E-commerce for Artisans

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Abstract

India is a nation with a rich cultural legacy, and the country's diverse cultures produce a wide variety of exquisite arts and crafts. Instead of using cutting-edge technology, the handicraft sector uses traditional manual processes to create a variety of goods. With the introduction of E-commerce efforts at the government level as well as at the private or individual level, this situation is changing. Ecommerce has made it simpler for people to eliminate physical work and to save time, in contrast to conventional commerce, which is carried out physically with a person's effort to travel and collect items. The goal of this project is to emphasize the contribution of e-commerce to the growth of rural artisans in India by showcasing some of the initiatives taken by government and non-government organizations, groups, and individuals to improve their socioeconomic standing.

I. INTRODUCTION

To develop an exclusive e-commerce platform for artisans to sell their products. The demand forecast of the items required, automatic quality checks on the items as well as Sentiment analysis with next recommendation actions for the artist shall be added. E-commerce portal for artisans and individual handicrafts makers to retail their products online. Artisans would benefit by maximizing their profit as this eliminates the need for a middle-man and they will also avail the benefits of a wider target audience. With the right approach, skilled products of individual artisans will be readily made available to people in need of it.

Development of a centralized platform with web-based portal for storing and sharing of information about artwork of artisans to reduce management cost and develop business relations.To develop a highly reactive single page website which will provide a user friendly interface for artisans to shows their work to a wider audience to help increase their customer base.The web portal will register artisans and they will be able to upload

information about their artwork along with the expected price.The system will store and share photographs and videos of such artworks.If a user likes a artwork they will be able to add it to their cart and if they want to will be able to buy whenever they want.

The scope of this project is to create a single page application for art enthusiasts including both artists and buyers. It will provide a platform for rural artisans to showcase their artwork to a wider audience and get them connected to more developed markets. It will host artworks of various kinds including paintings, sculptures, pottery and many more. It will also encourage more domestically made artwork and promote more 'Make in India'. This will make buying artwork more accessible to a normal art enthusiast. It will also promote a more artistic culture among the general populous .
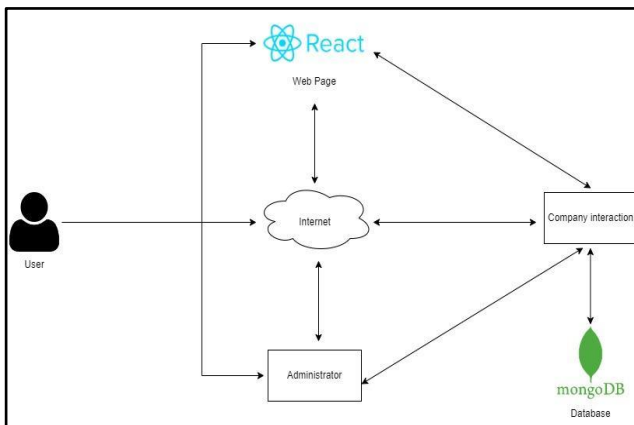
II. COMPARATIVE STUDY OF EXISTING SYSTEMS

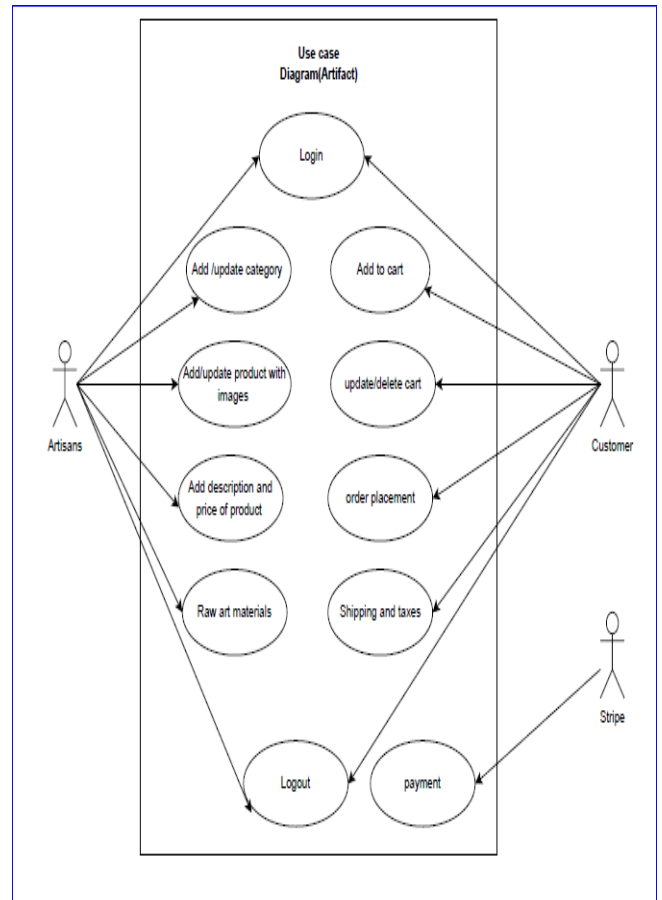| Name	Features	Disadvantages
Amazon	-fast -easy to use -Sell and buy anything from all categories	-Dependency of Amazon. -No specific category for artisans. -Many machine made artworks are also sold
Okhai	-Women upliftment -470 families benefited -cheap artworks	-Does not include pottery work , sculptor etc. -Reach to every artwork not there. -Mixed category of art works .
Craftsvilla	-Mixed category of art works . -finest quality clothes -handmade	-not include all categories of artworks. -slow delivery -expensive raw materials

III.   E-commerce for artisans

a) Methodology

Users and Artists(Seller) have to register themselves on the site separately . Database is maintained to contain user's information including their delivery address and sellers information along with the items to be sold. Modifications are updated onto the database. Users can select their art piece and can add it to their cart.

The following is the use case diagram for Artifact-

The project Handicrafts Online was developed by using Html, Sass, ReactJS, Stripe, Strapi and Javascript. The main aim of developing this project was to help the local artisans grow their businesses more and bring our traditional culture to light. Through our e-commerce website people can browse and view the local handicrafts made by our very own Indian Artisans and buy them at reasonable costs. We hope our project will provide a platform to all the local artists to display and sell their fine craftsmanship.

We think in today's world and in this economy it's very important to support the local craftsmen and admire their fine art and so this e-commerce

website will not only help them but also help people buy their fine art sitting at home and ordering at their ease instead of going to shop for them specially.

b) Dependencies

The major requirement of the resources for designing and developing the proposed E-commerce (Artifact) is as follows.

- HTML
- Javascript
- ReactJS
- Sass
- Strapi
- Stripe
- NodeJS
- ExpressJS
- MongoDB

HTML:

Hyper Text Markup Language is what HTML is. It serves as the industry standard markup language for online pages. It describes a web page's structure. A number of elements make up HTML. The content's presentation in the browser is controlled by HTML elements.

Javascript:

The behaviour of web pages is programmed using Javascript, or JS. With their extensive features and functionalities, JS libraries and frameworks facilitate the building of websites and applications. Leaflet is the one we'll employ in the smart map.

Leaflet. With the help of the open-source package js, we can create straightforward, interactive, and portable web maps.

ReactJS:

React is a free and open-source front-end JavaScript toolkit for creating user interfaces based on UI components. It is sometimes known as React.js or ReactJS. It is kept up-to-date by Meta (previously Facebook) and a group of independent programmers and businesses. Using frameworks like Next.js, React can be the foundation for single-page, mobile, or server-rendered applications. Making React apps typically necessitates the use of extra libraries for routing and specific client-side functionality because React is only concerned with state management and presenting that information to the DOM.

Sass:

Two syntaxes make up Sass. The original syntax, sometimes known as "the indented syntax," makes use of a Html-like grammar. It employs newline characters to separate rules and indentation to divide code chunks. Block formatting similar to that of CSS is used in the more recent syntax, SCSS (Sassy CSS). It employs semicolons to indicate the separation of rules inside a block and brackets to indicate code blocks. The extensions.sass and.scss are typically used for SCSS files and indented syntax, respectively.

Strapi:

- An open-source headless content management system is provided by Strapi (CMS). Strapi, which was incorporated in France in 2016, has its current headquarters in San Francisco and employs remote workers. Strapi, a Node.js-based, back-end-only CMS, seeks to allow developers the opportunity to use their preferred tools while simplifying the management of content for editors. Static websites, mobile apps, e-commerce, editorial, and corporate websites are examples of typical use cases.
- Some essential Strapi features are as follows:
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- Free software (the codebase is published on GitHub under a standard MIT license)
- Self-hosted \Customizable
- by design, extensible

Stripe:

You may accept payments directly on your store for web and mobile with the WooCommerce Stripe plugin. Using Stripe, visitors stay on your website during checkout rather than being forwarded to a checkout page hosted externally, which has been shown to increase conversion rates. Online payment processing is made simple using Stripe. There are no startup fees, monthly fees, or other expenditures with Stripe. The software solutions provided by Stripe are used by hundreds of thousands of enterprises, from small startups to Fortune 500 firms, to accept payments securely and grow internationally.

NodeJS:

A cross-platform, open-source server environment called Node.js can be used with Windows, Linux, Unix, macOS, and other operating systems. The V8 JavaScript Engine is used by Node.js, a back-end runtime environment for JavaScript, to execute JavaScript code outside of a web browser. JavaScript can be used by developers to create server-side scripts and command-line tools using Node.js. Before a page is sent to a user's browser, the functionality of running scripts server-side creates dynamic web page content..

ExpressJS:

Express.js, sometimes known as Express, is a Node.js back end web application framework that is made available as free and open-source software under the MIT License. It is used to create RESTful APIs. It is made for creating APIs and online applications. It has been referred to as Node.js's de facto standard server framework.

MongoDB:

A horizontal scale-out design was used to create the open-source document database MongoDB, which uses a flexible schema to store data. Among the developer community, MongoDB, which was established in 2007, has a large following.

Each record in a MongoDB database is a document described in BSON, a binary representation of the data, as opposed to tables of rows and columns like SQL databases. The data is then accessible to applications in JSON format.

Limitations :

- Product Suitability.
- It is not possible for people to physically examine the product in eCommerce. In many cases, the original product may not match the picture or specifications in the eCommerce site. This absence of 'touch and feel' creates a discouraging effect.
- Huge Technological Cost.
- Last but not the least; a lot of money needs to be invested to build up the technical infrastructure needed to run an eCommerce business. Moreover, they need to be upgraded to keep abreast with the changing technology.

IV.   Outcome

The project Artisans was developed by using Html, Sass, ReactJS, Stripe, Strapi and Javascript. The main aim of developing this project was to help the local artisans grow their businesses more and bring our traditional culture to light. Through our e-commerce website people can browse and view the local handicrafts made by our very own Indian Artisans and buy them at reasonable costs. We hope our project will provide a platform to all the local artists to display and sell their fine craftsmanship.

We think in today's world and in this economy it's very important to support the local craftsmen and admire their fine art and so this e-commerce website will not only help them but also help people buy their fine art sitting at home and ordering at their ease instead of going to shop for them specially. Some snapshots of the project are below-
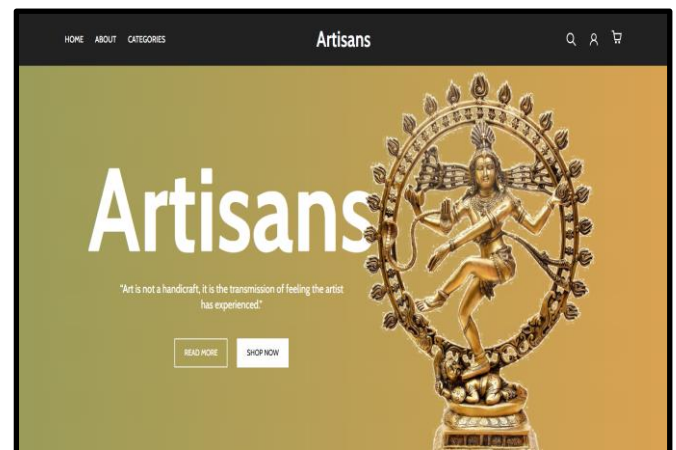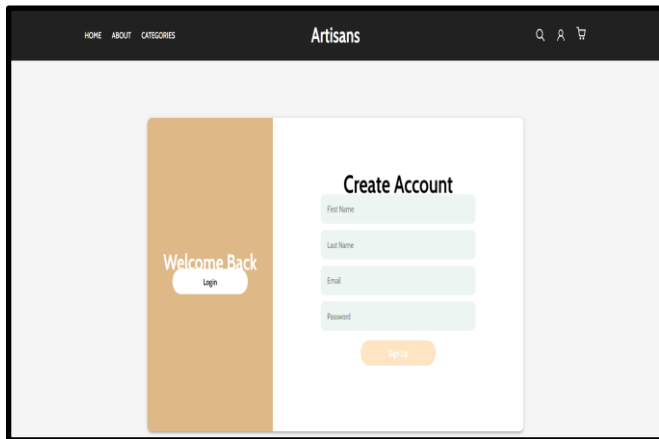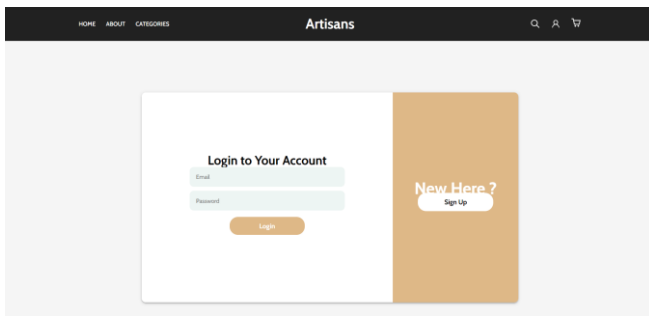

Figure 1. Home Page

Home page where the user will redirect on clicking the website URL. It is made using React which makes this page interactive .
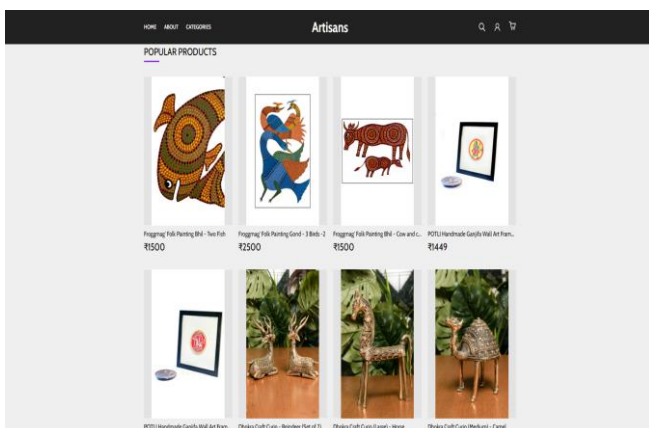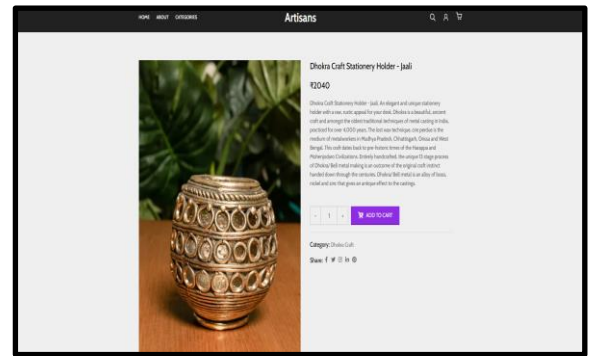
Figure 2. Account creation Page

Here users and artisans will create their account on Artisans.

Figure 3. Login page

Figure 4. Products Images

Figure 5. Product Description

V.   Conclusion

- The rural artisans do not get the exposure they deserve and are not very well connected to the wider market of the nation.

- A normal art lover is not able to buy artwork due to various reasons mainly because of poor access to the market.

- Local & individual artisans can benefit with the exposure to digital platform

- Online retailing removes the need for a middle-man to facilitate the sales.

- Portal enables sellers to register to sell their products online

- Right marketing will help to reach wider customer bases.

- Digital platforms are easy to maintain and cater to a variety of people.

- True skills of artisans would be showcased to earn them the respect that they rightfully deserve.

- Financial benefit would be marginally better as compared to selling via a middle-man.

● Shift of emphasis towards "Made in India" products can help gain the required traction

V.   References

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