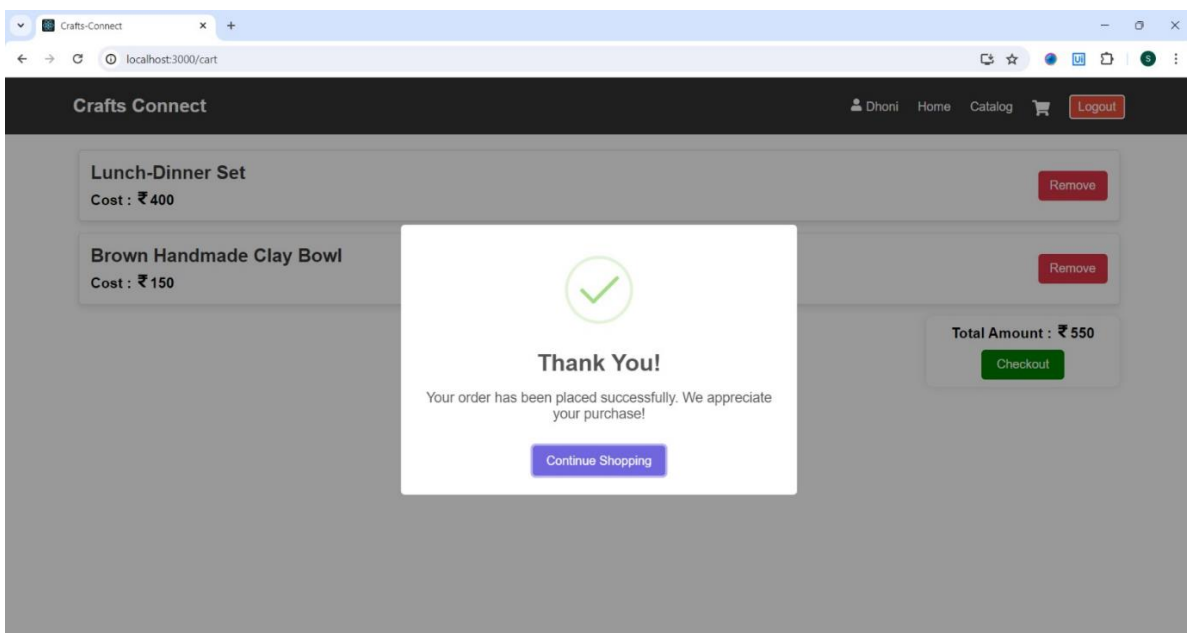

Fig 8.1.8: Success Page

8.2 ARTISAN:

The artisan home page looks the same as the user home page which is depicted in the Figure 8.2.1 but it will have an additional link in the navigation bar, an "upload" link only available to the user type "artisan". On clicking the link, the artisan will be directed to a new page as shown in Figure 8.2.2 where they can add their products into the system for sale.
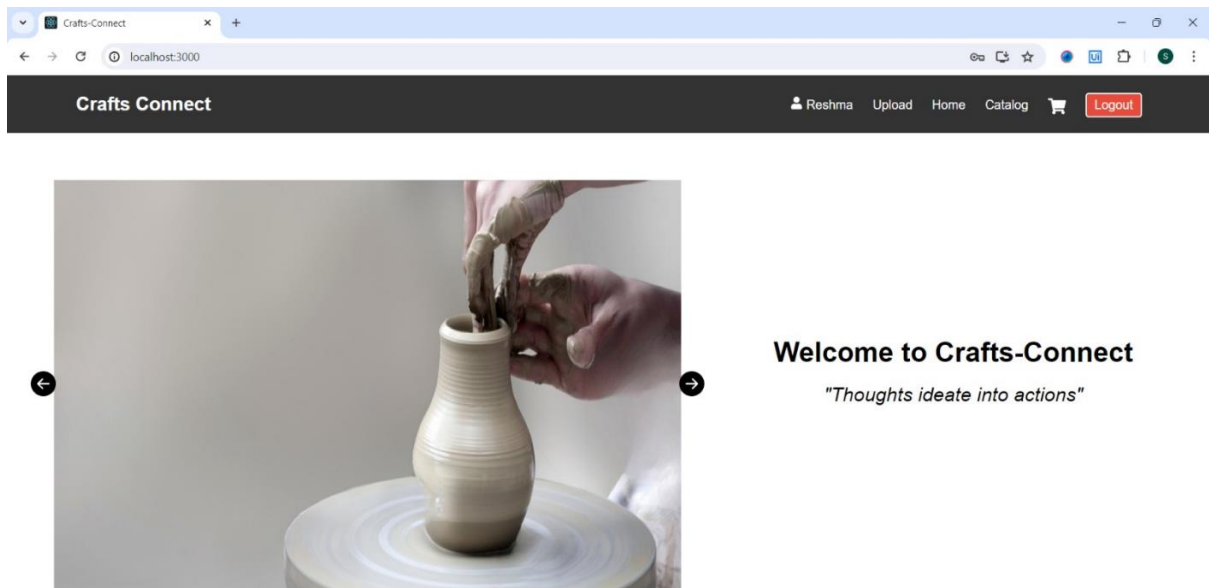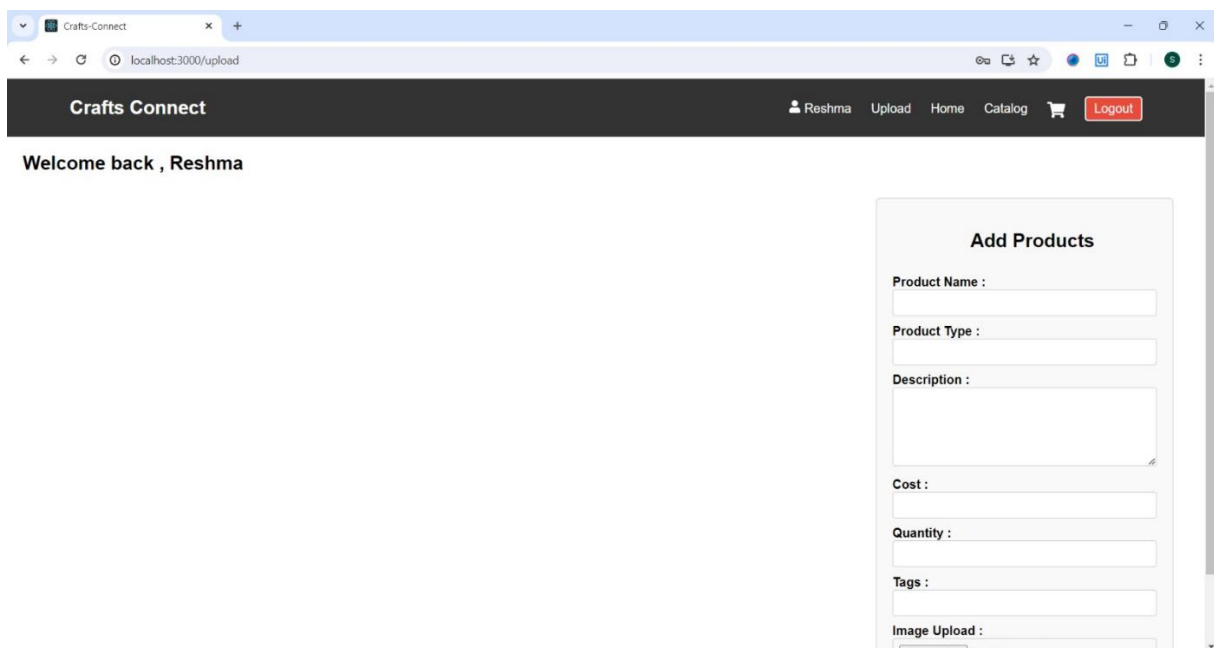

Fig 8.2.1: Artisan Home Page

Fig 8.2.2: Add Products Page

The artisans can add their handmade products at any time by giving the details of the product such as Product Name, Product Type, Cost, Quantity, Image of the product etc as shown in Figure 8.2.2. This page enables them to post their products for better sale in the market.

Fig 8.2.3: Adding Products Page

Fig 8.2.4: Added Product Page

The above Figures 8.2.3 and 8.2.4 depicts the process of an artisan adding a product and the way it is displayed after it is added respectively. On Figure

8.2.4, you can see the buttons 'Delete' and 'Update' which can be used by the artisan to manage his / her product.
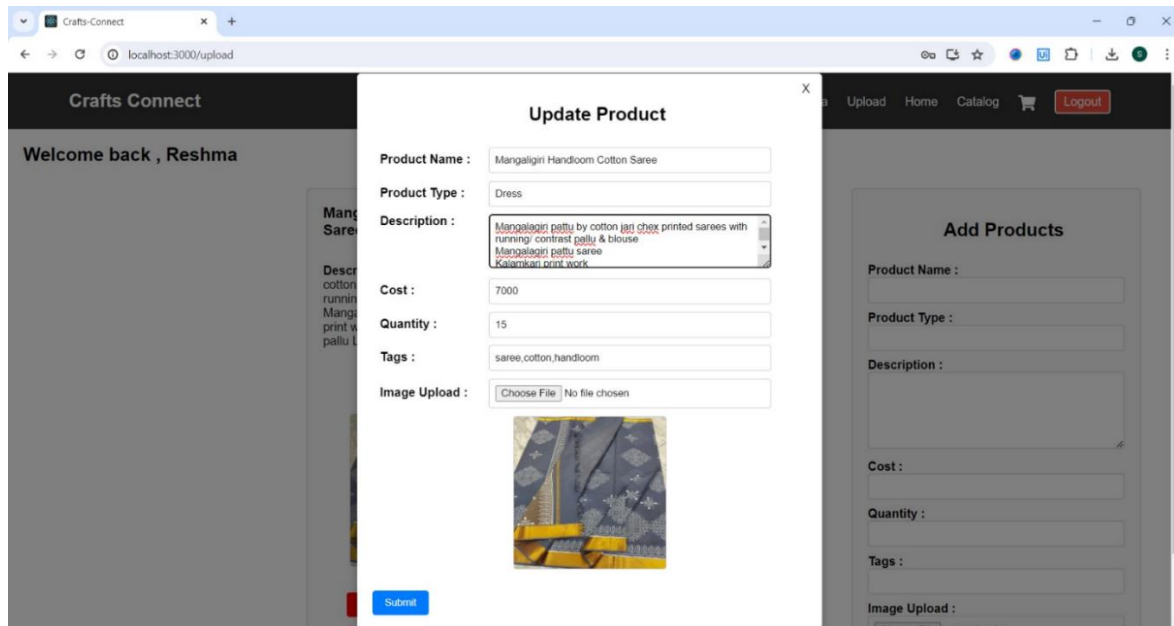

Fig 8.2.5: Update Product Page

After adding the products for sale in the market as in the Figure 8.2.4, the artisans may also update their product details according to the market trend which is shown in the Figure 8.2.5. They can also delete them at any course of time.
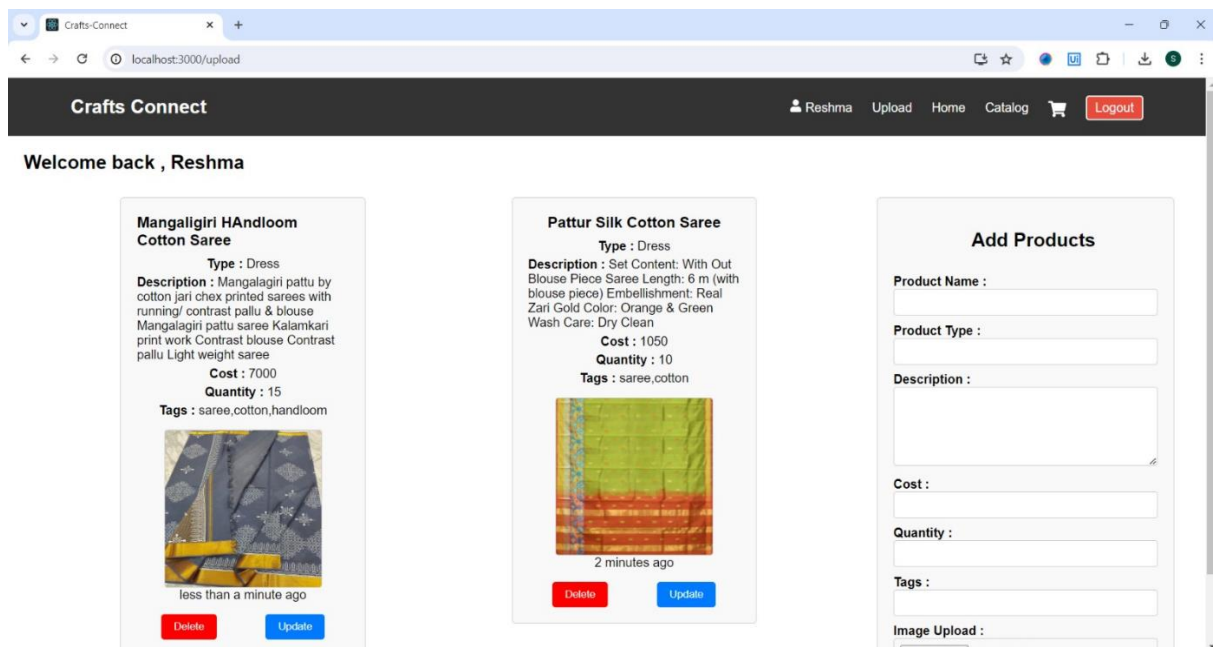

Fig 8.2.6: Upload Page

In the Upload page, only the products posted by the artisans are displayed as in Figure 8.2.6.
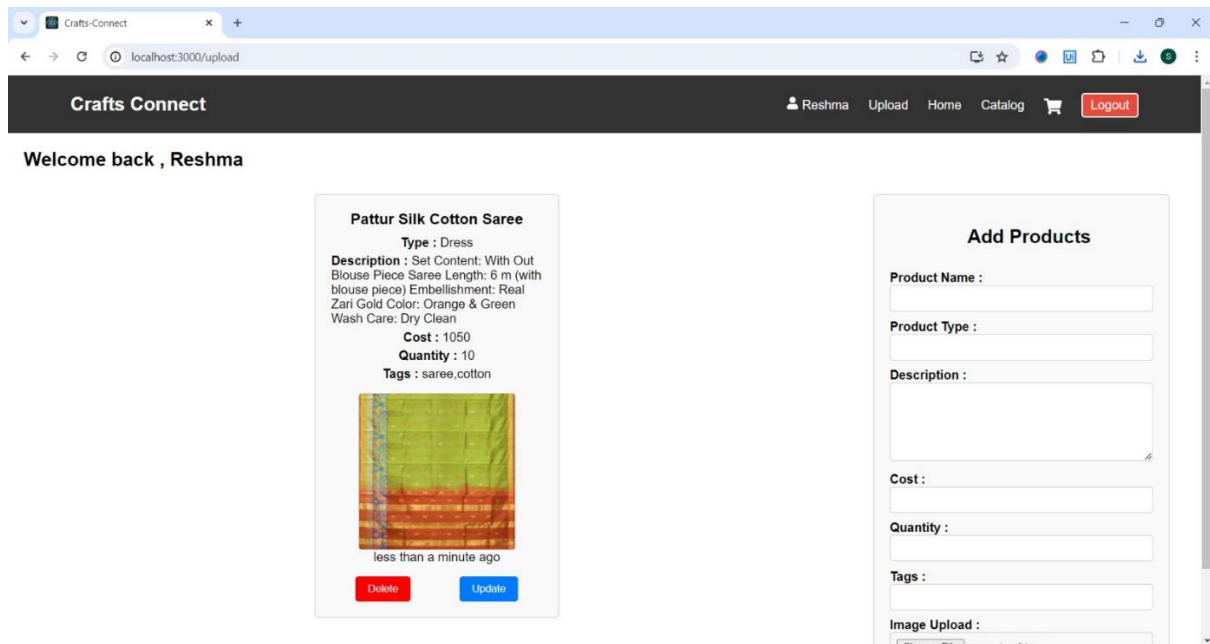
Fig 8.2.7: Product Deleted Page

After deleting any product as did in Figure 8.2.6, the artisan can view the other products as shown in the Figure 8.2.7.

CHAPTER – 9
CONCLUSION AND FUTURE ENHACEMENT

"Crafts-Connect" underwent rigorous validation to ensure its efficacy. Extensive market research confirmed demand for a global platform connecting rural artisans. User testing demonstrated intuitive navigation and positive engagement. Feedback from both artisans and consumers affirmed the platform's potential for transformative impact. Our platform, "Crafts-Connect" allows the artisans to easily list their products and manage it. The chatbot provides a seamless support for the customers in proceeding with their transaction. It is implemented through a user-centric approach, where feedback from artisans and consumers shapes ongoing enhancements. Crafts-Connect is a transformative platform that empowers rural artisans. By providing access to a global market, it enhances their livelihoods and breaks the cycle of poverty. Additionally, it preserves ancient crafting techniques, fostering cultural pride and continuity. Through eco-friendly practices, it promotes environmental conservation, ensuring a sustainable future for artisans and their communities. Moreover, Crafts-Connect revitalizes forgotten skills, strengthens local economies, and encourages cross-cultural understanding. This initiative not only enriches the lives of the artisans but also weaves a tapestry of global connections, celebrating the shared human spirit through the beauty of craftsmanship.

Integrating VR technology to create immersive experiences where users can virtually visit artisans' workshops, watch them create their crafts, and learn about their techniques and traditions in a more engaging and interactive way can revolutionize how traditional crafts are experienced and appreciated. By leveraging VR, users can explore the intricacies of artisans' workspaces in stunning detail, gaining a firsthand understanding of the environment in which these unique crafts are produced. This technology allows users to observe the entire crafting process from start to finish, providing a deeper appreciation for the

skill and effort involved. Additionally, interactive elements can be incorporated, enabling users to virtually handle tools, experiment with crafting techniques, and even create their own digital versions of traditional crafts. These VR experiences can be enriched with audio narratives and historical context, offering insights into the cultural significance and heritage of each craft. Such immersive experiences not only bridge the gap between artisans and a global audience but also play a crucial role in preserving and promoting traditional craftsmanship in the digital age. This innovative approach fosters a greater connection between consumers and artisans, ultimately supporting the sustainability and economic viability of traditional crafts.

REFERENCES

1. Almamari, B., 2020. Investigating Omani Artisans' Skills in Marketing their Creative Manufactured Goods. Saudi Journal of Humanities and Social Sciences, 5(9), pp.466-469.

2. Andersen, R., Brunoe, T. D. and Nielsen, K. (2023) 'Platform-based product development in the process industry: a systematic literature review', International Journal of Production Research, 61(5), pp. 1696–1719. doi: 10.1080/00207543.2022.2044085.

3. Bilal, M., Kumari, B. and Rani, S., 2021, May. An artificial intelligence supported E-commerce model to improve the export of Indian handloom and handicraft products in the World. In Proceedings of the International Conference on Innovative Computing & Communication (ICICC).

4. Curkovic, M.D., 2021. The role of the traditional crafts as intangible heritage on the global tourist market. In SHS Web of Conferences (Vol. 92, p. 06005). EDP Sciences.

5. De Silver, G. and Kundu, P., 2013. Handicraft products: Identify the factors that affecting the buying decision of customers (The Viewpoints of Swedish Shoppers).

6. Gulati, V. and Mathur, S., 2017. Digital manufacturing of Indian traditional handicrafts. International Journal of Computer Applications, 164(11), pp.1-4.

7. Farhikhteh, S. and Farhikhteh, F., 2013. Studying the role of using electronic commerce in development of handy-woven carpet exports compared to using the traditional methods. African Journal of Business Management, 7(25), p.2444.

8. Halbe, A., 2023. Trademarks of Tradition: Artisan Labor, Development and Place Making in Rural India. University of California, Los Angeles.

9. Huang, T. and Anderson, E., 2019. Designing for revitalization of communities through new business models for traditional arts and crafts. Art and Design Review, 7(04), p.225.

10. Izuhara, R., Yokokawa, S. and Suzuki, S., 2011. Promotion project for communication between artisans and consumers supported by media technology. In Human-Computer Interaction. Users and Applications: 14th International Conference, HCI International 2011, Orlando, FL, USA, July 9-14, 2011, Proceedings, Part IV 14 (pp. 237-244). Springer Berlin Heidelberg.

11. Jena, P.K., 2008. Globalization of Indian handicrafts: A human development approach. Orissa review, 65, pp.19-25.

12. Kohli, N. and Trar, D.V.V., 2022. Use of Social Media in Uplifting Traditional Craft. MULTIDISCIPLINARY, p.1.

13. Liebl, M. and Roy, T., 2004. Handmade in India: Traditional craft skills in a changing world. Poor people's knowledge: Promoting intellectual property in developing countries, pp.53-74.

14. MacDonald, M., 2012. Access to E-commerce in the ethical trade arena: a case study of Artisans in Kenya (Doctoral dissertation, University of Nairobi, Kenya).

15. Mutchima, P., Phiwma, N. and Valeepitakdej, V., 2019, October. E-Commerce for the Preservation of Traditional Thai Craftsmanship. In 2019 4th International Conference on Information Technology (InCIT) (pp. 114-119). IEEE.

16. Parts, P.-K. et al. (2011) 'Developing sustainable heritage-based livelihoods: an initial study of artisans and their crafts in Viljandi County, Estonia', International Journal of Heritage Studies, 17(5), pp. 401–425. doi: 10.1080/13527258.2011.589199.

17. Shah, A. and Patel, R., 2017. Problems and challenges faced by handicraft artisans. Voice of Research, 6(1), pp.57-61.

18. Tonthongkam, K., Arayajaru, S., Boonsringam, N., Phonsongkroh, N. and Phusri, N., 2023. Heritage Design: Developing Products Based on Traditional Knowledge and Creating an Artisan Community in Nakhon Pathom Province. The International Journal of Designed Objects, 18(1), p.61.

19. Sakaria, R.M. and Shah, S., DIGITAL TAPESTRY: TRADITIONAL TEXTILE ARTISANS'PERCEPTION FOR TAM IN E-COMMERCE ADOPTION–KACHCHH PERSPECTIVE.

20. Wallace, J., 2014. Handmade 2.0: women, DIY networks and the cultural economy of craft (Doctoral dissertation, Concordia University).

21. WONGPATHOMCUMNERD, M.S. and Swierczek, F.W., 2023. Readiness of Thai artistic handicrafts for global online marketplace (Doctoral dissertation, Thammasat University).

22. Yadav, U.S., Tripathi, R. and Tripathi, M.A., 2020. Strategies for development of handicraft sector (small industries) in India. SEDME (Small Enterprises Development, Management & Extension Journal), 47(3), pp.175-193.